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Online Real Estate Property Management
Project Report submitted in partial fulfillment of the
requirement for the degree of
Bachelor of Technology.
in
Computer Science and Engineering

under the Supervision of

Mr. Arvind

By

Aman (091320)

Amit Kumar Pandey (091254)

to



Jaypee University of Information and Technology

Waknaghat, Solan – 173234, Himachal Pradesh

Certificate

This is to certify that project report entitled "**ONLINE REAL ESTATE PROPERTY MANAGEMENT**", submitted by **Amit Kumar Pandey (091254) and Aman (091320)** in partial fulfillment for the award of degree of Bachelor of Technology in Electronics and Communication Engineering to Jaypee University of Information Technology, Waknaghat, Solan has been carried out under my supervision.

This work has not been submitted partially or fully to any other University or Institute for the award of this or any other degree or diploma.

Mr. Arvind

Arvind
28/05/13

Date: 28/05/13

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Date: 28/05/ 2013

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Abstract

This website is a complete end to end solution to cover all aspects of real estate Property buying selling procedure for small and large organization and individuals.

It is basically a user friendly contact and property manager for real estate professionals and property buyers. The main role of the project is

- Real estate system serves the server operator

1. When searching the properties to buy.
2. When uploading the property details .
3. When uploading information of users who are either buyer or seller.

- Real estate website serves customers to search about the property through the web.

- Real estate website focuses on main operation like selling, buying and searching but the financial operation is out of scope.

The basic objectives of the project are:-

- Each seller can know information about the customer before signing the deal to know if there is any unpaid money or if it using the property is bad.

- Each user is linked with a network and share information in a central data base that gives the user beneficial information like: -

1. All properties that are available.
2. Details on all the properties that are available.
3. Information about the lessees and sellers.

- Each user can either buy or sell a property according to his/her requirement.

- The administrator has unlimited access to all of the website's operation and function.

- The administrator can edit, delete or modify any user's detail or property detail in the website from the central database.

- Each interested buyer can directly contact the seller to sign the deal on the property he/she is intending to buy.

- Users can modify details about the property uploaded by them in the website.

- The home page will have new and featured properties displayed for sale and re .

CHAPTER 1

INTRODUCTION

1.1 Purpose of online real estate property management

Technology plays a very important role in today's life. Everything from regular routine work to big industry operations are getting digitized. Computers today are making everyone's life much easier than before. Everything nowadays is online from buying clothes, travel ticket reservation to booking movie tickets etc. E-commerce is becoming a competitive industry and according to experts it is still in its infant stage and has a very good future to look forward to.

The real estate properties have always been a point of interest among the people and after technological revolution people have started trading properties over the internet. Due to the advantage of large data storage and easy access people can now easily browse through wide range of properties easily over the internet with minimal effort and then can invest or buy more conveniently. The internet has changed the real estate business drastically and will continue to revolutionize it with new concepts.

This project is another step in that direction. It will enhance the real estate market even more by providing a website which will take care of all users' needs and will help them in every possible way to buy and sell properties online. It will become a point of contact between the interested buyers and property sellers.

Each user will be able to register him/herself on the website and then will be able to either buy a property posted by another user or post a property on the website for the purpose of selling it. The user will be able to perform even other functions such as edit his account, edit his details, edit his posted properties, perform property search etc.

A user friendly interface will help gain the website an edge in the market and efficiency in operations will help in providing users' trust in the website and would thus result in a good user experience.

1.2 Scope of online real estate property management

- The project will deliver an altogether new version of online real estate property management with an added feature of home page displayed properties.
- Will reduce the work and improve efficiency as a user will be having everything on one website.
- The portal will provide a facility of notifications to the user. (Eg: A user wants to share some property details with his friend, then he view his contact info and send him the required details).
- Daily feeds will be provided to the user when he logs in. A person can directly start browsing the properties from there itself.
- FAQ's and other interactive features will make website more user friendly.
- Feedback option will be available.
- Loan provider details will also be available.
- Important support Email Ids will be displayed on the website.
- The website administrators contact details will also be available.

1.3 Definitions, Acronyms, and Abbreviations

Terms	Definitions
User	User of the system.
Guest	User of the system.
Admin	The administrator and the moderator of the system.
HTTP	Hypertext Transfer Protocol is a transaction oriented client/server protocol between web browser & a Web Server
HTML	Hyper text markup language
SDD	Software Design Document
ODMCS	Online Document Modification, Conversion and Sharing Portal
JSP	Java Server Pages
Eclipse	Eclipse is a toolkit which is designed for the creation of more complex projects, providing fully dynamic web application utilizing EJB's. This consist of EJB tools, CMP, data mapping tools & a universal test client that is designed to aid testing of EJB's
XML	Extensible Mark-up Language is used for the storage and carriage of data.
FTP	File Transfer Protocol
PHP	Hypertext Preprocessor
FAQ	Frequently Asked Questions

1.4 Literature Review

→ Magicbricks:

Weblink: www.magicbricks.com

- To really improve the user experience they have some of the most common searches in there area accessible through a single click.
- They have a blog based site
- They post regularly in there blog.
- They have a great Search interface for their clients, so that they can find it easily on the internet.
- They use mysql as their backend database to store all their data.

→ 99 acres:

Weblink: www.99acres.com

- Most property listings and great listing information are given in their website.
- You can go into a deal negotiation feeling comfortable and educated.
- Includes in-depth neighborhood statistics and unusual property types.
- It has very minute details of every real estate property listed in their website.
- they have an instant property search option in their homepage.

→ Makanwala

Weblink: www.makanwala.com

- It has a clean, captivating traditional design.
- It is very simple and user friendly especially good for a first time buyer of real estate properties.
- It presents a housing locator to visitors in the top half of the home page.

→Estate Agent and Property Management System eProperty by Atanu Malik

Weblink: <http://www.programmer2programmer.net/>

- It has simple features of buying and selling residential and commercial property.
- It also has a feature of instant search where a user can instantly search for his/her property by just giving a few details.

1.5 Advantages of online real estate property management

- Using online real estate management property system in managing real estate helps the user to digitize all the real estate data.
- It makes all the tasks of buying and selling easier compared to the traditional ways of real estate business.
- The details are stored safely in the server.
- The property details are easily available that is they can be accessed from anywhere from just a computer with an internet connection.
- The website has a user friendly experience and helps the users to easily search through properties.
- The users can easily post their properties using the post property link.
- Even user registration is very easy as it requires one simple step.
- The administrator can view, edit and delete every detail on the website.

1.6 User profiles

The following are the different user profile of the website:-

1. Visitor:- it has the following characteristic;-
 - It browse through the website
 - It should be able to perform quick search
 - He/she should be able to register him/herself.
2. User – It has the following characteristic :-
 - It has read only rights to most functions of the website.
 - It can only edit its own account information and its own posted properties.
 - It can view all the posted properties in the website by using the instant search or the advanced search option.

