

IDRAS

INTEGRATED DATA REFINING AND ANALYSIS SYSTEM

by

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INDIA**

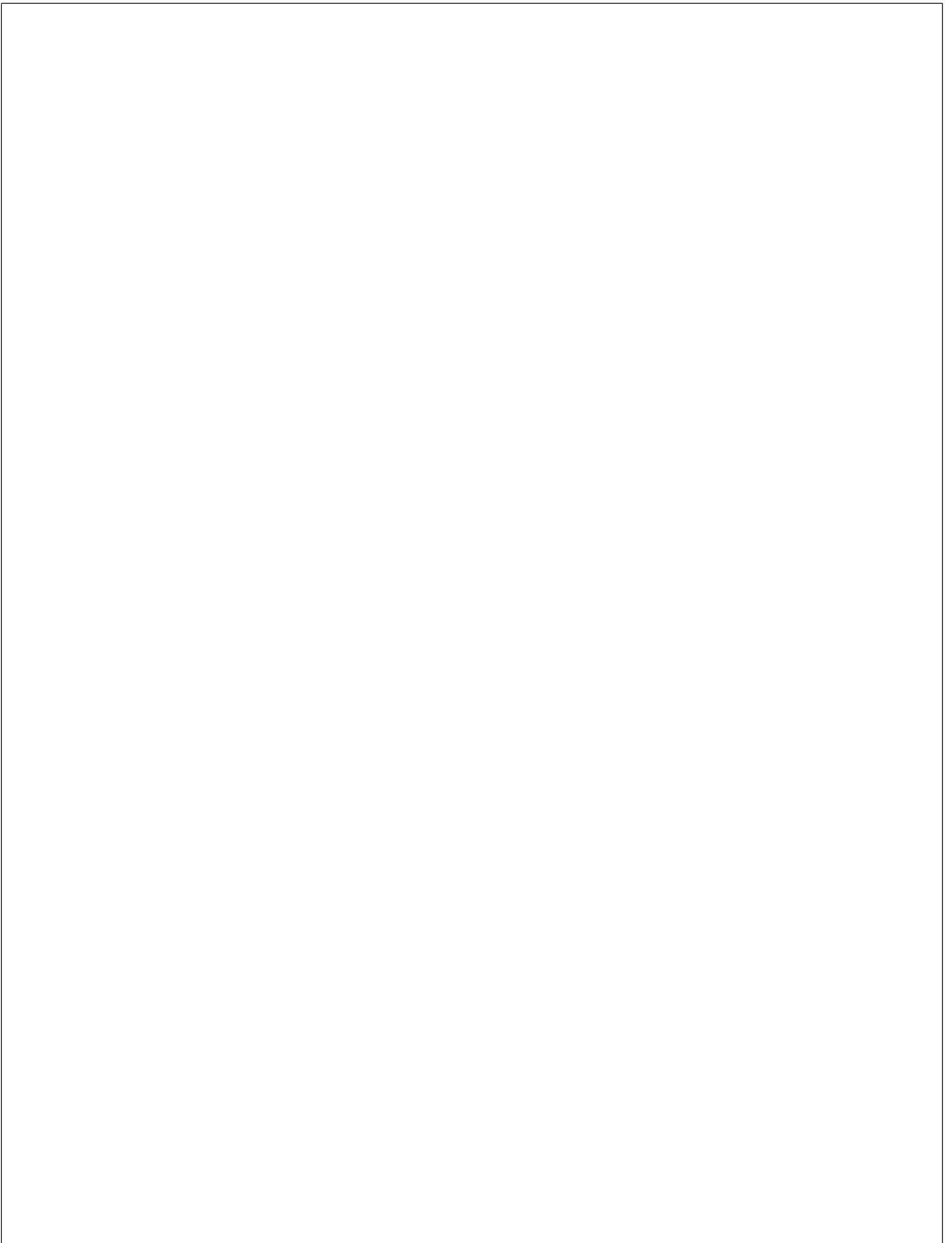


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CERTIFICATE FROM SUPERVISOR

This is to certify that the work titled “IDRAS(Integrated Data Refining Analysis System” submitted by

“Siddharth Arya(081273) , Apoorva Gupta(081275) , Kripi Agarwal(081289) “ in partial fulfilment for the award of degree of B.TECH of Jaypee University of Information Technology,Waknaghat has been carried out under my supervision. This work has not been submitted partially or wholly to any other university or institute for the award of this or any other degree or diploma.

Signature of Supervisor

Name of Supervisor

Designation

Date

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It gives us great pleasure in presenting the project report for our final year project “**IDRAS**”, Integrated Data Refining and Analysis System . We would like to take this opportunity to thank our internal guide **Dr. Ravi Rastogi** for giving us all the help and guidance we needed. We are really grateful to him for his kind support throughout the analysis and design phase. We are also grateful to **Dr. S.P Ghrera**, Head of Computer Science Department, Jaypee University of Information and Technology for giving important suggestions.

Signature of Student

Name of Student

Date

SUMMARY

We purpose a Federated Search Engine to improve the productivity of search in BioInformatics Department. Bio is one of the leading departments with such enormous and scattered information today that it becomes very difficult for a layman (or for the researchers) to identify and access right information at right time. Increasing demand of information services and resource access of bioinformatics realises the single platform access of information of the subject. Thus we will make an effort to manifest the information (available via many reliable resources) in a meaningful manner.

The objective is to design, implement and deploy a suite of tools and network based services that reliably improve the productivity of research in bioinformatics society by providing proactive information for solving problems related to bioinformatics activities. IDRAS is a federated search engine based on storing bioinformatics information in the form of URLs for assembling and integrating information. The bioinformatics information represented in cluster of categories will link to the resources functioning in different web repositories. The information will be limited to BioInformatics field and will further be clustered into major categories. IDRAS relies on continuous link updates.

Effective management of data involves both storage and effective retrieval of data by developing Databases or Web-based servers or Software Tools.

Our task involves : -

Developing useful and usable system.

Understanding user's needs.

Translating user's needs to user's requirements.

Continuously look for the requirements.

Federated Search (an information retrieval technology) along with Clustering (a process of grouping similar objects) will complete one of the most reliable source of Bioinformatics information centre “IDRAS”. We aim to perform a simultaneous real-time search of multiple diverse and distributed sources from a single search page, with the federated search engine acting as intermediary.

Signature of Student

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Date

1. INTRODUCTION

1.1 FEDERATED SEARCH

Federated search is an information retrieval technology that allows the simultaneous search of multiple searchable resources. A user makes a single query request which is distributed to the search engines participating in the federation. The federated search then aggregates the results that are received from the search engines for presentation to the user. Users can then view search results in a single integrated list. In other words, users do no longer need to consult each information resource individually.

Federated search technology is an integral component of an Information Portal, which provides the interface to diverse information resources. Once the user enters his or her search query in the search box of the Information Portal, the system uses federated search technology to send the search string to each resource that is incorporated into the Portal. The individual information resources then send the Information Portal a list of results from the search query. Users can view the number of documents retrieved in each resource and link directly to each search result.

In short, an Information Portal uses federated search technology to enable users to:

- Search for information in multiple information resources through a single query.
- View search results in a single list.
- Link directly to each resource to expand the search.

Federated search came about to meet the need of searching multiple disparate content sources with one query. This allows a user to search multiple database at once in real time, arrange the results from the various databases into a useful form and then present the results to the user.

1.1.1 PROCESS

Federated searching consists of :

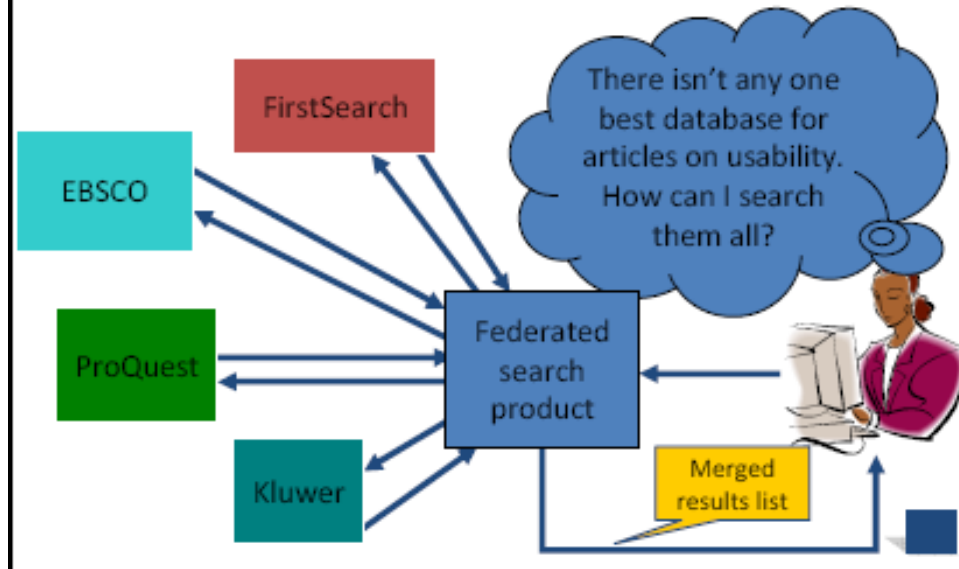
- (1) Transforming a query and broadcasting it to a group of disparate databases or other web resources, with the appropriate syntax.
- (2) Merging the results collected from the databases.
- (3) Presenting them in a succinct and unified format with minimal duplication.
- (4) Providing a means, performed either automatically or by the portal user, to sort the merged result set.

Federated search portals, either commercial or open access, generally search public access bibliographic databases, public access Web-based library catalogues (OPACs), Web-based search engines like Google and/or open-access, government-operated or corporate data collections. These individual information sources send back to the portal's interface a list of results from the search query. The user can review this hit list. Some portals will merely screen scrape the actual database results and not directly allow a user to enter the information source's application. More sophisticated ones will de-dupe the results list by merging and removing duplicates. There are additional features available in

many portals, but the basic idea is the same: **to improve the accuracy and relevance of individual searches as well as reduce the amount of time required to search for resources.**

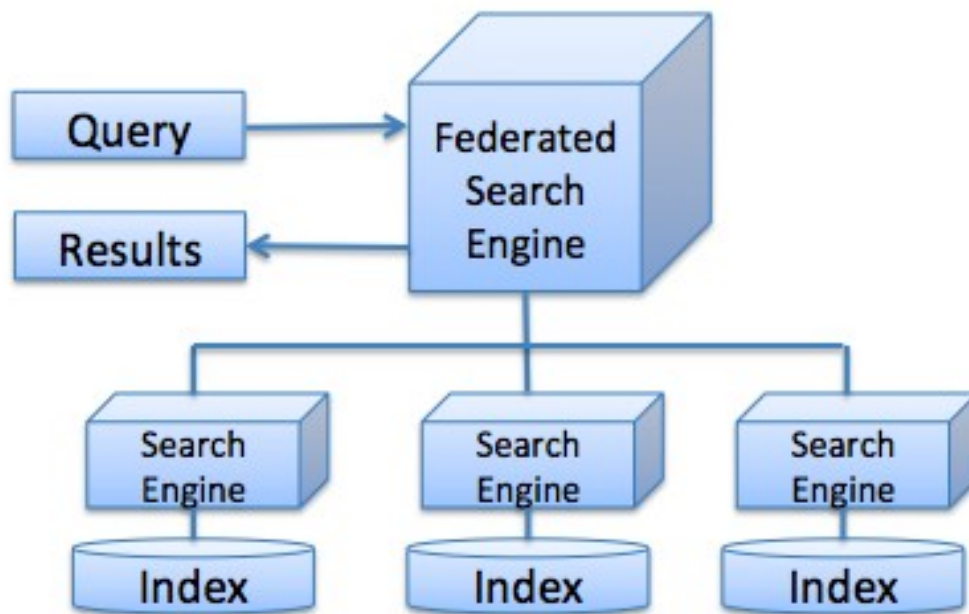
This process allows federated search some key advantages when compared with existing crawler-based search engines. Federated search need not place any requirements or burdens on owners of the individual information sources, other than handling increased traffic. Federated searches are inherently as current as the individual information sources, as they are searched in real time.

What is federated searching?



1.1.2 IMPLEMENTATION

One application of federated searching is the **METASEARCH** engine; however, this is not a complete solution as many documents are not currently indexed. These documents are on what is known as the deep Web, or invisible Web. Many more information sources are not yet stored in electronic form.



A challenge faced in the implementation of federated search engines is scalability, in other words, the performance of the site as the number of information sources comprising the federated search engine increase.

1. One federated search engine that has begun to address this issue is **World Wide Science**, hosted by the U.S. Department of Energy's Office of Scientific and Technical Information.

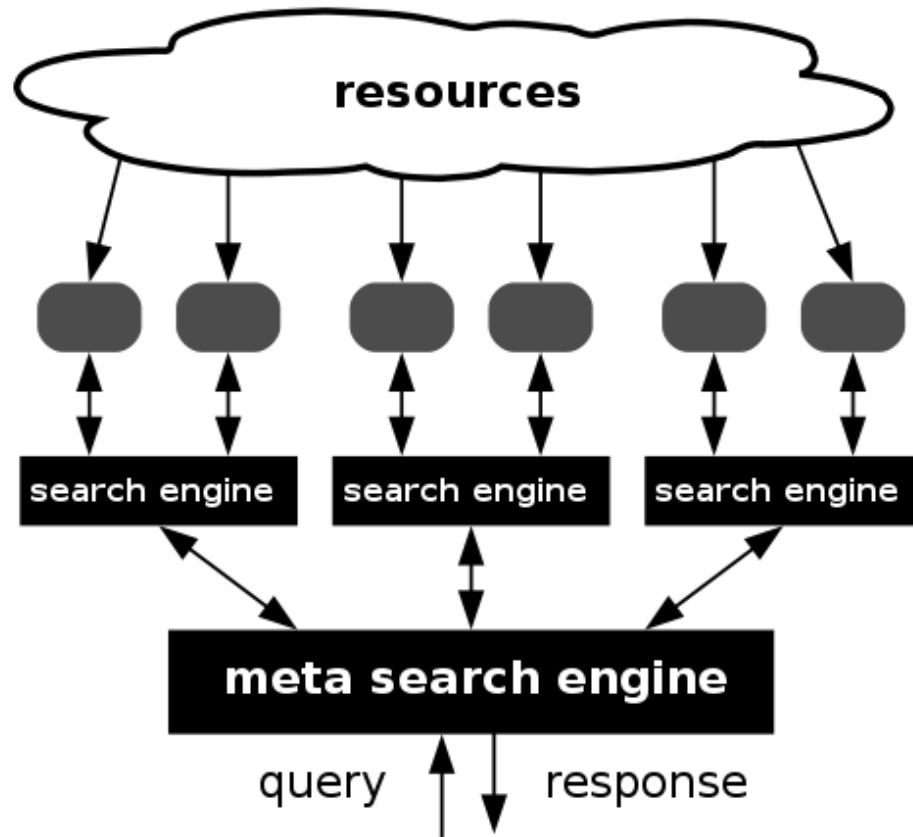
World Wide Science is composed of more than 40 information sources, several of which are federated search portals themselves.

2. One such portal is **Science.gov** which itself federates more than 30 information sources representing most of the R&D output of the U.S. Federal government. Science.gov returns its highest ranked results to World Wide Science, which then merges and ranks these results with the search returned by the other information sources that comprise World Wide Science. This approach of cascaded federated search enables large number of information sources to be searched via a single query.