- The user can register himself by clicking the link given on the home page.
 - The user can also login to website every time he/she visits it.
3. System administrator – It has the following characteristic:-
- It can view all the user profiles that exist in the database.
 - It can change any user profile if it wants to.
 - The administrator can edit and even delete any user profile.
 - The administrator can even edit and delete any property posted on the website.
 - It has unlimited access to the user profile, the property details and the website's database.

CHAPTER 2

Problem statement and requirements

The main basic requirement of this real estate management property system is to provide a user friendly interface and manage all the property management tasks efficiently and effectively.

The following preliminary list are the main requirements:-

1.1 Business Requirements

The business goal for the application is to increase efficiency of registration process and powerful search facilities and capable of matching property with client's requirement while increasing the productivity and managing it effectively.

The main business requirements are as follows:-

- Improve the search facility and all the users of Property Management System should get all the information in a second.
- The application should support the capability to use multi user environment.
- Administrator should be able to view all types of profiles as and when required by the organization.
- System should store all the property details in the database which should be easily accessible.
- Improve client's ability to analyze property and easily find what they need.
- The system should be refreshing and updating the database from time to time and should be able to identify the best properties for the featured properties section.
- The system should also update properties in the new property section and also in the feature ads section so that users and the administrator can view the new and featured properties on the website.
- The system should display all the property details instantly when the user clicks on the properties.
- The images should not take time to display.

1.2 User requirements

User requirements are categorized by user type.

1. Visitor:-

- Able to browse through the website
- Register himself as the user
- Should be able to perform quick search
- Should be able to view featured properties.

2. User:-

- Able to search and view his or her own read only information.
- Able to register himself quickly.
- Should be able to login and view his profile easily.
- Should be able to view his posted profile on the website.
- He/She should experience a user friendly environment when browsing the website.
- He/she should be able to change and edit its own profile information.

3. System Administrator:-

- Create new user, assign role and privileges
- Database backup and maintenance.
- It should be able to view all the user profiles that exist in the database.
- It should be able any user profile if it wants to.
- The administrator should be able to edit and even delete any user profile.
- The administrator should be able to edit and delete any property posted on the website.
- It should have unlimited access to the user profile, the property details and the website's database.

1.3 Operational Requirements

The following requirements provide a high-level view of how the system will run:

- A full weekly backup is required to WORM drives.

- The server should be monitored from time to time.
- The website should have a quick access time.
- Application should run in Client-Server architecture.

1.4 System Requirements

These are additional constraints from a system perspective:

- The administrator must be able to monitor everything from the IT department.
- The administrator should have unlimited access to the websites operations and its database.

1.5 Specific requirements

Follwing are the functional and non-functional requirements:-

1. Functional requirements:-

- The home page to consist of features like: featured properties, new properties.
- Database to be maintained.
- Feedback to be supported to enhance the user experience.
- Guests can view the featured porperties.
- Prevent standard automated software from filling out a form.
- Any person can register as members.
- Registered members can perform their required functions.
- File can be downloaded in various formats.
- File can be downloaded in various formats.
- File can be uploaded in various formats.
- Registered users and Administrator will have their own profile, where they can perform their work.

2. Non Functional Requirements:-

- Secure access of confidential data (user's details).
- 24 X 7 availability
- Better component design to get better performance at peak time
- Flexible service based architecture will be highlydesirable for future extension.

CHAPTER 3

OVERALL DESCRIPTION

3.1 The project's perspective

The website will provide the means for the users to use the services at their own convenience. The website will automate the whole system of real estate proerty buying and selling and sharing it easily, all online.

3.2 Software Interface

Server Requirements:

- Operating System - Windows XP,Vista,7
- Database –Mysql

Technologies:

- PHP
- HTML

Client Requirements:

- Operating System - Windows XP, Vista, 7
- Browser - Internet Explorer, Mozilla Firefox, Google Chrome, Netscape Navigator.

Front end :

- HTML/ CSS

Platform :

- PHP

Backend:

- MySQL

Webservers:

- Wamp 2.2

Communication Interface

- Client on Internet will be using HTTP/HTTPS protocol.
- Client on Intranet will be using TCP/IP protocol.

3.3 Modules

----Master modules

1. Property registration.
2. User registration
3. Website login
4. Change password

----Administrator modules

1. Matching properties.
2. User detail.
3. Seller's detail.
4. Storing details.
5. User's post

----Search query modules

1. Instant search
2. Extensive search
3. Update keyword

----User modules

1. User registration
2. User login
3. User requirements
4. User records
5. User properties

• Master modules

1. Property registration:-

- ➔ A user can register his property.
- ➔ An option would be displayed to upload property images.
- ➔ An address bar would take the address and store it in the database.
- ➔ A property document option would store the property details.
- ➔ The property details would then be validated.
- ➔ The property details would then be stored in the database.

2. User registration

- ➔ This module will be available at the home page.
- ➔ The user has to register by filling up the user registration form.
- ➔ The user has to give the following details
 1. Name.
 2. Address.
 3. Age.
 4. Sex
 5. Occupation
 6. Annual income
 7. An E-mail id.
 8. A password.
- ➔ Then he would get a registration confirmation and then he can start buying, selling or dealing properties by logging in to the website.

3. Website login
→ This module will ask for username and password.

4. Change password
→ The user can change to his desired password.

• **Administrator modules:-**

1. Matching properties

- It will match the properties with the clients.
- It will be done by using the instant search.
- After a successful match it will wait for the user response.
- After the user gives his response he would then store the user response.

2. User details

- The database will store the user details and it will be readily available for the operator and the user.
- It would also store the user activity on the website.
- It would also store the property search preference for new properties.

3. Seller's detail

- The user can view the property owner's details.

4. Storing details

- This would store all the details of the operations performed
- A notification would also be generated to the operator.

5. User's post

→ It would store all the properties posted by the user.

→ And his/her details

→ And his/her activities.

*

• Search module

1. Property locator.

→ It is an instant search which would search for property details.

→ It will ask the details of the property to be searched.

→ Enter an appropriate keyword to search.

2. Extensive search

→ It would ask for more details for a specific type of property as follows:-

1. The Property location.
2. The building's characteristics.
3. The property size
4. The land rate for a building.
5. The purpose of the property that is if it is a commercial or a residential property.

→ The details filled would be more exact and matching very closely to the property desired.

3. Update keyword

→ The user with the help of this function can update a keyword to change his search.

→ The search will then again start from the beginning.

→ The update keyword could be used in normal search and also in extensive search.

- **User modules**

1. User registration

→ The new user can register his details in form available in the home page.

2. User login

→ The user can login from the homepage with his user name and password.