3. Another application **Sesam** running in both Norway and Sweden has been built on top of an open sourced platform specialised for federated search solutions. Sesat ,an acronym for Sesam Search Application Toolkit, is a platform that provides much of the framework and functionality required for handling parallel and pipelined searches and displaying them elegantly in a user interface.

1.1.3 METASEARCH ENGINE

A **METASEARCH ENGINE** is a search tool that sends user requests to several other search engines and/or databases and aggregates the results into a single list or displays them according to their source. Metasearch engines enable users to enter search criteria once and access several search engines simultaneously. Metasearch engines operate on the premise that the Web is too large for any one search engine to index it all and that more comprehensive search results can be obtained by combining the results from several search engines. This also may save the user from having to use multiple search engines separately. The National Information Standards Organization (NISO) uses the terms Federated Search and Metasearch interchangeably to describe this web search paradigm.



ARCHITECTURE OF META SEARCH ENGINE

Metasearch engines create what is known as a virtual database. They do not compile a physical database or catalogue of the web. Instead, they take a user's request, pass it to several other heterogeneous databases and then compile the results in a homogeneous manner based on a specific algorithm.

No two metasearch engines are alike. Some search only the most popular search engines while others also search lesser-known engines, newsgroups, and other databases. They also differ in how the results are presented and the quantity of engines that are used. Some will list results according to search engine or database. Others return results according to relevance, often concealing which search engine returned which results. This benefits the user by eliminating duplicate hits and grouping the most relevant ones at the top of the list.

Search engines frequently have different ways they expect requests submitted. For example, some search engines allow the usage of the word "AND" while others require "+" and others require only a space to combine words. The better metasearch engines try to synthesize requests appropriately when submitting them.

1.2 WEB CRAWLER

A **WEB CRAWLER** is a computer program that browses the World Wide Web in a methodical, automated manner or in an orderly fashion. Other terms for Web crawlers are *ants*, *automatic indexers*, *bots*, *Web spiders*, *Web robots*, or—especially in the FOAF community—*Web scutters*.

This process is called *Web crawling or spidering*. Many sites, in particular search engines, use spidering as a means of providing up-to-date data. Web crawlers are mainly used to create a copy of all the visited pages for later processing by a search engine that will index the downloaded pages to provide fast searches. Crawlers can also be used for automating maintenance tasks on a Web site, such as checking links or validating HTML code.

A Web crawler is one type of bot, or software agent. In general, it starts with a list of URLs to visit, called the *seeds*. As the crawler visits these URLs, it identifies all the hyperlinks in the page and adds them to the list of URLs to visit, called the *crawl frontier*. URLs from the frontier are recursively visited according to a set of policies. The large volume implies that the crawler can only download a fraction of the Web pages within a given time, so it needs to prioritize its downloads. The high rate of change implies that the pages might have already been updated or even deleted. The number of possible crawlable URLs being generated by server-side software has also made it difficult for web crawlers to avoid retrieving duplicate content.

1.2.1 FEDERATED SEARCH OVER CRAWLING

GOOGLE'S APPROACH

The approach that **Google** and all major search engines use is to “**crawl**” the Web. Google, over many years, has amassed a list of billions of Web sites. In the early days, it's likely that Google learned about many Web sites when owners registered their sites with them. Today, Google can find new Web sites through links from sites it already knows about. Google periodically visits the sites (and the sites' pages) on its list and identifies the links at that site. It then follows each link it finds to arrive at other pages where it starts the process over to find more links. In doing this, Google discovers sites it didn't know about during previous visits. This process of going from one page to another and then to another is referred to as “crawling,” just like a spider crawls from one thread to another in its web. In fact, Web “spiders” are commonly referred to as “Web crawlers.” When you create a new site, just create a link to it from another site, or get someone to do it for you, and Google's crawler will discover it.

PROBLEM IN CRAWLING

The trouble with crawling is that this search technique doesn't find everything. One might believe that through sufficient crawling, one could find all Web pages. In fact, only a small percentage of the Web's content is accessible to Google. The term “**deep Web**” refers to the vast portion of the Web that is beyond the reach of the typical “surface Web” crawlers. Surface Web search engines like Google can't easily fathom the deep Web because most deep Web content has no links to it.

Consider an example:

Let's say that we are researching the effects of some chemical or hazardous substance on humans. We would be well advised to search the National Library of Medicine's Toxicology Data Network. Most of the information we would find there, we would not find via Google. This is because, to find the research articles, we would have typed one or more words in a search box and then click on the “search” button. Few, if any, of the articles we found had links to them from any Web site. Google couldn't find those articles because Google isn't designed

to fill out search forms and click “submit” the way humans do. In particular, Google wouldn’t know what search words to put into the form. Additionally, even if Google did know what to enter into search forms and how to submit them, Google wouldn’t be able to retrieve all of the documents from the source. **This would leave Google with very incomplete content from deep Web sources.**

HOW IS FEDERATED SEARCH DIFFERENT?

While in most cases, Google doesn’t fill out search forms, this is exactly what federated search applications (also known as federated search engines) do. Why doesn’t Google fill out forms? It turns out that filling out forms is a difficult problem. Federated search engine builders have to customize their search software for each Web form they encounter. While Google has a general approach to crawling links from any Web site, federated search engines are programmed with intimate knowledge of each search form. The specialized software must know not only how to fill out the form and how to simulate the pressing of the “search” button, but also how to read the results.

BENEFITS OF FEDERATED SEARCH

The essential benefits of federated search to its users include efficiency, quality of search results, and current, relevant content.

1. Efficiency, Time Savings

Using a federated search engine can be a huge time saver for researchers. Instead of needing to search many sources, one at a time, the federated search engine performs the many searches on the user’s behalf. While federated search engines specialize in finding content that requires form submissions to retrieve, it isn’t the only criterion for being a federated search engine. A federated search engine also associates content from different sources. Federated search uses just one search form to cover numerous sources, and combines the results into a single results page.

2. Quality of Results

Federated search engines show their value best in environments in which the quality of results matters, such as libraries, corporate research environments, and the federal government. In the case of the federal government, the constituents of the government benefit greatly from such applications. A major difference between a federated search engine and a standard search engine like Google is that the client who contracts for the federated search service selects the sources to search. In almost every case, the sources will be authoritative. Google, on the other hand, has very minimal criteria for source selection. If a Web page doesn't look like outright junk (i.e., spam) Google will present it among the search results. Thus, the federated search engine acts as a helpful librarian does, directing users to excellent quality.

3. Most Current Content

In addition to filling out forms and combining documents from multiple sources, another important benefit of federated search engines is that they search content in real time. Real time data is crucial for researchers who are searching for up-to-the-minute content or for content that changes frequently. As soon as the content owner updates their source, the information is available to the searcher on the very next query. By contrast, with standard search engines/Google, the results are only as current as the last time that Google crawled sites with content that matches your search words. Content you find via Google might be days or weeks old, which can be fine depending on your situation, but can be problematic if you want the most current information.

1.3 OTHER FEATURES OF FEDERATED SEARCH

1. AGGREGATION

Aggregation is the process of combining search results from the different sources in some helpful way. A federated search engine might present all of the results from one source then, beneath those results, present the results from the next source, and so on. Aggregation may incorporate sorting (e.g., by date, title, or author), or it may involve ranking, also known as relevance ranking.

2. RANKING

A researcher searching a couple of dozen sources via a federated search engine usually wants to know which results are most relevant to his or her search from among all of the sources. Relevance ranking compares results from all sources against one another and displays the results in order. Surprisingly, not all federated search engines rank their results. This is largely because ranking is difficult to perform well.

3. DE-DUPLICATION

A federated search engine may retrieve the same result or document from multiple sources. Users are not interested in seeing duplicate results, yet it turns out to be difficult to remove duplicates effectively. Two documents may have the same title and author, but might actually be different revisions of one document. How does the federated search engine decide which document, or documents, to return? Like ranking, de-duping is a challenge.

1.4 CLUSTERING CONCEPT

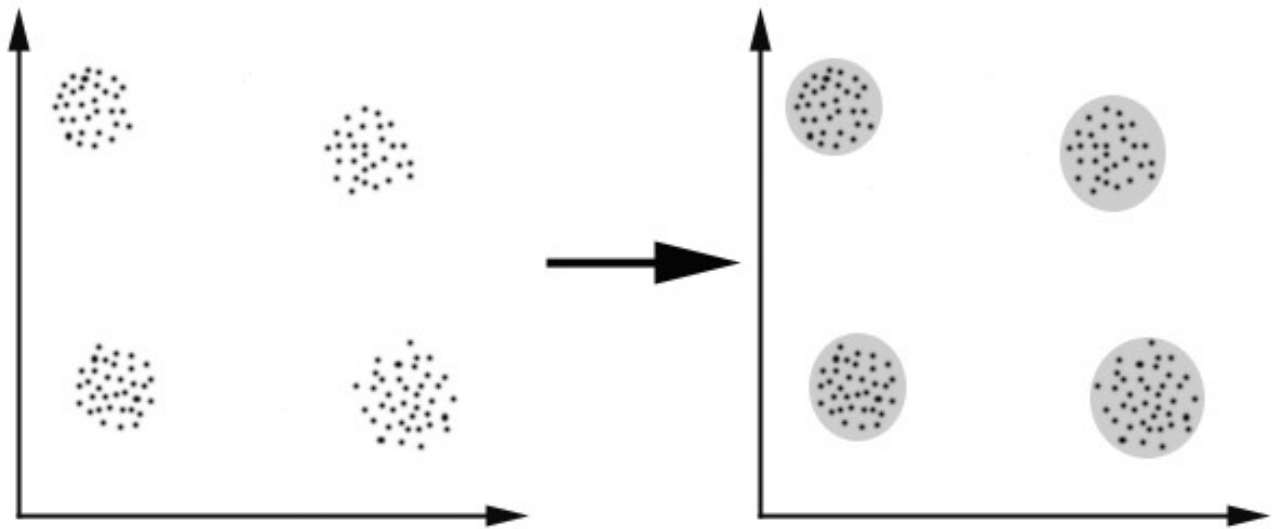
Cluster analysis or **clustering** is the task of assigning a set of objects into groups (called **clusters**) so that the objects in the same cluster are more similar (in some sense or another) to each other than to those in other clusters.

APPLICATIONS :

1. DATA MINING (dna analysis,marketing study,...)
2. TEXT MINING (text type clustering)
3. INFORMATION RETRIEVAL (document clustering)
4. CORPUS- BASED COMPUTATIONAL LEXICOGRAPHY

The appropriate clustering algorithm and parameter settings (including values such as the distance function to use, a density threshold or the number of expected clusters) depend on the individual data set and intended use of the results. Cluster analysis as such is not an automatic task, but an iterative process of knowledge discovery that involves try and failure. It will often be necessary to modify preprocessing and parameters until the result achieves the desired properties.

Besides the term *clustering*, there are a number of terms with similar meanings, including *automatic classification*, *numerical taxonomy*, *botryology* and *typological analysis*. The subtle differences are often in the usage of the results: while in data mining, the resulting groups are the matter of interest, in automatic classification primarily their discriminative power is of interest. This often leads to misunderstandings of researchers coming from the fields of data mining and machine learning, since they use the same terms and often the same algorithms, but have different goals.



1.4.1 CLUSTERING ALGORITHM

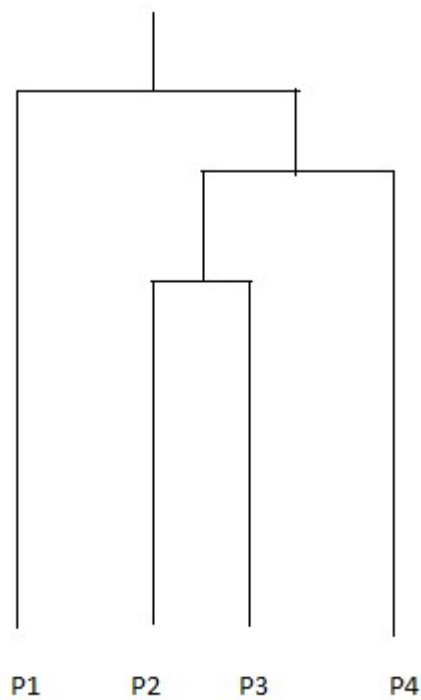
Connectivity based clustering (Hierarchical clustering)

Connectivity based clustering, also known as *hierarchical clustering*, is based on the core idea of objects being more related to nearby objects than to objects farther away. As such, these algorithms connect "objects" to form "clusters" based on their distance. A cluster can be described largely by the maximum distance needed to connect parts of the cluster. At different

distances, different clusters will form, which can be represented using a dendrogram, which explains where the common name "hierarchical clustering".

Simple Agglomerative Clustering Algorithm (TOP DOWN APPROACH)

- 1 Initialize the cluster set assuming each data point to be distant cluster.
- 2 Compute the similarity between all pairs of clusters ,i.e.,calculate the similarity matrix whose ij entry gives the similarity between i and j clusters.
- 3 Merge the most similar (closest) two clusters.
- 4 Update the similarity matrix to reflect the pair-wise similarity between the new cluster and the original (remaining) clusters.
- 5 Repeat steps 3 and 4 until only a single cluster remains.



ADVANTAGES OF CLUSTERING

Embedded flexibility regarding the level of granularity

Ease of handling any forms of similarity or distances

Applicability to any attribute types

DISADVANTAGES

Most hierarchical algorithms do not revisit once-constructed clusters with the purpose of improvement

Vagueness of termination criteria

Centroid-based clustering

In centroid-based clustering, clusters are represented by a central vector, which must not necessarily be a member of the data set. When the number of clusters is fixed to k , ***k*-means clustering** gives a formal definition as an optimization problem: find the k cluster centers and assign the objects to the nearest cluster center, such that the squared distances from the cluster are minimized.

Distribution-based clustering

The clustering model most closely related to statistics is based on distribution models. Clusters can then easily be defined as objects belonging most likely to the same distribution. A nice property of this approach is that this closely resembles the way artificial data sets are generated: by sampling random objects from a distribution.

2. LITERATURE SURVEY

2.1 ON FEDERATED SEARCH

Federated search systems—alternatively called metasearch systems—aim to search a collection of databases from one interface and present one set of results, thereby reducing the amount of time and energy that a researcher must invest in learning and using individual database interfaces. Although federated search systems are, conceptually, an ideal way to simplify the search process, in practice they often suffer from certain weaknesses, including slowness, fewer advanced search refinements, and poor integration of results from multiple sources. Many problems stem primarily from a lack of consistency between database systems. However, despite such common weaknesses, federated search systems can provide a relatively quick and simple mechanism for conducting a broad search of multiple resources in one step.

2.2 E-Z SEARCH

In spring 2007, several teams of students in John Newbold's class in strategic marketing management at Sam Houston State University (SHSU) were given the assignment of producing a marketing plan for the university's Newton Gresham Library. Some of the teams surveyed students on campus, asking how the library could better market its online resources, while other teams relied on their own preferences and suggestions. The opinions from the teams and survey respondents showed a desire for a more Google-like approach to searching library resources; students were accustomed to using Google and other Internet search engines to search once and retrieve a single, simple list of results from many websites, ranked by relevancy. That familiarity created the expectation that the library should provide a similar capability for quick, convenient academic research. In response to this finding, the Newton Gresham Library researched metasearch options and finally implemented the **federated search** product **WebFeat**, which was marketed on the library's website under the name **E-Z Search**.