3. User requirements

→ The user can give his requirements and then the search algorithm will search for the property for the user.

4. User records

→ all the user details will be stored in database.

5. User properties

→ The user's properties will be stored since his/her registration would be stored.

→ Property suggestions would be made according to his/her activities.

3.4 Software engineering design

Use case diagram:-

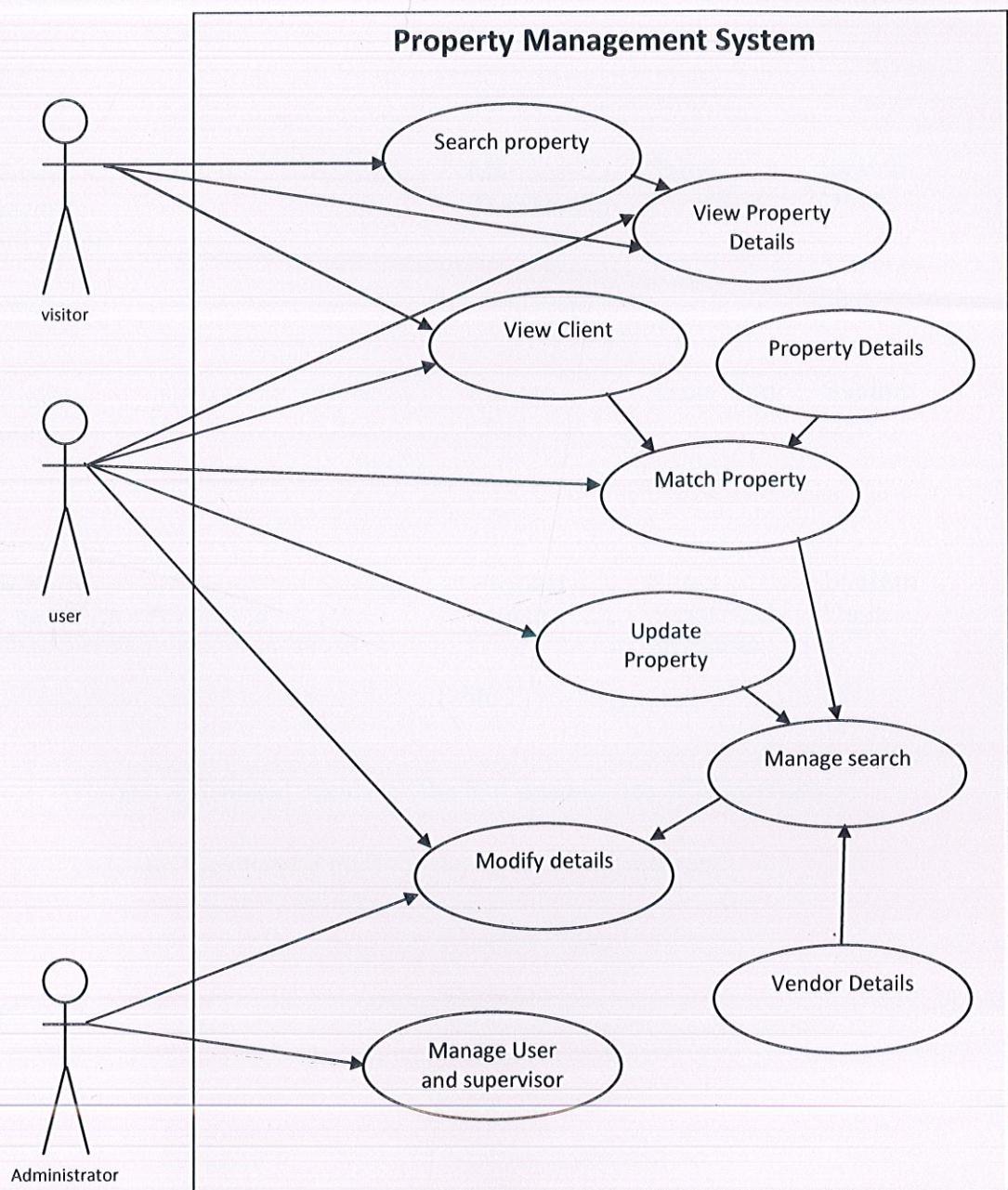


Fig - 1

Event table :-

Event	Trigger	Source	Activity/Use Case	Response	Destination
Client Registration	New User	System User	Create User	Show User	System User
Match Property with Client	Match	System User	Manage Transaction	Show Transaction	System User
vendor details	New User	System User	Create User	Show User	System User
Property registration	New Property	System User	Property registration	Show registered property	System User

Table 1

- The above depicted events are the four main events of the website.
- They are described by their respective data flow diagram.

Context level DFD:

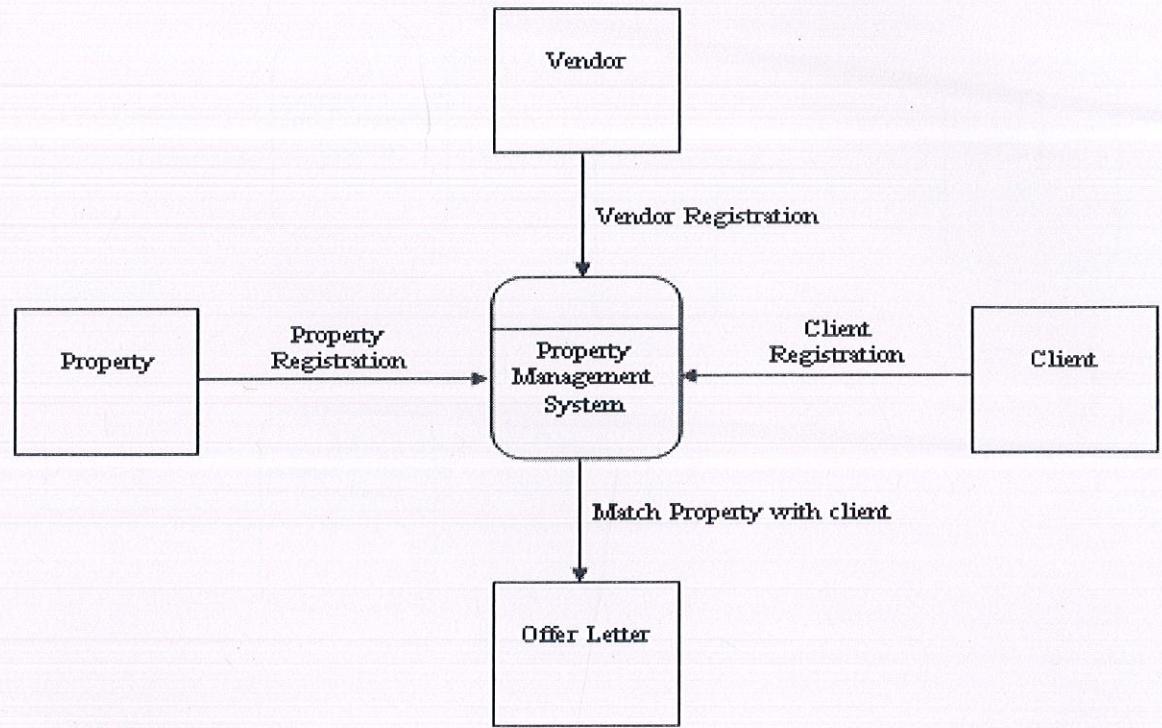


Fig - 2

The four objects which are client, vendor, property and offer letter would perform their functions which are registration done by client/vendor which then registers their property and if it is matched with the client demands offer letter is generated.