The federated search tool was released in a beta version on the library website in August 2007. E-Z Search was marketed through the library website, library instruction sessions, and handouts available at the library reference desk. In addition to the new E-Z Search tool, students still had access to the library's online catalog (branded Sam-Cat) and the native search interfaces for approximately 180 subscription databases. After about six months of use, the library collected

information about how many users were searching with E-Z Search and whether it was satisfying their academic search needs.

E-Z Search Results

When considering E-Z Search results, **55 percent** of students stated that results were mostly to always **easy to understand**. The results ranged from **51 to 60 percent**, when broken down by college. When considering the percentages by classification, the results ranged from **52 to 63 percent**, with sophomores finding it the **easiest**. Between **52 and 54 percent** of students in other classifications reported that results were mostly to always **easy to understand**. Only **2 percent** of students found the results **never easy to understand**.

The number of search results were “just right” approximately 41 percent of the time, ranging from 36 to 52 percent for undergraduates. When considering the percentages by college, the range went from 30 percent in the College of Humanities to 40 percent in the College of Arts and Sciences. Six percent of students felt there were too many results. When also factoring in students that thought there were somewhat too many results, this percentage increased to 28 percent. Five percent, meanwhile, felt that there were too few results, and 25 percent of students felt that the number of results was somewhat too low. E-Z Search satisfied the needs of 35 percent of students most or all of the time. When looking at these percentages by classification, they ranged from 17 percent of doctoral students to 52 percent of sophomores. The average satisfaction for undergraduates was approximately 43 percent. When considering the rates by college, 30 percent (Business) to 40 percent (Arts and Sciences) of students were satisfied most or all of the time.

E-Z Search Versus Other Resources

Among students who were familiar with both E-Z Search and individual database interfaces, the preference for individual databases over E-Z Search rose as the student’s classification increased. Doctoral students showed the strongest preference, with a ratio of almost 7:1 preferring individual databases. Masters students shared this preference almost 4:1, while senior-level undergraduates showed a more modest preference of 2:1. Junior, sophomore, and freshman level undergraduates reported close to a 1:1 ratio across the board. The freshman respondents actually reported a slightly higher preference for federated searching with E-Z

Search. Within the entire group of 257 respondents who had used both E-Z Search and individual databases, 66 percent of students preferred individual databases over E-Z Search.

Use of Federated Search and Other Search Tools

The survey responses show that E-Z Search was used frequently during the first year of implementation. However, given the weak levels of satisfaction reported for E-Z Search, the researchers suspect that the frequent use of E-Z Search use may be due in part to the tool's prominent placement, bright color, and "one-search-box" simplicity, rather than to students specifically seeking out a federated searching tool. Undergraduates showed a greater likelihood of use of federated search tools compared to graduate students. This result was expected because of the varying specificity of research needs between undergraduate and graduate students. Nonetheless, the number of masters and doctoral students that used federated searching was still higher than initially expected. This may be because of the prominent placement of the tool, but it also may point to a lack of resource knowledge by students or a need for continued training of all students about research methods.

The specificity of research needs and knowledge level of students also are important factors when considering the use of federated searching versus other resources. Doctoral, masters, and senior undergraduate students are more likely to have a greater familiarity with their subject area, a greater knowledge of which individual databases are best for certain topics, and a higher comfort level with research and database interfaces in general. They also are more likely to perform in-depth research in a specific area. They can benefit from the more specialized and specific array of search options available via individual database interfaces as opposed to the necessarily limited search options available in a federated search interface.

In contrast, freshmen are likely to have less familiarity with research in a specific discipline and are likely not researching at the same depth as more advanced students. With less need for discipline-specific advanced search options and less time spent becoming comfortable with complex and varied database interfaces, freshmen may be drawn to the federated search tool's visible placement and apparent simplicity. Some may be attracted to the greater efficiency of searching multiple sources at once: With less practiced knowledge of which specific databases are best for certain topics, they prefer instead to cast a wide net via federated search. Others may simply use the most visible tool (which closely resembles familiar Internet search engines)

and are not making a reasoned, deliberate choice to engage in federated searching; they may not even recognize that the E-Z Search tool performs a unique function.

2.3 qUIC SEARCH

Typical to many universities , first – year English composition students from the largest audience for library instruction at the university of Illinois at Chicago(UIC),where English 161 is a required composition course in which students write a research paper.

To this point , many librarians have been hesitant to introduce students to the process of searching for articles using UIC’s “qUICsearch” , the federated search tool powered by Webfeat , rather than a single multidisciplinary database such as Academic Search Primer. This hesitancy could be based on the conception that federated searching forces students to process more search results than they handle , or more results than they need.

REVIEW OF THE LITERATURE

While multiple studies evaluate federated search tools(meta search tools) and single database from both the user’s and the librarian’s perspectives , few studies compare federated searching to single database searching. Belliston (2007) conducted a study comparing federated searching to searching individual article database.In this study , 190 randomly selected undergraduates searched for articles on a pre-selected biology topic using 2 methods :

A federated search engine and

A list of seven databases comprised of both subject – specific and multidisciplinary databases.

About 70 percent of students preferred federated searching over the alternative.

The study compared the following factors :

TIME ,

STUDENT PREFERENCE ,
STUDENT SATISFACTION WITH RESULTS ,
QUALITY OF RESULTS.

METHODOLOGY

Students were deliberately asked to complete their searches in the single database and federated search tool without receiving an introduction to the process of searching for articles. This was done in order to collect the first impressions of each mode of searching from the unfettered point of view of a novice user with little to no experience with searching for articles.

Upon completing and recording searches in the single database and the federated search tool, students were asked series of questions regarding :

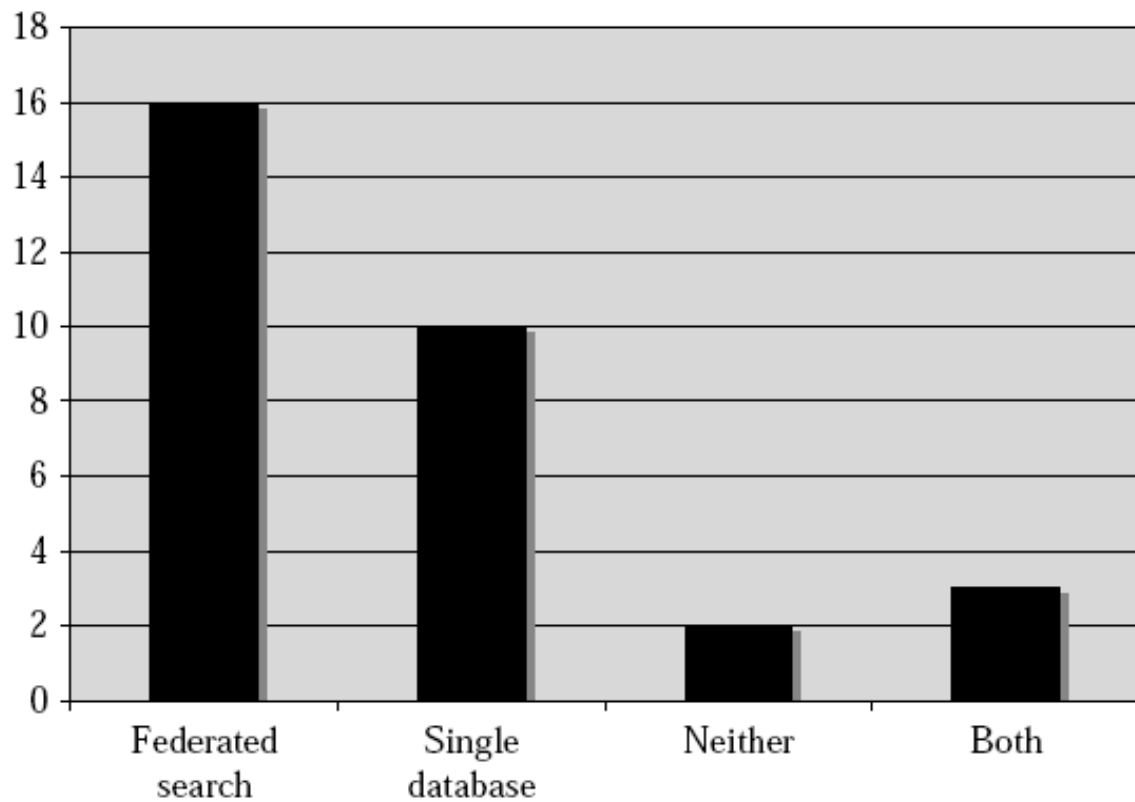
ease of use,

relevance of results,

overall preference between the two resources,

likeliness of future use as well as other preferred research tools.

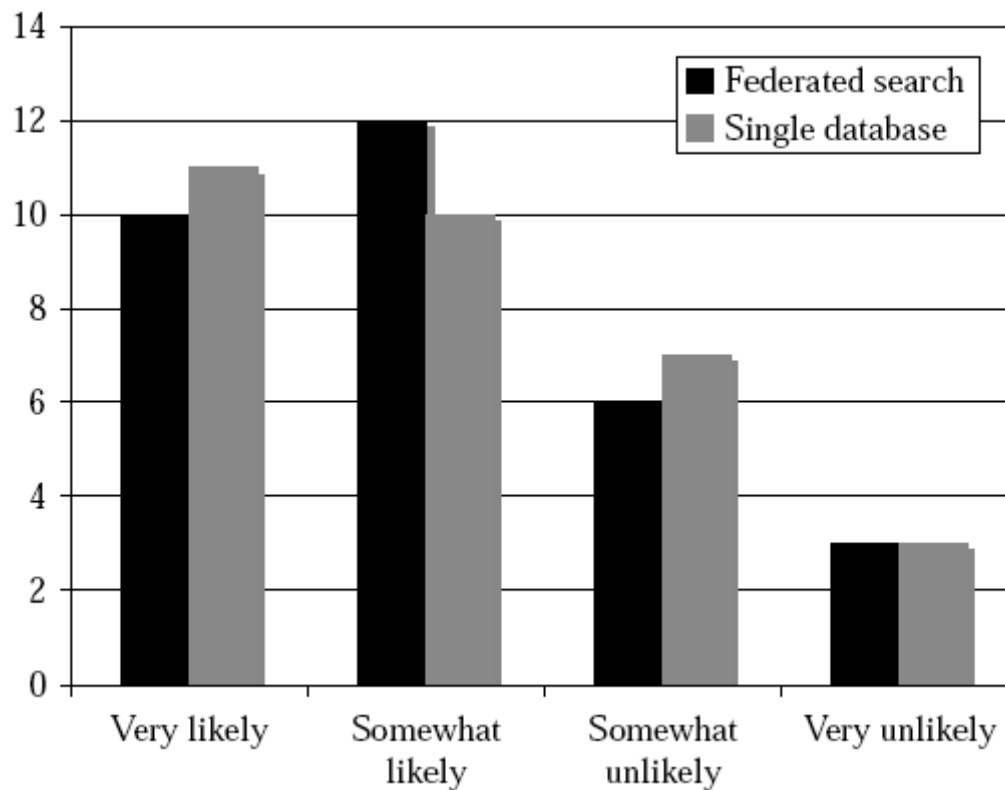
RESULTS



In total , 31 students completed and submitted the study.Students judgments of relevancy were slightly more weighted towards the federated search tool than single database , with 16 (51.6 percent) of students stating that results were more relevant in federated search tool and 10 (32.3 percent) of students stating that results were more relevant in case of single database .2 students

stated that neither resource produced relevant results on their topic and 3 said both the tools produced equally relevant results.

LIKELINESS OF FUTURE USE



The responses supported the assumption that most students would use both the tools in the future.

67.7 percent students stated that they would be very or somewhat likely to use the single database in the future , while 32.3 percent stated that they would be somewhat likely or very unlikely to do it again.

As for federated search tool, 70.1 percent stated that they would very or somewhat likely to use it again,while 29.0 percent stated that they would be somewhat or very unlikey to use it again.

2.4 ON CLUSTERING

Clustering is a process of forming groups (clusters) of similar objects from a given set of inputs. Good clusters have the characteristic that objects belonging to the same cluster are "similar" to each other, while objects from two different clusters are "dissimilar". The idea of clustering originates from statistics where it was applied to numerical data. However, computer science and data mining in particular, extended the notion to other types of data such as text or multimedia.


Corporate Client x Yippy x Federated search - Wikipedi... x

← → ↻ www.yippy.com

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YIPPY!™

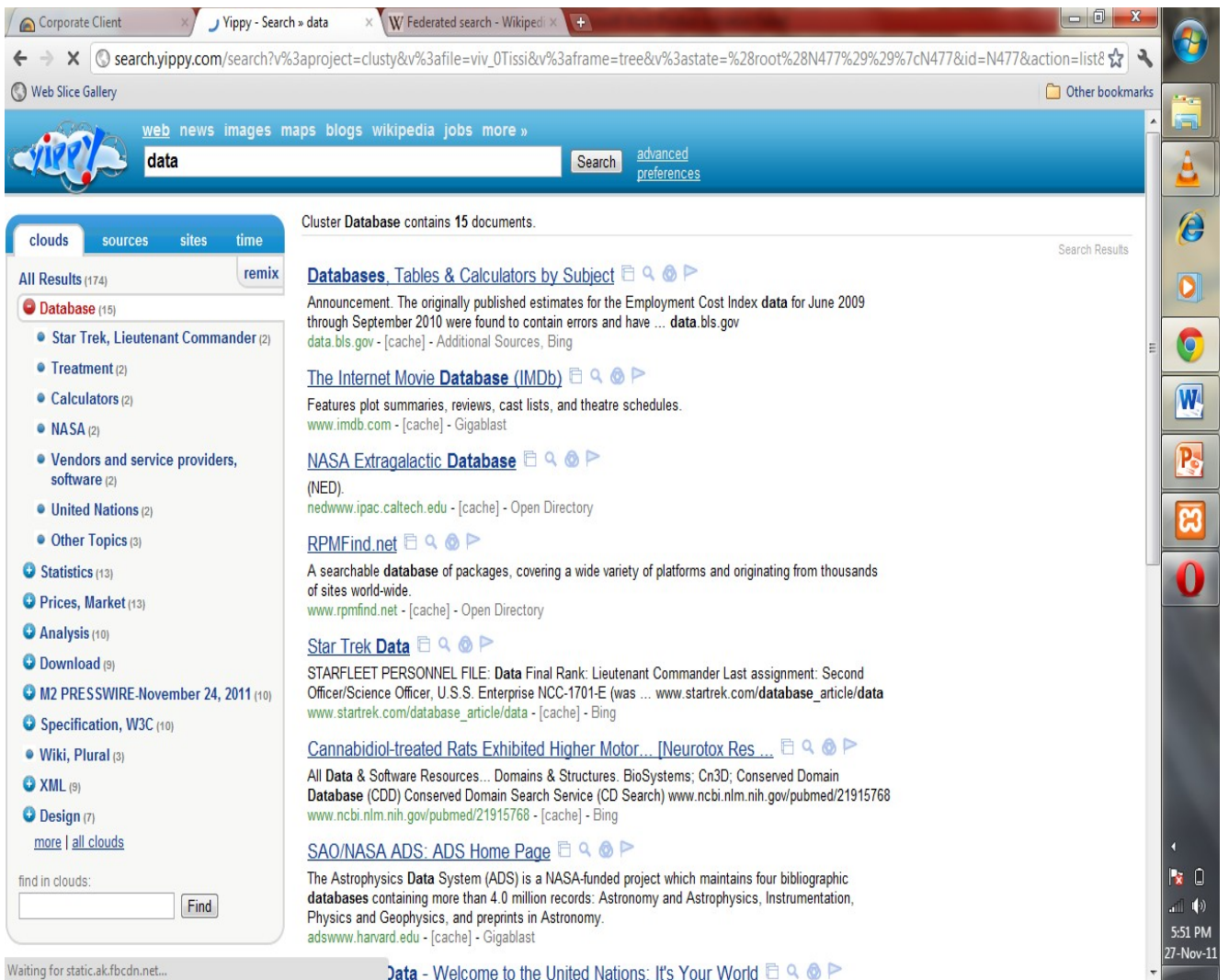
Desktop Tablet Mobile


Menu

TRY OUR FOOTBALL SEARCH ENGINE!

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5:26 PM
27-Nov-11



Above shown print screen is from a site called www.yippy .com

An attempt to show clustering of information.

Yet another example to show clustering is following:

The screenshot shows a web browser window displaying search results on the Scitopia website. The browser's address bar shows the URL www.scitopia.org/scitopia/result-list/fullRecord/data/. The page features a navigation bar with filters for 'societies (1218)', 'patents (105)', and 'government (298)'. A sidebar on the left titled 'Clusters' lists various topics such as 'Data Sets (101)', 'Data Collection (94)', and 'Data Storage (71)'. The main content area displays a list of search results, each with a title, a star rating, author information, and a logo from a professional organization. The results are:

- 1 Data Modeling Basics** (5 stars) by Ponniah, P. (IEEE logo). Title: Database Design and Development: An Essential Guide for IT Professionals 2003-01-01. Description: This chapter contains sections titled: Chapter Objectives What is a Data Model? Data Modeling Concepts Patterns of Data Modeling Data Views View Integration Chapter Summary Review Questions Exercises.
- 2 Data Compression for Nearly-Periodic Data** (5 stars) by Talmi, Amos; Ribak, Erez N. (OSA logo). Title: Adaptive Optics: Methods, Analysis and Applications (AO) 2009 paper: AOTHC5. Description: Shape from shade and Hartmann sensing require plenty of pixels for measurement, but many fewer can be analyzed, saving space and time. We found a method to compress large-format camera outputs with minimal accuracy loss.
- 3 Data preprocessing of spatial data mining** (5 stars) by Yuan, Hanning; Wang, Shuliang (SPIE logo). Title: Proceedings of SPIE 2005-10-10. Description: Data preprocessing is essential in spatial data mining. This paper presents some issues on data preprocessing. It pays more attention on incomplete data, inaccurate data, repetitive data, inconsistent data, and image data. Finally, a case is studied, and come with a satisfactory result.
- 4 Data Line Protection** (5 stars) by Mark Waller (AFE logo). Title: AFE Journal 1994-11-01.

At the bottom of the page, a snippet of text reads: '...rges can enter the data port, travel through a building, and reach the host computer'.

3. OBJECTIVES DEFINED

To achieve a better quality of service in the field of emerging subjects in Bioinformatics. Biologists working in the field of bioinformatics often come across with lack of key information resources such as software tools , database information , journals along with the association of institutions in order to correlate , compare and keep pace with the fast moving research program in bioinformatics.

IDRAS (Integrated Data Refining and Analysis System) is an effort to associate bioinformatics people with the Bioinformatics Information Resource , available over worldwide , at a single platform.

IDRAS searches the content based on PUBMED indexing terms and provides relevant results , without the noise of other Internet search engines in the form of clusters.

The information made available is further clustered into 6 major categories:

Database

Journals

Software tools

Webservers

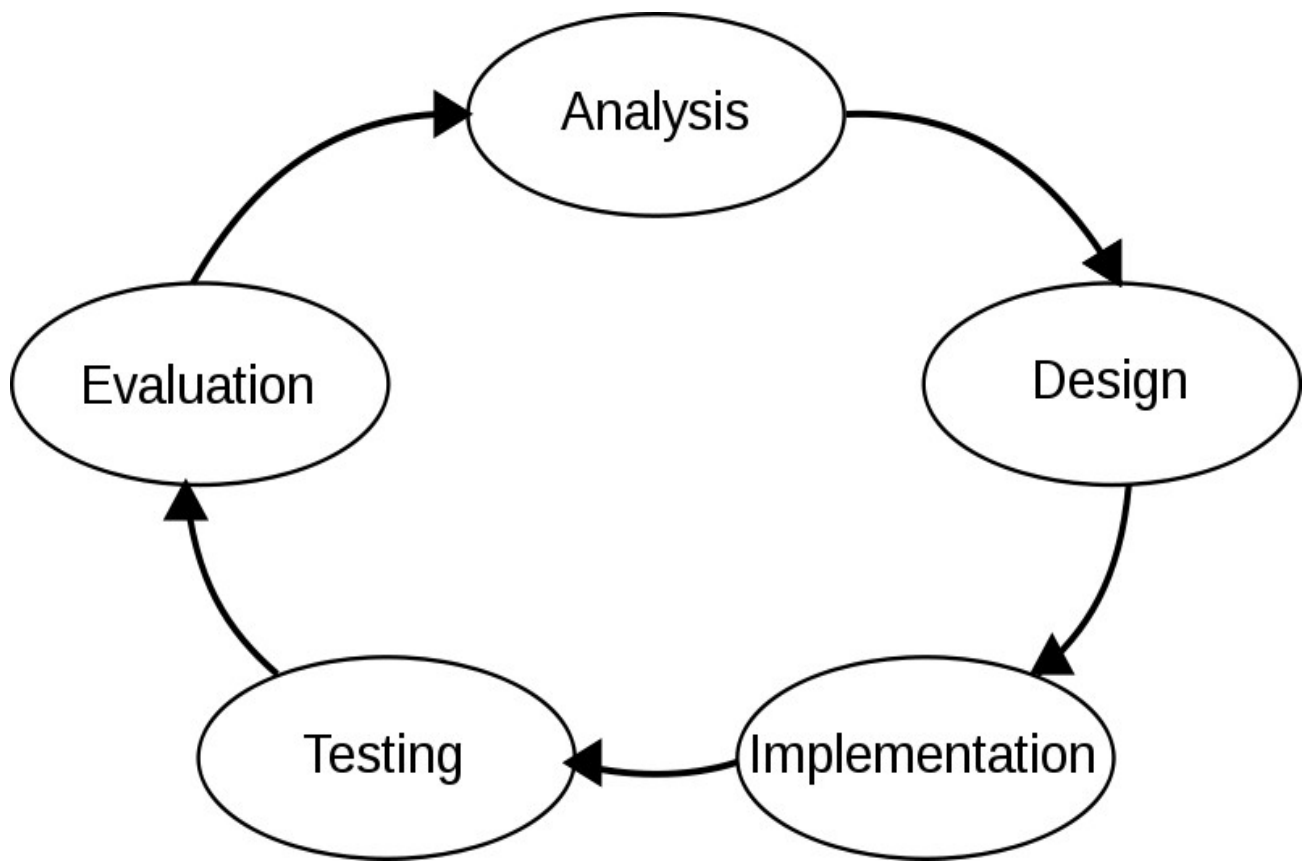
Patents

Institutions

4. DESIGNING

SYSTEMS DEVELOPMENT LIFE CYCLE

The **systems development life cycle (SDLC)**, or *software development life cycle* in systems engineering, information systems and software engineering, is a process of creating or altering information systems, and the models and methodologies that we will use to develop our system. In software engineering the SDLC concept underpins many kinds of software development methodologies. These methodologies form the framework for planning and controlling the creation of an information system.



SDLC MODEL

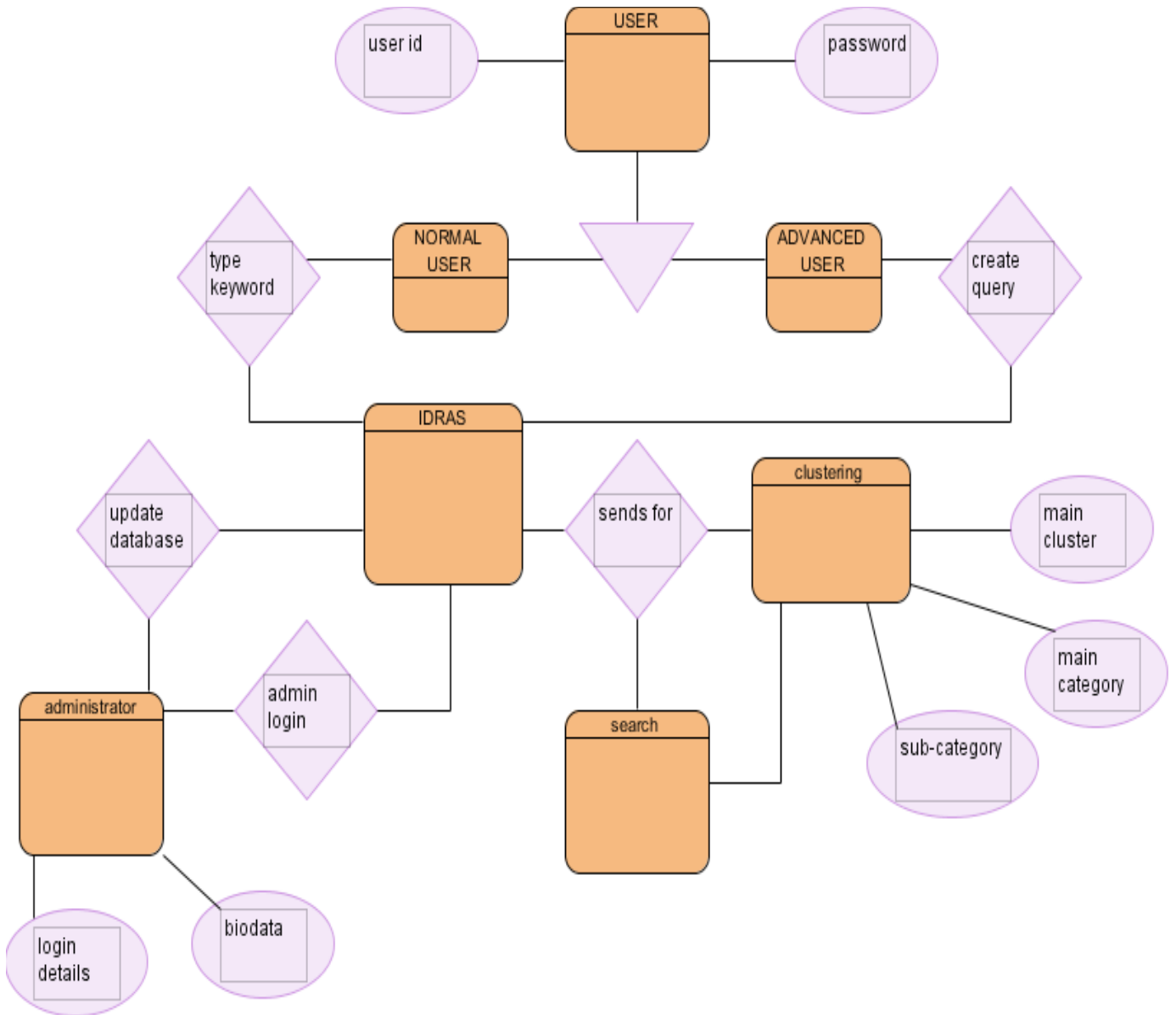
4.1 DESIGN THEORY

The Unified Modeling Language (UML) is used to specify, visualize, modify, construct and document the [artifacts](#) of an object-oriented software-intensive system under development. UML offers a standard way to visualize a system's architectural blueprints, including elements such as:

- [activities](#)
- [actors](#)
- [business processes](#)
- [database](#) schemas
- (logical) [components](#)
- [programming language](#) statements
- reusable [software components](#).

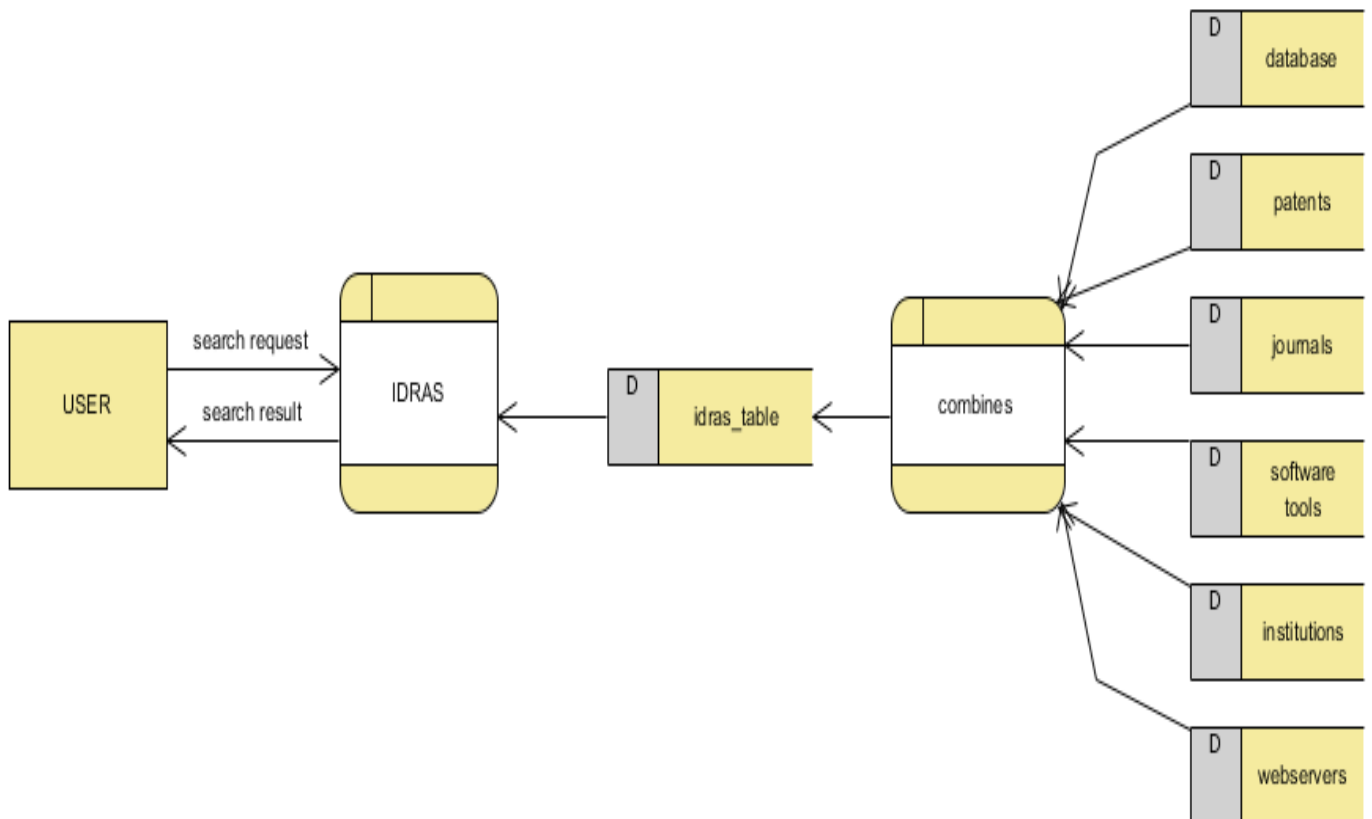
UML combines techniques from [data modeling](#) ([entity relationship diagrams](#)), [business modeling](#) (work flows), [object modeling](#), and component modeling. It can be used with all processes, throughout the [software development life cycle](#), and across different implementation technologies.