Level 1 DFD :
(to match property with client)

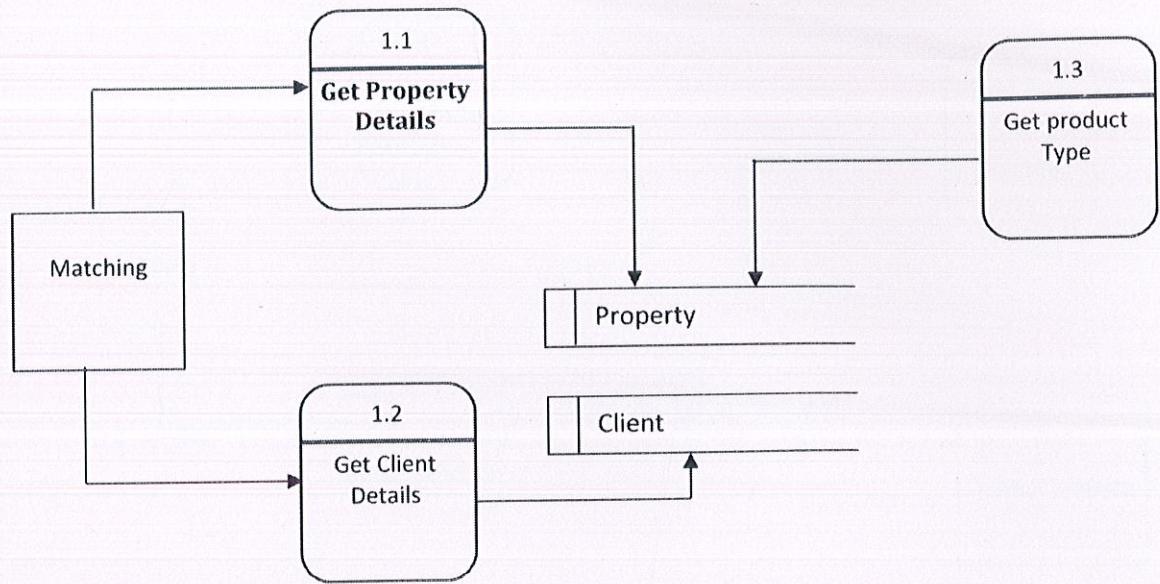


Fig-3

For matching property we will get the property and client details from the database and then the matching algorithm would match the property and after a successful match an offer letter would be sent to user.

Level 2 DFD: (client registration)

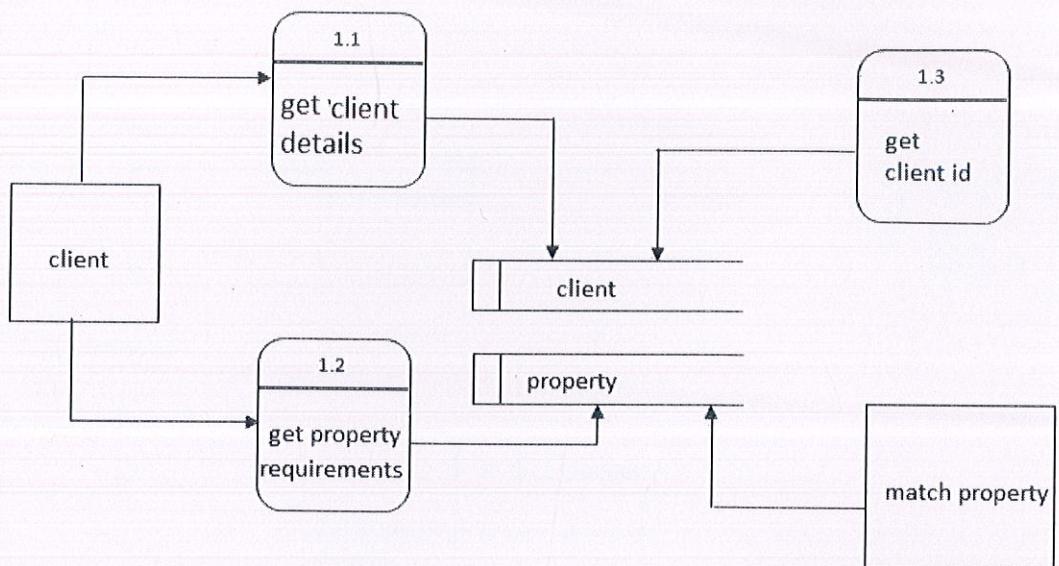


Fig-4

The client would enter his/her details and the type of property he is looking and after this the details would then be stored in the database and a client id would be generated and after successful generation of client id the match property function would then be executed.

Level 3 DFD :
(vendor registration)

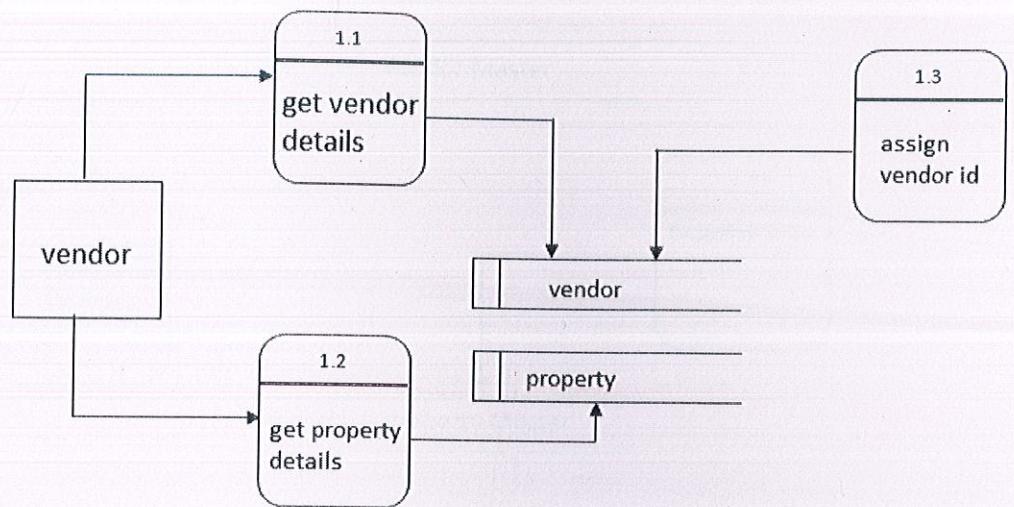


Fig-5

The vendor would register himself/herself by giving his/her details and the property he/she is selling. After the generation of the vendor id the details would then be stored in the database.