ENTITY-RELATIONSHIP DIAGRAM

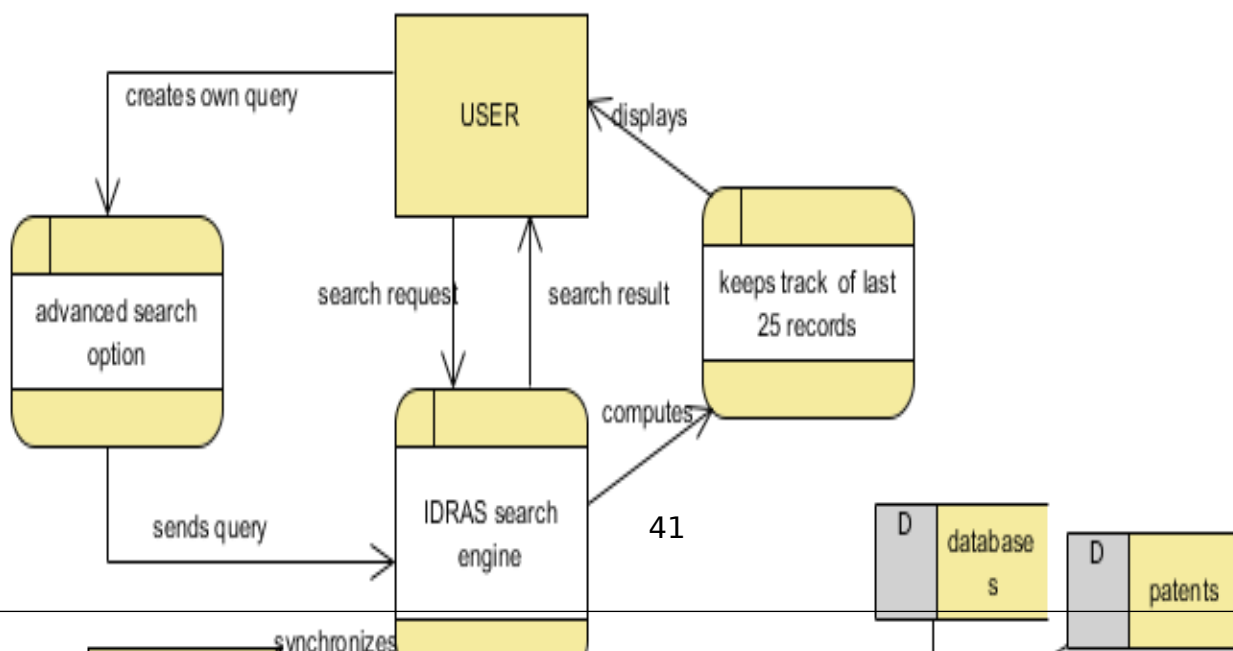


DATA FLOW DIAGRAM

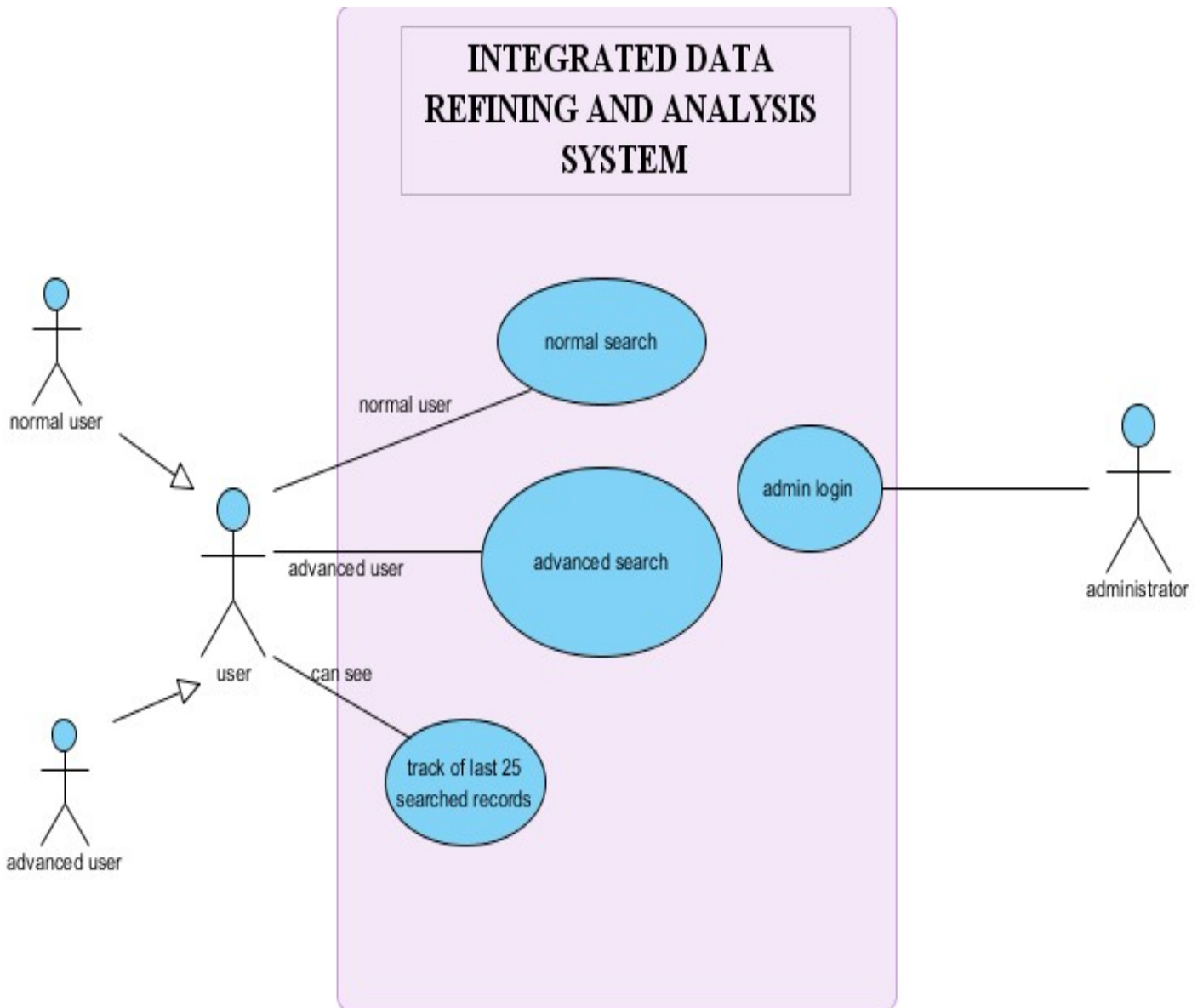
LEVEL-0



LEVEL-1



USE CASE DIAGRAM



5. CODING

CONTROLLERS

CODE: Welcome.php

```
/* Location: ./system/application/controllers/welcome.php */

class Welcome extends Controller {

    function Welcome()
    {
        parent::Controller();
        $this->load->model('page_model');
    }

    function index()
    {

        $id = "c1";
        $this->session->unset_userdata('error_message');
        $this->load->view('main'); //for header and logo
        $this->load->view('mainsearch'); //for search form
        $this->load->view('mainfooter'); //footer
    }
}

/* End of file welcome.php */
```

SUBSEQUENT PAGE

CODE: pages.php

```
<?php
class Pages extends Controller {

    function Pages()
    {
        parent::Controller();
        $this->load->model('page_model');
        $this->load->model('tree_model');
    }
}
```

```

        // $sql = $this->page_model->total_data();
        $this->session->set_userdata('total_resources',$sql);
    }
function index()
{

    $id = "c1";
    $this->session->unset_userdata('error_message');
    $this->load->view('main');
    $this->load->view('mainsearch');
    $this->load->view('mainfooter');

}

function browse($b_text='%',$start=0)
{
    $id = 'c4';
//SET MAIn cluster to search
    if($this->input->post('b_cluster'))
    {
        $b_cluster=$this->input->post('b_cluster');
        if($b_cluster=="All_Resources")
        {
            $b_cluster="";
        }
        $this->session->set_userdata('b_cluster',
$b_cluster);
    }
    $b_cluster=$this->session->userdata('b_cluster');

//SET BROWSE TEXT
    $results_per_page=10;
    if($this->input->post('b_text'))
    {
        $b_text=$this->input->post('b_text');
    }
    if(!trim($b_text))
    {
        //echo "Inside browse!!! Redirecting to Browse09
". $this->session->userdata('b_cluster');
        redirect('/pages/browse09');
    }
    $this->session->set_userdata('b_text',$b_text);

    $browse_data = $this->page_model-
>browse_data($b_text);
    $total_results = $this->page_model-
>count_browse_results($b_text);

```

```

        $first_result = $start + 1;
        $last_result = min($start + $results_per_page,
$total_results);

        $this->load->view('siteintial');
        $this->load->view('chooseheader2');
        $this->load->view('mainheader',array('id'=>$id));
        $this->load->view('browse_header');
        $this->load->view('browse_results', array(
            'search_terms' => $b_text,
            'first_result' => $first_result,
            'last_result' => $last_result,
            'total_results' => $total_results,
            'results' => $browse_data
        ));
        $this->load->view('mainfooter');

    }

function aboutus()
{
    $this->load->view('siteintial');
    $this->load->view('mainheader',array('id'=>$id));
    $this->load->view('full_aboutus');
    $this->load->view('mainfooter');

}

function contactus()
{
    $this->load->view('siteintial');
    $this->load->view('mainheader',array('id'=>$id));
    $this->load->view('contact_us');
    $this->load->view('mainfooter');

}

function faqs()
{
    $this->load->view('siteintial');
    $this->load->view('mainheader',array('id'=>$id));
    $this->load->view('faq');
    $this->load->view('mainfooter');

}

function loginpage()
{

```



```

        $this->load->view('siteintial');
        $this->load->view('mainheader',array('id'=>$id));
        $this->load->view('login_view');
        $this->load->view('mainfooter');

    }

    function adsearch()
    {
        $id = 'c2';
        $this->session->unset_userdata('error_message');
        $this->session->unset_userdata('qsi');
        $this->load->view('siteintial');
        $this->load->view('chooseheader2');
        $this->load->view('mainheader',array('id'=>$id));
        $this->load->view('adsearch');
        $this->load->view('mainfooter');
    }

    function browse09($start=0)
    {
        $id = 'c4';
//SET BROWSE TEXT
        $results_per_page=10;
        $this->session->set_userdata('b_text',"");
        $browse_data = $this->page_model->browse09();
        $total_results = $this->page_model->count_browse09();
        $first_result = $start + 1;
        $last_result = min($start + $results_per_page,
$total_results);

        $this->load->view('siteintial');
        $this->load->view('chooseheader2');
        $this->load->view('mainheader',array('id'=>$id));
        $this->load->view('browse_header');
        $this->load->view('browse_results', array(
            'search_terms' => $b_text,
            'first_result' => $first_result,
            'last_result' => $last_result,
            'total_results' => $total_results,
            'results' => $browse_data
        ));
        $this->load->view('mainfooter');
    }

    function results_per_page()
    {
        $results_per_page = 10;

```

```

        return $results_per_page;
    }

function adsearch1($start=0)
{
    if($this->session->userdata('qsi'))
    {
        $url = '/pages/adsearch1/';
        $this->adsearch2($start,$url);
    }
else
    {
        $mbd=$this->input->post('mbd');
        $mbj=$this->input->post('mbi');
        $mbw=$this->input->post('mbj');
        $mbi=$this->input->post('mbp');
        $mbp=$this->input->post('mbs');
        $mbs=$this->input->post('mbw');

        $sfild1=$this->input->post('sfild1');
        $sfild2=$this->input->post('sfild2');
        $sfild3=$this->input->post('sfild3');
        $sfild4=$this->input->post('sfild4');
        $sfild5=$this->input->post('sfild5');

        $s_text1=$this->input->post('s_text1');
        $s_text2=$this->input->post('s_text2');
        $s_text3=$this->input->post('s_text3');
        $s_text4=$this->input->post('s_text4');
        $s_text5=$this->input->post('s_text5');

        $yfrom=$this->input->post('yfrom');
        $yto=$this->input->post('yto');
        $match1=$this->input->post('match1');

        $si=$s_text1;

        if (!
trim($s_text1.$s_text2.$s_text3.$s_text4.$s_text5.$yfrom.$yto))
        {
            $errortext='At least one search field must
contain text.';
        }

        //Year range
        $yearfrom=1600;
        $yearto=date("Y");
    }
}

```

```

        if(trim($yfrom))
            if (!ctype_digit($yfrom))
                $errortext='Enter Valid Year.';
            elseif ($yfrom<$yearfrom)
                $errortext='Year can not be less than
'. $yearfrom.'.';

        if(trim($yto))
            if (!ctype_digit($yto))
                $errortext='Enter Valid Year.';

        if(trim($yfrom) and ($yto))
            if($yfrom>$yto)
                $errortext='Enter Valid Range.';

        if (trim($errortext))
        {
            $id = 'c2';
            $this->session-
>set_userdata('error_message',$errortext);
            $this->load->view('siteintial');
            $this->load->view('chooseheader2');
            $this->load-
>view('mainheader',array('id'=>$id));
            $this->load->view('adsearch');
            $this->load->view('mainfooter');
            return;
        }

        $search_q="";

        if (trim($s_text1))
            {$search_q=$this->build_query($search_q, $match1,
$sfild1, $s_text1);}
        if (trim($s_text2))
            {$search_q=$this->build_query($search_q, $match1,
$sfild2, $s_text2);}
        if (trim($s_text3))
            {$search_q=$this->build_query($search_q, $match1,
$sfild3, $s_text3);}
        if (trim($s_text4))
            {$search_q=$this->build_query($search_q, $match1,
$sfild4, $s_text4);}
        if (trim($s_text5))

```

```

        {$search_q=$this->build_query($search_q, $match1,
$sfield5, $s_text5);}

        if (trim($yfrom))
        {
            if (trim($search_q))
                $search_q=$search_q." and ( year >=
$yfrom )";
            else
                $search_q=$search_q." ( year >= $yfrom )";
        }

        if (trim($yto))
        {
            if (trim($search_q))
                $search_q=$search_q." and ( year <=
$yto )";
            else
                $search_q=$search_q." ( year <= $yto )";
        }

        $search_q = "( ".trim($search_q)." ) AND (";
        if ($mbd)
        {
            $search_q = $search_q."main_clusters =
'".$mbd."'";
        }
        if ($mbj)
        {
            if(substr("$search_q", -1)=="(")
            {
                $search_q
=$search_q."main_clusters = '".$mbj."'";
            }
            else
            {
                $search_q = $search_q." OR
main_clusters = '".$mbj."'";
            }
        }
        if ($mbw)
        {
            if(substr("$search_q", -1)=="(")
            {
                $search_q = $search_q."main_clusters =
'".$mbw."'";
            }
        }

```

```

else
{
$search_q =$search_q." OR main_clusters
= '". $mbw. "'";
}
}
if ($mbi)
{
if(substr("$search_q", -1)=="(")
{
$search_q =$search_q."main_clusters =
' ". $mbi. "'";
}
else
{
$search_q =$search_q." OR main_clusters
= '". $mbi. "'";
}
}
if ($mbp)
{
if(substr("$search_q", -1)=="(")
{
$search_q =$search_q."main_clusters =
' ". $mbp. "'";
}
else
{
$search_q =$search_q." OR main_clusters
= '". $mbp. "'";
}
}
if ($mbs)
{
if(substr("$search_q", -1)=="(")
{
$search_q =$search_q."main_clusters =
' ". $mbs. "'";
}
else
{
$search_q =$search_q." OR main_clusters
= '". $mbs. "'";
}
}
$search_q=$search_q.)";

```

```

        if ($search_q)
        {
            $this->session->set_userdata('qsi',
$search_q);
            $this->session->unset_userdata('search_query');
            $this->session->set_userdata('si',$si);
        }
        $url = '/pages/adsearch1/';
        $this->adsearch2($start,$url);
    }
}

function open_result($b_text)
{
    $start=0;
    $this->session->set_userdata('qsi'," master_list = ".
$b_text." ");
    //$this->session->unset_userdata('si');
    $url = '/pages/open_result';
    $this->adsearch2($start,$url);
}

function search($start=0)
{
    if ($this->input->post('q'))
    {
        $this->session->set_userdata('si',trim($this->input->
post('q')));
        $this->session->unset_userdata('qsi');
        redirect('/pages/search/');
    }
    if(!$this->session->userdata('si'))
    {
        redirect('pages');
    }

    $results_per_page = $this->results_per_page();
    $search_terms = $this->session->userdata('si');
}

```

```

        $where_query = $this->getquery($search_terms);
        $this->session->set_userdata('qsi',$where_query);
        $url = '/pages/search/';
        $this->adsearch2($start,$url);
    }

    function getquery($search_terms)
    {
        $search_terms1=$search_terms." ";
        $search_terms2=" ".$search_terms." ";
        $search_terms3=" ".$search_terms;
        $search_terms4=$search_terms."; ";
        $where_query = $where_query." ( ( subject_area
LIKE ' ".$search_terms."' OR subject_area LIKE ' ".
$search_terms1."%"

OR subject_area LIKE '%".$search_terms2."%' OR subject_area LIKE
 '%".$search_terms4."%' OR subject_area LIKE '%"
$search_terms3."' )";
        $where_query = $where_query." OR ( Keywords LIKE
' ".$search_terms."' OR Keywords LIKE ' ".$search_terms1."%' OR

Keywords LIKE '%".$search_terms2."%' OR Keywords LIKE '%"
$search_terms4."%' OR Keywords LIKE '%".$search_terms3."' ) ";
        $where_query = $where_query." OR
( Name_of_Resource LIKE ' ".$search_terms."' OR Name_of_Resource
LIKE ' ".

$search_terms1."%' OR Name_of_Resource LIKE '%"
$search_terms2."%' OR Name_of_Resource LIKE '%"
$search_terms4."%' OR Name_of_Resource LIKE

 '%".$search_terms3."' )";
        $where_query = $where_query." OR
( full_name_of_resource LIKE ' ".$search_terms."' OR
full_name_of_resource LIKE

' ".$search_terms1."%' OR full_name_of_resource LIKE '%"
$search_terms2."%' OR full_name_of_resource LIKE '%"
$search_terms4."%' OR

full_name_of_resource LIKE '%".$search_terms3."' )";
        $where_query = $where_query." OR
( brief_description LIKE ' ".$search_terms."' OR
brief_description LIKE ' ".

```

```

$search_terms1."%" OR brief_description LIKE '%".
$search_terms2."%" OR brief_description LIKE '%".
$search_terms4."%" OR brief_description

LIKE '%".$search_terms3."' );";
        $where_query = $where_query." OR ( country LIKE
'".$search_terms." OR country LIKE '".$search_terms1."%" OR

country LIKE '%".$search_terms2."%" OR country LIKE '%".
$search_terms4."%" OR country LIKE '%".$search_terms3."' );";
        $where_query = $where_query." OR ( year LIKE '".
$search_terms."' OR year LIKE '".$search_terms1."%" OR year LIKE

'".$search_terms2."%" OR year LIKE '%".$search_terms4."%" OR
year LIKE '%".$search_terms3."' );";
        $where_query = $where_query." OR
( name_of_the_developer LIKE '".$search_terms."' OR
name_of_the_developer LIKE

'".$search_terms1."%" OR name_of_the_developer LIKE '%".
$search_terms2."%" OR name_of_the_developer LIKE '%".
$search_terms4."%" OR

name_of_the_developer LIKE '%".$search_terms3."' );";

        $where_query = $where_query." OR
( name_of_the_organization LIKE '".$search_terms."' OR
name_of_the_organization

LIKE '".$search_terms1."%" OR name_of_the_organization LIKE '%".
$search_terms2."%" OR name_of_the_organization LIKE '%".
$search_terms4."%"

OR name_of_the_organization LIKE '%".$search_terms3."' ) );";
        return $where_query;

    }

    function adsearch2($start=0,$url='/pages/adsearch1') //for
tree and serch results
    {
        $results_per_page = $this->results_per_page();
        $search_terms = $this->session->userdata('qsi');
        $search_query = $search_terms;

```



```

        $results = $this->page_model->search($search_query,
$start, $results_per_page);
        $total_results = $this->page_model-
>count_search_results($search_query);

        $main_clusters = '';
        $main_category = '';
        $sub_category = '';
        if($this->session->userdata('si'))
        {
            $search_terms=$this->session->userdata('si');
        }
        else
        {
            $search_terms='';
        }

        $id='c10';

        $this->load->view('siteintial');
        $this->load->view('mainheader');
        $this->load->view('chooseheader2');

        $this->load->view('header', array('search_terms' =>
$search_terms));
        $this->adtreedata($search_query);
        $this->paging($total_results,$results_per_page,$url,
$search_terms,$results,$start,$main_clusters,$main_category,
$sub_category);

        $this->load->view('mainfooter');
    }

```

```

function check_item($nodes,$item)
{
    $j =0;
    $flag = 0;
    $m = 0;
    foreach($nodes as $node)
    {
        if($node->$item != '')
        {
            $linearray = explode("`", $node->$item);
            for($i = 0; $i < count($linearray); $i++)
            {

```

```

        $linearray[$i] = trim($linearray[$i], "
");
        $array[$j] = $linearray[$i];
        $j++;
    }
}
return $this->check($array);
}

function check($array)
{
    $j =0;
    $flag =0;
    for($i = 0; $i<count($array) ;$i++)
    {
        if($j == 0)
        {
            $country_array[$j] = $array[$i];
            $j++;
        }
        else
        {
            for($m = 0 ; $m < $j ; $m++)
            {
                if(!strcasecmp($country_array[$m],
$array[$i]) )
                {
                    $flag = 1;
                    break;
                }
            }
            if($flag == 0)
            {
                $country_array[$j] = $array[$i];
                $j++;
            }
        }
        $flag = 0;
    }
    return $country_array;
}

function duplicate_check_item($nodes,$item)
{
    $j =0;

```

```

        $flag = 0;
        $m = 0;
        foreach($nodes as $node)
        {
            if($node->$item != '')
            {
                $linearray = explode(";", $node->$item);
                for($i = 0; $i < count($linearray); $i++)
                {
                    $linearray[$i] = trim($linearray[$i], "
");
                    $array[$j] = $linearray[$i];
                    $j++;
                }
            }
        }
        return $this->check($array);
    }

    function ad_no_of_records_of_node($search_terms, $node,
    $item)
    {
        for($i=0;$i<count($node);$i++)
        {
            $no_of_records_of_node[$i] = $this-
>tree_model->ad_no_of_records_of_node($search_terms, $node[$i],
    $item);
        }
        return $no_of_records_of_node;
    }

    function adtreedata($search_terms)
    {
        $nodes = $this->tree_model-
>adsearch_node($search_terms);
        $total_no_of_records = $this->tree_model-
>ad_total_no_of_records($search_terms);
        $main_clusters = $this-
>check_item($nodes, 'main_clusters');

        for($i=0;$i<count($main_clusters);$i++)
        {
            $no_of_records_in_main_cluster[$i] = $this-
>tree_model-
>ad_no_of_records_in_main_cluster($main_clusters[$i],
    $search_terms);

```

```

    }

    for($i=0;$i<count($main_clusters);$i++)
    {

        $main_category_nodes = $this->tree_model-
>ad_search_main_clusters($main_clusters[$i],$search_terms);

        $main_category[$i] = $this-
>check_item($main_category_nodes,'main_category');

        for($k=0;$k<count($main_category[$i]);$k++)
        {
            $no_of_records_in_main_category[$i]
[$k] = $this->tree_model->ad_no_of_records_in_main_category
($main_clusters[$i],$main_category[$i][$k],$search_terms);

        }
        /* Other of main category */
        $others_main_category = $this-
>tree_model-
>ad_no_of_records_of_others_main_category($main_clusters
[$i],$search_terms);

        if($others_main_category>0)
        {
            $count_main_category =
count($main_category[$i]);
            $main_category[$i]
[$count_main_category] = 'Others';
            $count_no_of_records_main_category
= $k;

            $no_of_records_in_main_category[$i]
[$count_no_of_records_main_category] =
$others_main_category;

        }

        for($j=0;$j<count($main_category[$i]);$j++)
        {
            $sub_category_nodes = $this-
>tree_model->ad_search_sub_clusters($main_clusters[$i],
$main_category

```

```

[$i][$j],$search_terms);
        $sub_category[$i][$j] = $this-
>check_item($sub_category_nodes,'sub_category');

        for($k=0;$k<count($sub_category[$i]
[$j]);$k++)
        {
            $no_of_records[$i][$j][$k] =
$this->tree_model->ad_no_of_records($main_clusters[$i],
$main_category[$i][$j],$sub_category[$i][$j][$k],$search_terms);
        }

        $others = $this->tree_model-
>ad_no_of_records_of_others($main_clusters[$i],
$main_category[$i][$j],
$search_terms);

        if($others>0)
        {
            $count_sub_category =
count($sub_category[$i][$j]);
            $sub_category[$i][$j]
[$count_sub_category] = 'Others';
            $count_no_of_records = $k;
            $no_of_records[$i][$j]
[$count_no_of_records] = $others;
        }

        $count[$i] += count($sub_category[$i]
[$j]);
    }
}
$countallcat=0;
for ($i=0;$i<count($count);$i++)
{
    $countallcat+= $count[$i];
}
$year = $this-
>duplicate_check_item($nodes,'Year');
$country = $this-
>duplicate_check_item($nodes,'Country');
rsort($year);

```

```

        sort($country);
        $no_of_records_of_country = $this->
>ad_no_of_records_of_node($search_terms,$country,'Country');
        $no_of_records_of_year = $this->
>ad_no_of_records_of_node($search_terms,$year,'Year');
        $data['country_array'] = $country;
        $data['year_array'] = $year;
        $data['main_clusters_array'] = $main_clusters;
        $data['main_category_array'] = $main_category;
        $data['sub_category_array'] = $sub_category;
        $data['all_sub_category'] = $count;
        $data['count_all_cat'] = $countallcat;
        $data['no_of_records'] = $no_of_records;
        $data['no_of_records_in_main_category'] =
$no_of_records_in_main_category;
        $data['no_of_records_in_main_cluster'] =
$no_of_records_in_main_cluster;
        $data['no_of_records_of_year'] =
$no_of_records_of_year;
        $data['no_of_records_of_country'] =
$no_of_records_of_country;
        $data['total_no_of_records'] =
$total_no_of_records;
        $this->load->view('treeview1',$data);
    }

    function search_category($category,$term)
    {
        $sql = $this->page_model->search_cat();
        $categories = $this->check_item($sql,$term);
        $replacements = array('!', '*', '"', '(', ')', ';',
":", "@", "&", "=", "+", "$", ",", "/", "?", "%", "#", "[",
"]");
        for($i=0; $i<count($categories);$i++)
        {
            $check_category = str_replace($replacements,"",
$categories[$i]);
            if($check_category == $category)
            {
                $category = $categories[$i];
                break;
            }
        }
        return $category;
    }
}

```

```

function paging($total_results,$results_per_page,$url,
$search_terms,$results,$start,$main_clusters,$main_category,
$sub_category)
{

    $config['base_url'] = site_url($url);
    $config['total_rows']=$total_results;
    $config['per_page']=$results_per_page;
    $config['first_link'] = '&lt;&lt; First';
    $config['last_link'] = 'Last &gt;&gt;';
    $config['num_links'] = 5;
    $config['next_link'] = 'Next &gt;';
    $config['prev_link'] = '&lt; Previous';

    $this->pagination->initialize($config);

    $first_result = $start + 1;
    $last_result = min($start + $results_per_page,
$total_results);

    $this->load->view('search_results', array(
        'search_terms' => $search_terms,
        'main_clusters' => $main_clusters,
        'main_category' => $main_category,
        'sub_category' => $sub_category,
        'first_result' => @$first_result,
        'last_result' => @$last_result,
        'total_results' => @$total_results,
        'results' => @$results));
}

function build_query($search_q, $opr1, $field1, $text1)
{
    if (trim($search_q))
    {
        $search_q=$search_q." ".$opr1." ";
    }
    $search_q=$search_q." ( ";
    $search_q=$search_q." (". $field1." = '". $text1."' ) OR
";
    $search_q=$search_q." (". $field1." Like '". $text1."
%' ) OR ";
    $search_q=$search_q." (". $field1." Like '% ". $text1."
%' ) OR ";
}

```

```
        $search_q=$search_q." ($.field1." Like '% ".
$text1."' ) ";
        $search_q=$search_q." ) ";
        return $search_q;
    }

}

?>
```


MODELS

CODE: page_model.php

```
/* Location: ./system/application/models/page_model.php */

<?php
class Page_model extends Model
{
    function Page_model()
    {
        parent::Model();
        // Make the database available to all the methods
        $this->load->database();
    }
    function database()
    {
        $database = 'idras';
        return $database;
    }
    function view_pub()
    {
        $master_list_no=$this->session
>userdata('master_list_no');
        $sql="select * from publications where master_list =".
$master_list_no." order by title_of_the_paper";
        $query = $this->db->query($sql);
        return $query->result();
    }

    function view_res()
    {
        $master_list_no=$this->session-
>userdata('master_list_no');
        $sql="select * from idras where master_list =".
$master_list_no;
        $query = $this->db->query($sql);
        return $query->result();
    }

    function search($terms, $start = 0, $results_per_page = 0)
    {
        $database = $this->database();
```

```

        // Determine whether we need to limit the results
        if ($results_per_page > 0)
        {
            $limit = "LIMIT $start, $results_per_page";
        }
        else
        {
            $limit = '';
        }
        // Execute our SQL statement and return the
result
        $sql = "SELECT * FROM $database WHERE ".
$terms." order by Name_of_Resource ".$limit;
        $query = $this->db->query($sql);
        return $query->result();
    }

    function count_search_results($terms)
    {
        $database = $this->database();

        // Run SQL to count the total number of search results
        $sql = "SELECT COUNT(*) AS count
            FROM $database
            WHERE $terms";
        $query = $this->db->query($sql, array($terms));
        return $query->row()->count;
    }
}
?>

```

VIEWS

CODE: chooseheader2.php

```
/* Location: ./system/application/views/chooseheader2.php */  
  
<div id="idras"><b>IDRAS</b></div>  
<div id="idrasintro"><i>Integrated Data Refining and Analysis  
System </i></div>
```

Code: header.php

```
/* Location: ./system/application/views/header.php */  
  
</div></div>  
<div class="container_16">  
<div >  
<br><br><br><br>  
    <div style="float:left; width:100%;padding-left:20px" >  
        <?php echo form_open('pages/search'); ?>  
  
<p align="left" class="no-border">  
  
    <input class="searchText2" align="right" type="text" name="q"  
value="<?php echo $search_terms ?>" />  
    <INPUT name="submit" type="submit" class="button"  
value="Search"  
style="size:landscape;height:30px;width:60px;margin-left:5px"/>  
</p>  
  
<br><br><br>  
</div>  
  
</div>  
<div style="background-color:#ffffff">
```