Level 4 DFD:
(property registration)

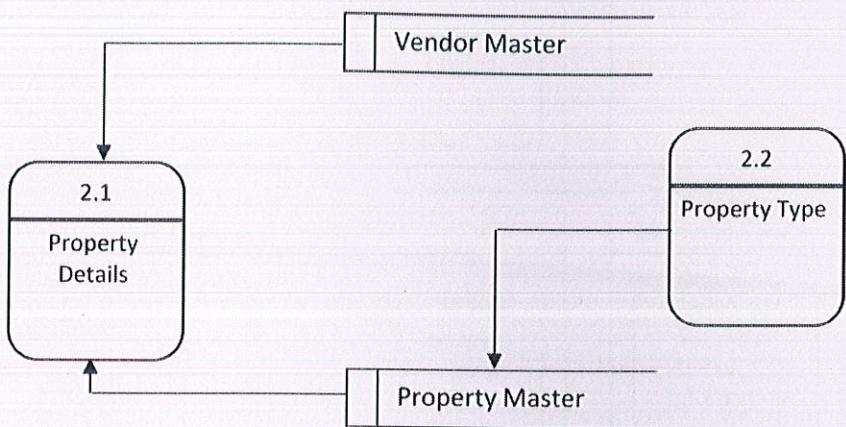


Fig- 6

The property details would be registered by the vendor and then stored in the database and it would be assigned a property type.

This property would then be available to view in the website.