CODE: main.php

```
/* Location: ./system/application/views/main.php */  
  
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">  
<html xmlns="http://www.w3.org/1999/xhtml">
```

```

<head>

<meta http-equiv="content-type" content="text/html;
charset=utf-8" />

<title>IDRAS-Integrated Data Refining and Analysis
System</title>

<meta name="keywords" content="" />

<meta name="description" content="" />

<link href="style.css" rel="stylesheet" type="text/css"
media="screen" />

</head>

<body>

<div id="header-wrapper">

    <div id="header">

        <div id="menu">

            <ul>
                <li><a href="#" class="first">Home</a></li>

                <li class="current_page_item"><a
href="#">Browse</a></li>

                <li><a href="help.php">help</a></li>
            </ul>

        </div>

        <!-- end #menu -->
        <form action="#" method="post" id="login">

            <label><b><font color=
"#AED75B">.....</font>Email:</b></label>

            <input type="text" name="username" value=""
id="search-text" size="15" title="Start typing and hit ENTER" />

            <label ><b>Password:</b></label>

```

```

        <input type="password" name="pass" value=""
id="search-text" size="15" title="Start typing and hit ENTER" />

        <span class="no-border">

            <input name="submit" type="submit"
class="button" tabindex="5" value="Login" />

        </span>| <a
href="http://ibira.net/pages/register"><b>Register</b> </a>

    </form>

</div>

</div>

<!-- end #header -->

<!-- end #header-wrapper -->

<div id="logo">

    <h1><i><b>IDRAS</b></i></h1>

    <p><em>.....Integrated Data Refining and
Analysis System</em></p>

</div>

<hr />

<!-- end #logo -->

</body>

</html>

```

CODE: mainfooter.php

```

    <div id="footer">

        <div align="left" style="font:'Times New Roman',
Times, serif;font-size:14px;letter-
spacing:2;width:100%;float:left;">

```

```
<center>
```

```
    <a href="#" style="color: #000000"
onmouseover="this.style.color='#339900'"
onmouseout="this.style.color='#000000'"> Home </a> &nbsp;|&nbsp;
```

```
    <a href="#" style="color: #000000"
onmouseover="this.style.color='#339900'"
onmouseout="this.style.color='#000000'"> Contact Us </a> &nbsp;|
&nbsp;
```

```
    <a href="#" style="color: #000000"
onmouseover="this.style.color='#339900'"
onmouseout="this.style.color='#000000'">About Us</a> &nbsp;|
&nbsp;
```

```
    <a href="#" style="color: #000000"
onmouseover="this.style.color='#339900'"
onmouseout="this.style.color='#000000'">FAQ's</a>&nbsp;|&nbsp;
```

```
    <a href="#" style="color: #000000"
onmouseover="this.style.color='#339900'"
onmouseout="this.style.color='#000000'"> Give Us Feedback </a>
&nbsp;|&nbsp;
```

```
    <a href="#" style="color: #000000"
onmouseover="this.style.color='#339900'"
onmouseout="this.style.color='#000000'">Admin Login</a>
```

```
<br><br>Disclaimer : The information available on this website
is indicative only.
```

```
</center>
```

```
</div>
```

```
</div>
```

CODE: mainheader.php

```
/* Location: ./system/application/views/mainheader.php */
```

```
<html>
```

```

    <head><title></title></head>
    <body>

<ul><li><h1><a href="#" class="first">Home</a></h1></li></ul>
    </body>
</html>

```

CODE: mainsearch.php

```
/* Location: ./system/application/views/mainsearch.php */
```

```

<div id="page">
<?php $attributes = array( 'id' => 'quick-search');
    echo form_open('pages/search',$attributes);  ?>
<br><br>
<form>
    <p >
        <input name="q" type="text" class="searchText "
value="" id="searchText"/>

        <INPUT    name="submit" type="submit" class="button"
value=""
style="background:url(images/icon.jpg);height:80px;width:80px;"
>
        </p>
</form>

<div id="sidebar">
    <ul>
    <li>
        <h2>About <i>IDRAS</i></h2>
<b>IDRAS</b> (Integrated Data Refining and Analysis System) is
an effort to associate bioinformatics people with the
Bioinformatics Information Resource, available over worldwide,
at a single platform in five leading areas of the bioinformatics
which are: Molecular Biology Databases, Journals publishing
Bioinformatics articles, Software Tools for analyzing
Bioinformatics data, Web-servers hosting plethora of
bioinformatics data sets, Patents and Institutions working and
imparting education in the area of bioinformatics. <a
href="http://ibira/pages/aboutus" > ...read more </a>
        </li>
    <li>
        <h2>How To Use <i>IDRAS</i></h2>
        IDRAS works on the principle of federated search Engine. It
collects information related to bioinformatics domain and

```

```

creates clusters of information of five categories. These
categories are Database, Journals, Institutions, Software and
Web-Server along with countries and Year. <a
href="http://ibira/pages/help" > ...readmore </a>
    </li>
  </ul>

</div>
</div>

```

Code: search_results.php

```

/* Location: ./system/application/views/search_results.php */

<?php $replacements = array(';'); ?>

<div style="float:right; width:79%;padding-right:3px; ">

<table width="100%" style="font:Verdana, Arial, Helvetica,
sans-serif;font-size:12px;padding-left:0px " >
<tr>
<td width="1%" background="<?php echo base_url();?
>images/bg_left.gif">
</td>
<td width="4%">
</td>
<td>
<br /><br />
<?php
?><div align="left" style="font:Verdana, Arial, Helvetica,
sans-serif;font-size:16px;padding-left:24px" ><?php
echo $this->pagination->create_links();

?><br>
<br>

</div>
<?php
if ( ! is_null($results))
{
    if (count($results))
    {?>
        <p><?php $this->session->userdata('qsi'); ?></p>
        <p><b>Showing search results for '<?php
echo $search_terms;

```



```

        ?>' (<?php echo $first_result; ?>&ndash;<?php echo
$last_result; ?> of <?php echo $total_results; ?>):</b>
        <br /><br />

        <?php //echo $search_terms.'>'.$main_clusters.'>'.
$main_category.' > '.$sub_category; ?>

</p>
        <ol style="list-style-type: decimal; font-size:14px;
font-family: 'Times New Roman', Times, serif; font-style:normal"
start=<?php echo (int)$first_result?>><?php
        foreach($results as $result)
        {
                ?><li>
                <!-- Name_of_Resource-->
                <?php
                if($result->Name_of_Resource)
                { ?>
                <p align='justify'><font color="#3D3D3D"
style="font-weight:bold;font-size:14px; " >

                <!-- IF URL Exist then only show the hyperlink -->
                <?php
                if($result->url_of_resource)
                { ?>
                <a style="color:#000000; font-weight:bold;font-
size:14px; "
                onmouseover="this.style.color='#FF0000'"
                onmouseout="this.style.color='#000000'"
                href="<?php if($result->url_of_resource) echo
$result->url_of_resource ?>">
                <?php
                } ?>
                <b><?php echo highlight_phrase($result-
>Name_of_Resource, $search_terms, '<span
style="color:#F47200">', '</span>'); ?>
                </a></b></font>
                <?php
                } ?>

                <?php
                if($result->view_pub)
                { ?>
                        <a href="<?php echo site_url();?
>pages/view_publication/<?php echo $result->master_list?>"
target="_blank">(View Publication)</a><?php
                } ?>

```

```

        <?php
        if($result->view_course)
        { ?>
                <a href="<?php echo site_url();?
>pages/view_courses/<?php echo $result->master_list?>"
target="_blank">(View Courses)</a><?php
        } ?>

        <!-- allow edit resource if admin login -->
        <?php
        if($this->session->userdata('logged_as') ==
'admin')
        { ?>
                <b><a href="<?php echo site_url();?
>user/edit_resource/<?php echo $result->master_list?>"
target="_blank">(Edit Resource No.
                <?php echo $result->master_list."></a></b>";
        } ?>

        <!-- full_name_of_resource-->
        <?php
        if($result->full_name_of_resource)
        { ?>
                <br><b>Full Name of the
Resource</b> :
                <font color="#3D3D3D" style="font-
weight:100" >
                <?php echo
highlight_phrase($result->full_name_of_resource, $search_terms,
'<span style="color:#F47200">', '</span>'); ?> </font>
                <?php
                } ?>

        <!-- Resource Category -->
        <br><b>Resource Category</b> :
        <font color="#3D3D3D" style="font-weight:100" >
        <?php echo highlight_phrase($result-
>main_clusters, $search_terms, '<span style="color:#F47200">',
'</span>'); ?> </font><?php
        ?>
        <?php
        if($result->main_category)
        { ?>
                <?php echo highlight_phrase(" -> ".$result-
>main_category, $search_terms, '<span style="color:#F47200">',
'</span>'); ?> </font><?php
        } ?>

```

```

        <?php
        if($result->sub_category)
        { ?>
            <?php echo highlight_phrase(" -> ".$result-
>sub_category, $search_terms, '<span style="color:#F47200">',
'</span>'); ?> </font><?php
        } ?>

        <?php
        if($this->session->userdata('logged_as') ==
'admin' )
        {
        if($result->main_clusters == 'Institutions')
        {?>
        <b><a href="<?php echo site_url();?
>user/add_courses/<?php echo $result->master_list?>"
target=" _blank">(Add Courses)</a></b>
        <?php
        }
        else
        {?>
        <b><a href="<?php echo site_url();?
>user/add_pub/<?php echo $result->master_list?>"
target=" _blank">(Add Publication)</a></b>
        <?php
        }} ?>

        <!-- accesibility-->
        <?php
        if($result->accesibility)
        { ?>
            <br><b>Accesibility</b> :
            <?php echo $result->accesibility;?
        } ?>

        <!-- inventor -->
        <?php
        if($result->inventor)
        { ?>
            <br><b>Inventor</b> :
            <font color="#3D3D3D" style="font-
weight:100" >
            <?php echo
highlight_phrase($result->inventor, $search_terms, '<span
style="color:#F47200">', '</span>'); ?> </font><?php
        } ?>

```

```

<br>
        <!-- brief_description -->
        <?php
        if($result->brief_description)
        { ?>
                <br><b>Brief Description</b> :
                <font color="#3D3D3D" style="font-
weight:100" >
                        <?php echo
highlight_phrase($result->brief_description, $search_terms,
'<span style="color:#F47200">', '</span>'); ?> </font><?php
        } ?>

        <!-- assignee -->
        <?php
        if($result->assignee)
        { ?>
                <br><b>Assignee</b> :
                <font color="#3D3D3D" style="font-
weight:100" >
                        <?php echo
highlight_phrase($result->inventor, $search_terms, '<span
style="color:#F47200">', '</span>'); ?> </font><?php
        } ?>
        <!-- application_no -->
        <?php
        if($result->inventor)
        { ?>
                <br><b>Application No.</b> :
                <font color="#3D3D3D" style="font-
weight:100" >
                        <?php echo
highlight_phrase($result->application_no, $search_terms, '<span
style="color:#F47200">', '</span>'); ?> </font><?php
        } ?>
        <!-- abstract -->
        <?php
        if($result->filed_on)
        { ?>
                <br><b>Filed On</b> :
                <font color="#3D3D3D" style="font-
weight:100" >
                        <?php echo
highlight_phrase($result->filed_on, $search_terms, '<span
style="color:#F47200">', '</span>'); ?> </font><?php
        } ?>
        <!-- source -->

```

```

        <?php
        if($result->source)
        { ?>
                <br><b>Source</b> :
                <font color="#3D3D3D" style="font-
weight:100" >
                        <?php echo
highlight_phrase($result->source, $search_terms, '<span
style="color:#F47200">', '</span>'); ?> </font><?php
        } ?>

        <!-- subject_area -->
        <?php
        if($result->subject_area)
        { ?>
                <br><b>Subject Area</b> :
                <font color="#3D3D3D" style="font-
weight:100" >
                        <?php echo
highlight_phrase($result->subject_area, $search_terms, '<span
style="color:#F47200">', '</span>'); ?> </font><br /><?php
        } ?>
<br>

        <!-- name_of_the_organization-->
        <?php
        if($result->name_of_the_organization)
        { ?>
                <br><b>Institute/s</b> :<br>
                <font color="#3D3D3D" style="font-
weight:100" >
                        <a style="color:#000000; text-
decoration:none;" onmouseover="this.style.color='#FF0000'"
onmouseout="this.style.color='#000000'" href="<?php if($result-
>url_of_the_organization) echo $result-
>url_of_the_organization ?>"><?php echo
highlight_phrase(str_replace($replacements,"<br>",$result-
>name_of_the_organization), $search_terms, '<span
style="color:#F47200">', '</span>'); ?> </a></b></font><?php
        } ?>

        <!-- address_of_the_organization -->
        <?php
        if($result->address_of_the_organization)
        { ?>
                <br><b>Address of
Institute/s</b> : <br>
                <font color="#3D3D3D" style="font-
weight:100" >

```

```

                                <?php echo
highlight_phrase(str_replace($replacements,"<br>",$result-
>address_of_the_organization), $search_terms, '<span
style="color:#F47200">', '</span>'); ?> </font><?php
    } ?>

    <!-- Publisher -->
    <?php
    if($result->publisher)
    { ?>
                                <br><b>Publisher</b> :
                                <font color="#3D3D3D" style="font-
weight:100" >
                                <?php echo
highlight_phrase(str_replace($replacements,"<br>",$result-
>publisher), $search_terms, '<span style="color:#F47200">',
'</span>'); ?> </font><?php
    } ?>

    <!-- state -->
    <?php
    if($result->state)
    { ?>
                                <br><b>State</b> :
                                <font color="#3D3D3D" style="font-
weight:100" >
                                <?php echo
highlight_phrase(str_replace($replacements,"<br>",$result-
>state), $search_terms, '<span style="color:#F47200">',
'</span>'); ?> </font><?php
    } ?>
    <!-- Country -->
    <?php
    if($result->Country)
    { ?>
                                <br><b>Country</b> :
                                <?php echo $result->Country;?><?
php
    } ?>

    <!-- Associated Institutes-->
    <?php
    if($result->associated_institutes)
    { ?>
                                <br><br><b>Associated
Institutes</b> :<br>
                                <font color="#3D3D3D" style="font-
weight:100" >

```

```

                                <?php echo
highlight_phrase(str_replace($replacements,"<br>",$result-
>associated_institutes), $search_terms, '<span
style="color:#F47200">', '</span>'); ?> </font><?php
    } ?>

    <!-- Associated Country -->
    <?php
    if($result->associated_country)
    { ?>
                                <br><b>Associated Country</b> :
                                <?php echo $result-
>associated_country;?><?php
    } ?>

<br>

    <!-- publishing_since -->
    <?php
    if($result->publishing_since)
    { ?>
                                <br><b>Publishing Since</b> :
                                <?php echo $result-
>publishing_since;?><?php
    } ?>

    <!-- frequency -->
    <?php
    if($result->frequency)
    { ?>
                                <br><b>Frequency</b> :
                                <?php echo $result->frequency;?><?
php
    } ?>
    <!-- isi_if_2009-->
    <?php
    if($result->isi_if_2009)
    { ?>
                                <br><b>Impact Factor (2009)</b> :
                                <?php echo $result->isi_if_2009;?
><?php
    } ?>
    <!-- indexing_abstracting -->
    <?php
    if($result->indexing_abstracting)
    { ?>