3.5 System Architecture

High Level Solution Architecture

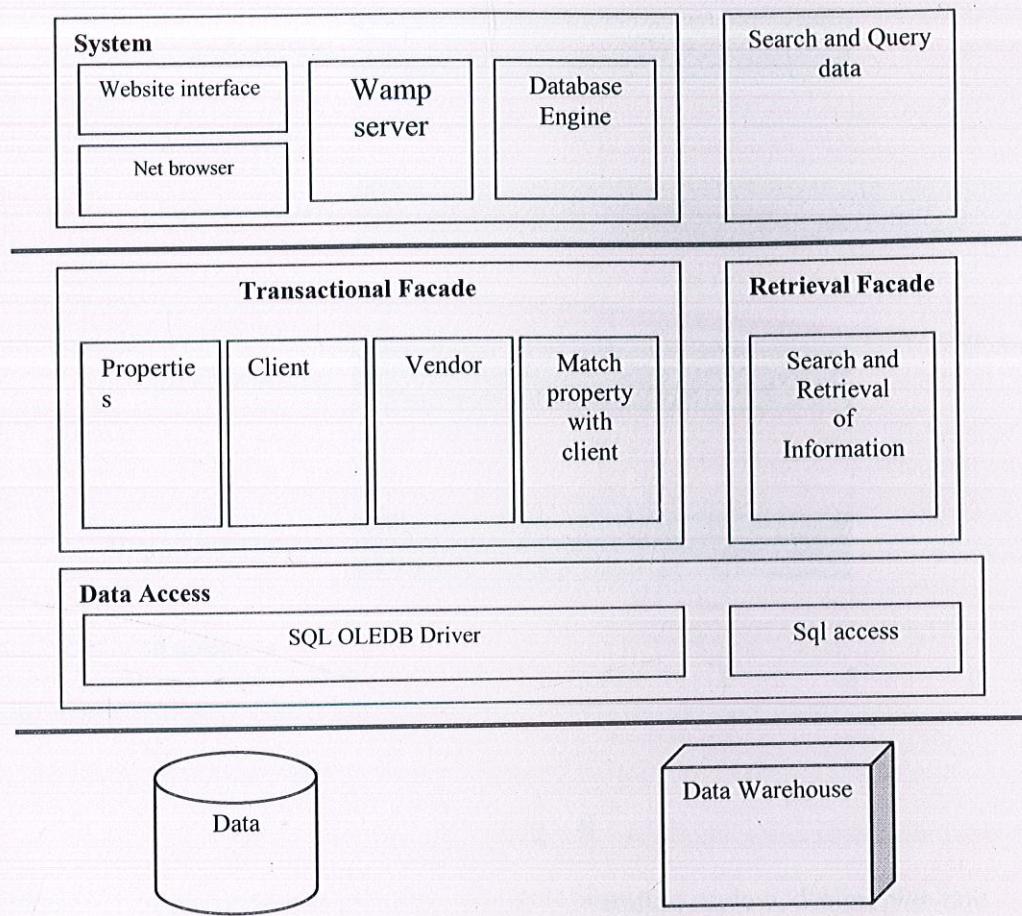


Fig - 7

High Level Solution Architecture of online real estate Property Management

3.6 Project Roadmap

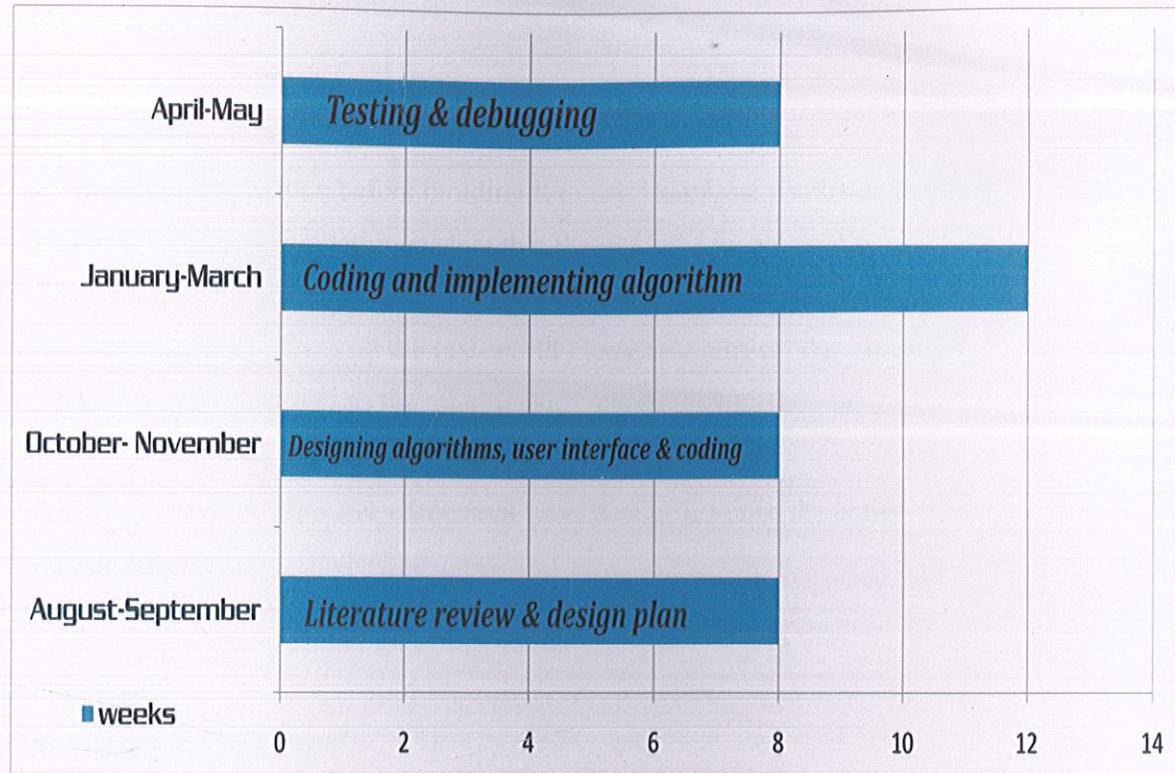


Fig - 8

Phase – 1 of the project is complete which is literature review, design plan and designing, coding and implementing algorithms and user interface.

Phase – 2 of the project was started on January and was finished by may.

3.7 Databases

A **database** is a structured collection of data. The data are typically organized to model relevant aspects of reality in a way that supports processes requiring the information.

Database design:

- Database design is done before building it to meet needs of end-users within a given application/information-system that the database is intended to support.
- The conceptual level is designed, which defines the over-all picture/view of the database, and reflects all the real-world elements (entities) the database intends to model, as well as the relationships among them.
- A common way to carry out conceptual level design is to use the entity-relationship model.

Requirements:

- Statement of the Problem
- Data Requirements
- Transaction Requirements
- Domain Objectives

Database Design Objectives:

- Represent the data and the relationships between data required from the database application.
- Provide a data model that supports any transactions required on the data.
- Specify a minimal design that is appropriately structured to achieve the stated performance requirements for the database application.

Relational Database Design Phases:

- Building the logical/conceptual data model.
- Building the physical database design.

3.8 TEST PLAN

The complete test strategy for the Real Estate Property Management System is to perform the following kinds of tests, in sequence:

1. **Component testing** of each component that makes up the Property Management System.
2. **Integration testing** of the Property Management System, to ensure the correct interworking of its components.
3. **Validation testing** of the Property Management System, to ensure that it works correctly in a pseudo-live environment.
4. **User acceptance testing** of the Property Management System, to ensure that its function is acceptable to its users.

Preconditions:-

The following items are required before testing can take place:

- A complete and coherent functional specification of the Property Management System expressed as use cases and usage scenarios
- Sufficient, suitable resources to carry out the testing
- A proper collection of test cases for each of the testing phase.

Roles and Responsibilities:-

The following roles are defined:

- A person responsible for planning and ensuring the smooth running of the test process.
- A person who is a tester who carries out the tests according to the test plan, and then reports the results
- A person who ensures that the tests are carried out successfully from a user perspective.

Threats to Testing:-

Potential threats to the testing process are as follows:

- **Insufficient resources available for testing.** Testing resources might lack to the real-world testing requirement of the website.
- **Unavailability of professional tester for testing.**
- **Lack of test cases to carry out the testing.**

Final testing and implementation:-

Rigorous testing is crucial to the implementation and maintenance of a reliable system that will create customer confidence.

Test results:

Summarized results of the system test, Include the completion status of each test case associated with the tests.

Test Analysis :

It summarizes the results of tests already conducted and identifies testing that remain to be conducted. Provide a brief summary of the project objectives, and identify the System Proponent and users.

3.9 Design goals and constraints

• Performance

→ No more than a 5-percent degradation in average query response is allowed while all concurrent user are using the system.

→ Processor utilization should not exceed 80 percent during all concurrent users are using the system.

- **Availability**

→ Because the system is accessed by more than one concurrent users so there should not be any single point of failure.

- **Reliability**

→ The system should be reliable to all the users.

- **Scalability**

- **Security**

→ Every resource in the system are defined by the role and privileged. System administrator assigned user role and privileged for their access rights.

→ The system should have anti-hacking programs.

→ The communication should be done with the help of encryption and decryption programs.

- **Interoperability**

→ The system should be interoperable that is able to use and exchange information efficiently between large heterogeneous networks.

- **Setup/Installation**

Setup and installation must not interrupt the system user's daily tasks and work flow.

CHAPTER 4

SCREENSHOTS AND CODING

4.1 Database code

```
drop DATABASE if exists testroom;  
create DATABASE testroom;  
use testroom;  
create table users  
(  
    username char(20) not null,  
    password char(16) not null,  
    email char(50) not null,  
    name varchar(100),  
    surname varchar(100),  
    user_type enum('A','U'),  
    unique(email),  
    primary key(username)  
)  
engine=innnoDB default character set utf8 collate  
utf8_general_ci;  
  
create table telephone  
(  
    tel_id int auto_increment,  
    home char(10),  
    mobile1 char(10) not null,
```

```
mobile2 char(10),  
other char(10),  
user_id char(20) not null,  
primary key(tel_id),  
constraint phones_constr  
foreign key(user_id) references users(username)  
on delete cascade on update cascade  
)  
engine=innnoDB default character set utf8 collate  
utf8_general_ci auto_increment=1;  
create table property  
(  
prop_id int not null auto_increment,  
address char(100) not null,  
price int(15) not null,  
offer_type ENUM('S','L'),  
area int(10) not null,  
constr_date int(4),  
latitude float(10,7),  
longitude float(10,7),  
region char(100),  
Afloor int,  
views int(10) default '0',  
comments text,  
modified TIMESTAMP DEFAULT CURRENT_TIMESTAMP,  
propState ENUM('T','F'),
```

```
    user_id char(20) not null,  
    primary key(prop_id),  
    foreign key(user_id) references users(username)  
        on delete cascade on update cascade  
)engine=innnoDB default character set utf8 collate utf8_general_ci auto_increment=1;
```

```
create table images
```

```
(
```

```
    image_id int not null auto_increment,  
    prop_id int not null,  
    filename varchar(255) not null,  
    mime_type varchar(255) not null,  
    image_size int(20),  
    description text,  
    primary key(image_id),  
    foreign key(prop_id) references property(prop_id)  
        on delete cascade on update cascade
```

```
)
```

```
engine=innnoDB default character set utf8 collate utf8_general_ci auto_increment=1;
```

```
create table fav_prop
```

```
(
```

```
    user_id char(20) not null,  
    prop_id int not null,  
    primary key(user_id,prop_id),  
    constraint favProp_c1  
    foreign key(user_id) references users(username)
```

```
on delete cascade on update cascade,  
constraint favProp_c2  
foreign key(prop_id) references property(prop_id)  
on delete cascade on update cascade  
)  
engine=innodb default character set utf8 collate utf8_general_ci;  
  
create table facilities  
(  
    fac_id int not null auto_increment,  
    facility varchar(100) not null,  
    primary key(fac_id)  
)  
engine=innodb default character set utf8 collate utf8_general_ci auto_increment=1;  
  
create table fac_prop  
(  
    prop_id int not null,  
    fac_id int not null,  
    primary key(fac_id,prop_id),  
    constraint facProp_constr1  
    foreign key(prop_id) references property(prop_id)  
    on delete cascade on update cascade,  
    constraint facProp_constr2  
    foreign key(fac_id) references facilities(fac_id)  
    on delete cascade on update cascade
```

)

engine=innnoDB default character set utf8 collate utf8_general_ci;

create table categories

(

cat_id int not null auto_increment,

category varchar(100) not null,

primary key(cat_id)

)

engine=innnoDB default character set utf8 collate utf8_general_ci auto_increment=1;

create table cat_prop

(

prop_id int not null,

cat_id int not null,

constraint catProp_constr1

foreign key(prop_id) references property(prop_id)

on delete cascade on update cascade,

constraint catProp_constr2

foreign key(cat_id) references categories(cat_id)

on delete cascade on update cascade ,

primary key(cat_id,prop_id)

)

engine=innnoDB default character set utf8 collate utf8_general_ci;

4.2. Database Snapshots

Table – cat_prop

The screenshot shows the phpMyAdmin interface for a database named 'testroom'. On the left, a sidebar lists tables: categories, cat_prop, facilities, fac_prop, fav_prop, images, property, telephone, and users. The 'cat_prop' table is selected. The main area displays the table structure with two columns: 'cat_id' (int(11)) and 'category' (varchar(100)). Below the structure, there's an 'Information' tab showing space usage and row statistics. The space usage table is as follows:

Type	Usage	Statements	Value
Data	16 KB	Format	Compact
Index	0 B	Collation	utf8_general_ci
Total	16 KB	Next autoindex	1
		Creation	May 20, 2013 at 13:56 AM

Table-2

Table – categories

The screenshot shows the phpMyAdmin interface for the 'testroom' database. The 'categories' table is selected. The table structure includes two columns: 'cat_id' (int(11)) and 'category' (varchar(100)). The 'category' column has a collation of 'utf8_general_ci'. The table has two rows. The 'Information' tab is selected, displaying space usage and row statistics. The table uses the InnoDB storage engine.

#	Name	Type	Collation	Attributes	Null	Default	Extra	Action
1	cat_id	int(11)			No	None	AUTO_INCREMENT	<input type="checkbox"/> Change <input checked="" type="checkbox"/> Drop <input type="checkbox"/> Browse distinct values <input type="checkbox"/> Primary <input type="checkbox"/> Unique <input type="checkbox"/> Index <input type="checkbox"/> More
2	category	varchar(100)	utf8_general_ci		No	None		<input type="checkbox"/> Change <input checked="" type="checkbox"/> Drop <input type="checkbox"/> Browse distinct values <input type="checkbox"/> Primary <input type="checkbox"/> Unique <input type="checkbox"/> Index <input type="checkbox"/> More

Table-3

Table – fac_prop

The screenshot shows the phpMyAdmin interface for the 'testroom' database. The 'fac_prop' table is selected. The table structure includes two columns: 'prop_id' (int(11)) and 'fac_id' (int(11)). Both columns have a collation of 'utf8_general_ci'. The table has two rows. The 'Information' tab is selected, displaying space usage and row statistics. The table uses the InnoDB storage engine.

#	Name	Type	Collation	Attributes	Null	Default	Extra	Action
1	prop_id	int(11)	utf8_general_ci		No	None		<input type="checkbox"/> Change <input checked="" type="checkbox"/> Drop <input type="checkbox"/> Browse distinct values <input type="checkbox"/> Primary <input type="checkbox"/> Unique <input type="checkbox"/> Index <input type="checkbox"/> Spatial <input type="checkbox"/> Fulltext
2	fac_id	int(11)	utf8_general_ci		No	None		<input type="checkbox"/> Change <input checked="" type="checkbox"/> Drop <input type="checkbox"/> Browse distinct values <input type="checkbox"/> Primary <input type="checkbox"/> Unique <input type="checkbox"/> Index <input type="checkbox"/> Spatial <input type="checkbox"/> Fulltext

Table-4

Table – facilities

The screenshot shows the phpMyAdmin interface for the 'facilities' table in the 'testroom' database. The table has two columns: 'fac_id' (int(11)) and 'facility' (varchar(100)). The 'facility' column is indexed with 'utf8_general_ci'. The table contains one row with the value '1 facility'. The 'Information' tab displays space usage and row statistics.

Type	Usage	Statements	Value
Data	14 kB	Format	Compact
Index	0 B	Collation	utf8_general_ci
Total	14 kB	Next autoIndex	1
		Creation	May 20, 2013 at 12:56 AM

Table-5

Table – fav_prop

The screenshot shows the phpMyAdmin interface for the 'fav_prop' table in the 'testroom' database. The table has two columns: 'user_id' (char(20)) and 'prop_id' (int(11)). Both columns have 'utf8_general_ci' collation. The table contains one row with the values '1 user_id' and '1 prop_id'. The 'Information' tab displays space usage and row statistics.

Type	Usage	Statements	Value
Data	14 kB	Format	Compact
Index	14 kB	Collection	utf8_general_ci
Total	32 kB	Creation	May 20, 2013 at 12:56 AM

Table-6

Table – images

The screenshot shows the phpMyAdmin interface for the 'testroom' database. The 'images' table is selected. The table structure includes columns: image_id (int(11)), prop_id (int(11)), filename (varchar(255) utf8_general_ci), mime_type (varchar(255) utf8_general_ci), image_size (int(20)), and description (text). The table has 6 rows. Below the table, there is an 'Information' section showing space usage (Data: 14 KB, Index: 16 KB) and row statistics.

Table-7

Table – property

The screenshot shows the phpMyAdmin interface for the 'testroom' database. The 'property' table is selected. The table structure includes columns: prop_id (address), price, offer_type, area, constr_date, latitude, longitude, region, Affloor, views, comments, modified, propState, and user_id. The table has 17 rows. The 'address' column contains values such as '1 loalM921d_101001', '2 loalM921d_110001', etc.