```

```

                                <br><b>Indexing &
Abstracting</b> :
                                <?php echo $result-
>indexing_abstracting;?><?php
                                } ?>

                                <!-- issn_online-->
                                <?php
                                if($result->issn_online)
                                { ?>
                                        <br><b>ISSN (Online)</b> :
                                        <?php echo $result->issn_online;?
                                } ?>
                                <?php

                                <!-- issn_print-->
                                <?php
                                if($result->issn_print)
                                { ?>
                                        <br><b>ISSN (Print)</b> :
                                        <?php echo $result->issn_print;?
                                } ?>
                                <?php

                                <br>

                                <!-- editorial_board-->
                                <?php
                                if($result->editorial_board)
                                { ?>
                                        <br><b>Editorial Board </b> : <a
href='<?php echo $result->editorial_board;?>'><b>Click here </b>
</a>
                                } ?>
                                <?php

                                <!-- Editor -->
                                <?php
                                if($result->editor)
                                { ?>
                                        <br><b>Editor</b> :
                                        <?php echo $result->editor;?><?php
                                } ?>

                                <!-- Editorial Contact -->
                                <?php
                                if($result->editorial_contact)
                                { ?>

```



```

                                <br><b>Editorial Contact</b> :
                                <?php echo $result-
>editorial_contact;?><?php
    } ?>

    <!-- contact_person-->
    <?php
    if($result->contact_person)
    { ?>
        <br><b>Contact Person</b> :
        <?php echo $result->contact_person;?><?
php
    } ?>

    <!-- contact_email-->
    <?php
    if($result->contact_email)
    { ?>
        <br><b>Contact Email</b> :
        <?php echo $result->contact_email;?><?
php
    } ?>

    <!-- Year-->
    <?php
    if($result->Year)
    { ?>
        <br><b>Year</b> :
        <?php echo $result->Year;?><?php
    } ?>

    <!-- language-->
    <?php
    if($result->language)
    { ?>
        <br><b>Language</b> :
        <?php echo $result->language;?><?
php
    } ?>

    <!-- department_center-->
    <?php
    if($result->department_center)
    { ?>
        <br><b>Department</b> :
        <?php echo $result->
department_center;?><?php
    } ?>

```

```

        <!-- DBT_Designated_Center-->
        <?php
        if($result->dbt_designated_center)
        { ?>
                <br><b>DBT Designated Center</b> :
                <?php echo $result-
>dbt_designated_center;?><?php
        } ?>

        <!-- areas_of_research-->
        <?php
        if($result->areas_of_research)
        { ?>
                <br><b>Research Area</b> :
                <?php echo $result-
>areas_of_research;?><?php
        } ?>

        <!-- research_grant_support-->
        <?php
        if($result->research_grant_support)
        { ?>
                <br><b>Research Grant
Support</b> :
                <?php echo $result-
>research_grant_support;?><?php
        } ?>

        <!-- computing_facility-->
        <?php
        if($result->computing_facility)
        { ?>
                <br><b>Computing Facility</b> :
                <?php echo $result-
>computing_facility;?><?php
        } ?>

        <!-- database_development -->
        <?php
        if($result->database_development)
        { ?>
                <br><b>Database/s</b> :
                <?php echo $result-
>database_development;?><?php
        } ?>

        <!-- software_tools_developed-->

```

```

        <?php
        if($result->software_tools_developed)
        { ?>
                <br><b>Software Tools</b>
                <?php echo $result-
>software_tools_developed;?><?php
        } ?>

        <!-- name_of_the_developer-->
        <?php
        if($result->name_of_the_developer)
        { ?>
                <br><b>Name of the Developer</b> :
                <?php echo $result-
>name_of_the_developer;?><?php
        } ?>

        <!-- address_of_the_developer-->
        <?php
        if($result->address_of_the_developer)
        { ?>
                <br><b>Address of the
Developer</b> :
                <?php echo $result-
>address_of_the_developer;?><?php
        } ?>
<br>

        <!-- keywords-->
        <?php
        if($result->keywords)
        { ?>
                <br><b>Keywords</b> :
                <?php echo $result->keywords;?><?
php
        } ?>

        </li><br><br>
        <?php
        }
        ?> </ol>
        <?php ?><?php
    }
    else
    {
        ?> <br /><br /><center><b> No result found for '<?php
$flag=true;
echo $search_terms;
?>' </b><center><br /><br /><br /><br />

```


RESULTS

DATABASE

localhost / localhost / idras x

localhost/phpmyadmin/index.php?db=ibiranet_ibira&token=829510e7bb30b6190d15aedb0a380c61

Server: localhost ▶ Database: idras ▶ Table: idras

Database: idras (3)

- add_resource
- idras
- publications

Field	Type	Collation	Attributes	Null	Default	Extra	Action					
<input type="checkbox"/> master_list	bigint(50)			No	None							
<input type="checkbox"/> nar_sr_no	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> main_clusters	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> main_category	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> sub_category	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> Name_of_Resource	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> url_of_resource	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> full_name_of_resource	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> brief_description	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> subject_area	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> name_of_the_organization	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> url_of_the_organization	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> address_of_the_organization	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> publisher	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> state	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> Country	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> publishing_since	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> isi_if_2009	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> indexing_abstracting	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> frequency	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> issn_online	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> issn_print	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> editorial_board	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> editorial_contact	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> editor	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> Year	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> contact_person	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> contact_email	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> language	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> department_center	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> dbt_designated_center	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> computing_facility	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> database_development	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> software_tools_developed	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> publication_history	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> areas_of_research	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> research_grant_support	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> name_of_the_developer	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> address_of_the_developer	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> accessibility	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> keywords	text	latin1_swedish_ci		Yes	NULL							
<input type="checkbox"/> associated_institutes	text	latin1_swedish_ci		Yes	NULL							

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FRONT PAGE

TABLE: IDRAS



SUBSEQUENT PAGE

The screenshot shows a web browser window displaying the IDRAS website. The address bar shows the URL `localhost/idras/pages/search`. The page header includes the IDRAS logo and the tagline "Integrated Data Refining and Analysis System". A search bar contains the text "gene" and a "Search" button. Below the search bar, there are navigation links "1 2 3 4 5 6 Next > Last >>". The main content area displays search results for the gene "gene".

Showing search results for 'gene' (1-10 of 614):

- 1. ABS (View Publication)**
Full Name of the Resource : Annotated regulatory binding sites from orthologous promoters
Resource Category : Databases -> Nucleotide Sequence Databases -> Transcriptional regulator sites and transcription factors
Brief Description : ABS (Annotated Binding Sites) is a public database of experimentally verified orthologous transcription factor binding sites (TFBSs). Annotations have been collected from the literature and are manually curated. For each **gene**, the TFBSs conserved in orthologous sequences from at least two different species must be available. Promoter sequences as well as the original GenBank or RefSeq entries are additionally supplied in case of future identification conflicts. The final TSS annotation has been refined using the database dbTSS. Up to this release, 500 bps upstream the annotated transcription start site (TSS) have been always extracted to form the collection of **gene** promoter sequences from human, mouse, rat and chicken.
Subject Area : Annotated Binding Sites

Institute/s :
Grup de Recerca en Informàtica Biomèdica, Institut Municipal d'Investigació MÀdica Universitat Pompeu Fabra, Centre de Regulació Genètica CDRG Doctor Aiguader 80, 08003 Barcelona, Spain

Address of Institute/s :
Grup de Recerca en Informàtica Biomèdica, Institut Municipal d'Investigació MÀdica Universitat Pompeu Fabra, Centre de Regulació Genètica CDRG Doctor Aiguader 80, 08003 Barcelona, Spain

Country : Spain

Contact Person : Enrique Blanco
Contact Email : eblanco@imim.es
Year : 2006
Language : English

Clusters

- IDRAS (614)
- Databases (147)
 - Genomics Databases Non-Vertebrate (25)
 - Human Genes and Diseases (18)
 - Cancer Gene Databases (16)
 - Gene, System or Disease-Specific Databases (1)
 - General Human Genetics Databases (1)
 - Microarray Data and other Gene Expression Databases (1)
 - Nucleotide Sequence Databases (25)
 - Organelle Databases (2)
 - Plant databases (21)
 - Protein Sequence Databases (31)
 - RNA (22)
 - Structure Databases (2)
 - Institutions (2)
 - Journals (6)

DIRECT LINK

Firefox v... ABS: a database of Annotated regulatory...
genome.crg.es/datasets/abs2005/

Genome Bioinformatics Research Lab
Help | News | Downloads | Research | Software | Publications | Links
Resources & Datasets | Gene Predictions | Seminars & Courses

IMIM + UPF + CRG + IGBB + Resources & Datasets + ABS

ABS: a database of Annotated regulatory
Binding Sites from orthologous promoters

MAIN MENU

1. PRESENTATION
2. ACCESS THE ABS
3. STATISTICS
4. DOWNLOADS
5. DOCUMENTATION
6. GUIDED TOUR
7. REFERENCES

To get back to this page from any section, use the link **ABS** on the red rule above

If you use the annotations provided on ABS, please cite:

E. Blanco, D. Farré, M. Albà, X. Messeguer and R. Guigó. ABS: a database of Annotated regulatory Binding Sites from orthologous promoters. *Nucleic Acids Research* 34:D63-D67 (2006). [OPEN ACCESS PUBLICATION]

If you encounter problems using abs, or have suggestions on how to improve ABS, please send an e-mail to ebianco@imim.es

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Last Updated 07/13/2006 18:37:04
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Disclaimer
ABS: a database of ...
Windows Media Pla...
XAMPP Control Pan...
webmaster
21:57

BROWSE

localhost/idras/pages/browse

Suggested Sites Imported From IE

IDRAS
Integrated Data Refining and Analysis System

Home

● All Resources ● Databases ● Institutions ● Journals ● Patents ● Software ● Web-Servers

0-9 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z All

Showing 47 Browse Results.

1. **AAindex** [Categorised as : Databases -> Protein Sequence Databases -> Protein Properties]
2. **AAindex** [Categorised as : Databases -> Protein Sequence Databases -> Protein properties]
3. **AAnt** [Categorised as : Databases -> Structure Databases -> Small Molecules]
4. **ABA** [Categorised as : Databases -> Human and other Vertebrate Genomes -> Model organisms, comparative genomics]
5. **ABCdb** [Categorised as : Databases -> Protein Sequence Databases -> Databases of Individual Protein Families]
6. **ABS** [Categorised as : Databases -> Nucleotide Sequence Databases -> Transcriptional regulator sites and transcription factors]
7. **ACeDB** [Categorised as : Databases -> Genomics Databases Non-Vertebrate -> Other invertebrates]
8. **ACLAME** [Categorised as : Databases -> Nucleotide Sequence Databases -> Coding and non-coding DNA: genes, motifs and regulatory sites]
9. **ACTIVITY** [Categorised as : Databases -> Nucleotide Sequence Databases -> Transcriptional regulator sites and transcription factors]
10. **ADDA** [Categorised as : Databases -> Protein Sequence Databases -> Protein Domain Databases (Protein Classification)]
11. **AffinDB** [Categorised as : Databases -> Metabolic and Signaling Pathways -> Protein-protein Interactions]
12. **AgBase** [Categorised as : Databases -> Plant databases -> General plant databases]
13. **AGD** [Categorised as : Databases -> Genomics Databases Non-Vertebrate -> Yeasts]
14. **AGD** [Categorised as : Databases -> Genomics Databases Non-Vertebrate -> Fungal Genome (Gatbases)]
15. **AGNS** [Categorised as : Databases -> Plant databases -> Arabidopsis thaliana]
16. **AGRIS** [Categorised as : Databases -> Plant databases -> Arabidopsis thaliana]
17. **ALFRED** [Categorised as : Databases -> Human Genes and Diseases -> General polymorphism databases]
18. **AllGenes** [Categorised as : Databases -> Human and other Vertebrate Genomes -> Model organisms, comparative genomics]
19. **Aminoacyl-tRNA Synthetases Database** [Categorised as : Databases -> Protein Sequence Databases -> Databases of Individual Protein Families]
20. **Androgen Receptor Gene Mutations DB** [Categorised as : Databases -> Human Genes and Diseases -> Gene, System or Disease-Specific Databases]

localhost/idras/pages/browse/A

4:56 PM 16-May-12

ADVANCE SEARCH

The screenshot shows the IDRAS Advance Search web application. The browser's address bar displays the URL `localhost/idras/pages/adsearch`. The page header includes the IDRAS logo and the tagline "Integrated Data Refining and Analysis System". Below the header, there is a navigation menu with the following items: Databases, Institutions, Journals, Patents, Software, and Web-Servers. The main content area is titled "Advance Search" and contains a "Select Search Category" section with the following fields: "Name of Resource" (dropdown menu), "Country" (dropdown menu), "Subject Area" (dropdown menu), "Name of the Organization" (dropdown menu), and "Name of the Organization" (dropdown menu). The "Year" field is set to "2001" to "2004", and the "Match" field is set to "Any Field". There are "Search" and "Clear Search" buttons. The Windows taskbar at the bottom shows the time as 5:02 PM on 16-May-12, along with icons for Internet Explorer, Firefox, Chrome, and other applications.

ADVANCE SUBSEQUENT

The screenshot shows a web browser window displaying the IDRAS website. The address bar shows the URL `localhost/idras/pages/adsearch1`. The page title is "IDRAS Integrated Data Refining and Analysis System". A search bar contains the text "agris" and a "Search" button. Below the search bar, there are filters for "Clusters", "IDRAS (43)", "Databases (43)", "Country (2)", and "Year (4)". The main content area shows "Showing search results for 'agris' (1-10 of 43)". The first result is "AANT (View Publication)" with the following details: Full Name of the Resource: Amino Acid - Nucleotide interaction database; Resource Category: Databases -> Structure Databases -> Small Molecules; Brief Description: Amino acid-nucleotide interaction database; Subject Area: Amino Acid, Nucleotide; Institute/s: Department of Chemistry and Biochemistry, University of Texas at Austin, Austin, TX 787120159, USA; Address of Institute/s: Department of Chemistry and Biochemistry, University of Texas at Austin, Austin, TX 787120159, USA; Country: USA; Associated Institutes: Institute for Cellular and Molecular Biology, Department of Chemistry and Biochemistry, Department of Computer Sciences, University of Texas at Austin, Austin, TX 787120159, USA; Associated Country: USA; Contact Person: Andrew D. Ellington; Contact Email: andy.ellington@mail.utexas.edu; Year: 2004; Language: English; Keywords: Amino Acids / metabolism; Animals; Binding Sites; Computational Biology; DNA / chemistry / genetics / metabolism; DNA-Binding Proteins / chemistry / metabolism; Databases, Genetic; Humans; Internet; Models, Molecular; Nucleic Acids / chemistry / genetics / metabolism; Nucleotides / metabolism; Protein Conformation; ...

CONCLUSION

Till date we have successfully completed the task undertaken.

Database connectivity , Federated searching , Displaying results according to the query , Home page with all the functionalities working , Subsequent page, Clustering, Browse function and Advanced search are the working elements in the project.

IDRAS is expected to be proven as one of the most reliable searching tools in the field of Bioinformatics not only for research purposes but also for general reading and gaining knowledge.

BIBLIOGRAPHY

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[Federated%20Search%20Primer.pdf](#)

[Whats_New_In_Federated_Search.pdf](#)

[040701wanner.pdf \(clustering study\)](#)

<http://www.w3.org/1999/xhtml>