Table-8

Table – telephone

The screenshot shows the phpMyAdmin interface for the 'testroom' database. The left sidebar lists tables: categories, cat_prop, facilities, fav_prop, favs, images, property, telephone, and users. The 'telephone' table is selected. The main area displays the following SQL query:

```
SELECT * FROM `Telephone` LIMIT 0 , 30
```

The results table shows one row:

	tel_id	home	mobile1	mobile2	other	user_id
<input type="checkbox"/>	1	NULL	0987654321	NULL	NULL	aman

Below the table are buttons for Edit, Copy, Delete, Change, and Export.

Table-9

Table – users

The screenshot shows the phpMyAdmin interface for the 'testroom' database. The left sidebar lists tables: categories, cat_prop, facilities, fav_prop, favs, images, property, telephone, and users. The 'users' table is selected. The main area displays the following SQL query:

```
SELECT * FROM `users`
```

The results table shows 16 rows of user data:

	username	password	email	name	surname	user_type
<input type="checkbox"/>	aman	aman	aman@gmail.com	NULL	NULL	A
<input type="checkbox"/>	user1001	password1001	user1001@gmail.com	NULL	NULL	NULL
<input type="checkbox"/>	user1002	password1002	user1002@gmail.com	NULL	NULL	NULL
<input type="checkbox"/>	user1003	password1003	user1003@gmail.com	NULL	NULL	NULL
<input type="checkbox"/>	user1004	password1004	user1004@gmail.com	NULL	NULL	NULL
<input type="checkbox"/>	user1005	password1005	user1005@gmail.com	NULL	NULL	NULL
<input type="checkbox"/>	user1006	password1006	user1006@gmail.com	NULL	NULL	NULL
<input type="checkbox"/>	user1007	password1007	user1007@gmail.com	NULL	NULL	NULL
<input type="checkbox"/>	user1008	password1008	user1008@gmail.com	NULL	NULL	NULL
<input type="checkbox"/>	user1009	password1009	user1009@gmail.com	NULL	NULL	NULL
<input type="checkbox"/>	user1010	password1010	user1010@gmail.com	NULL	NULL	NULL
<input type="checkbox"/>	user1011	password1011	user1011@gmail.com	NULL	NULL	NULL
<input type="checkbox"/>	user1012	password1012	user1012@gmail.com	NULL	NULL	NULL
<input type="checkbox"/>	user1013	password1013	user1013@gmail.com	NULL	NULL	NULL
<input type="checkbox"/>	user1014	password1014	user1014@gmail.com	NULL	NULL	NULL
<input type="checkbox"/>	user1015	password1015	user1015@gmail.com	NULL	NULL	NULL
<input type="checkbox"/>	user1016	password1016	user1016@gmail.com	NULL	NULL	NULL

Table-10

4.3. User interface coding

-ajax.php

```
<?php
include('includes.php');
if(isset($_POST['oldPassword'])) $oldPas=$_POST['oldPassword'];
else $oldPas=NULL;
if(isset($_POST['newPassword1'])) $pas1=$_POST['newPassword1'];
else $pas1=NULL;
if(isset($_POST['newPassword2'])) $pas2=$_POST['newPassword2'];
else $pas2=NULL;
if(isset($_POST['newEmail'])) $newMail=$_POST['newEmail']; else
$newMail=NULL;
if(isset($_POST['newMob1'])) $newMob1=$_POST['newMob1']; else
$newMob1=NULL;
if(isset($_POST['newName'])) $newName=$_POST['newName']; else
$newName=NULL;
if(isset($_POST['newLast'])) $newLast=$_POST['newLast']; else
$newLast=NULL;
if(isset($_POST['newMob2'])) $newMob2=$_POST['newMob2']; else
$newMob2=NULL;
if(isset($_POST['newHome'])) $newHome=$_POST['newHome'];
else $newHome=NULL;
if(isset($_POST['newOthr'])) $newOthr=$_POST['newOthr']; else
$newOthr=NULL;
if(isset($_POST['privilege'])) $priv=$_POST['privilege']; else
$priv=NULL;
$user=strval($_GET['user']);
try{
    check_valid_user();
    if(!$oldPas&&!$pas1&&!$pas2&&!$newMail&&!$newMob1&&!$n
ewName&&!$newLast&&!$newMob2&&!$newHome&&!$newOthr&
&!$priv)
    {
        dispHeader("");
        showUserProfile($user);
        echo "<br /><br />";
        displayUserOptions($user,$type);
        dispFooter();
    }
    else
```

```

{
    if($type=="User")
    {
        if($oldPas && $pas1 && $pas2)
        {
            if($pas1 != $pas2)
            {
                throw new Exception("The passwords
you entered are different!");
            }
            else
            {
                $new=db_check("users","username","password","$user","$oldPa
s");
                if($new==false) throw new
Exception('Wrong password');
                db_update("users","username","password","$user","$pas1");
                $message="password changed!";
            }
        }
        else if(($oldPas && (!$pas1 || !$pas2)) || ($pas1 &&
(!$oldPas || !$pas2)) || ($pas2 && (!$oldPas || !$pas1)))
        {
            throw new Exception('form not filled
correctly,try again');
        }
    }
    else
    {
        if($pas1 && $pas2)
        {
            if($pas1 != $pas2)
            {
                throw new Exception('password not
same');
            }
            else
            {
                db_update("users","username","password","$user","$pas1");
                $message="password of $user changed!";
            }
        }
        else if(!$pas1 && $pas2) || ($pas1 && !$pas2))
    }
}

```

```

        {
            throw new Exception('form not filled
correctly,try again');
        }
    }
    if($newMail)
    {
        $ret=valid_email($newMail);
        if($ret==false) throw new Exception('The email
address you entered is invalid');

        db_update("users","username","email","$user","","$newMail");
        if($val_user!=$user) $message="email of $user
changed!";
        else $message="email changed!";
    }
    if($newMob1)
    {
        db_update("telephone","user_id","mobile1","$user",$newM
ob1);
        if($val_user!=$user) $message="mobile no. of $user
changed!";
        else $message="Your mobile has changed!";
    }
    if($newName)
    {
        db_update("users","username","name","$user","","$newName");
        if($val_user!=$user) $message="name of $user
changed!";
        else $message="name changed!";
    }
    if($newLast)
    {
        db_update("users","username","surname","$user","","$newLast");
        if($val_user!=$user) $message="surname of $user
changed!";
        else $message="Surname changed!";
    }
    if($newMob2)
    {
        db_update("telephone","user_id","mobile2","$user",$newMob2);
        if($val_user!=$user) $message="mobile no of $user
changed!";
    }

```

```

        else $message=""
            ][!";
        }
        if($newHome)
        {
            db_update("telephone","user_id","home","$user",$newHome);
                if($val_user!=$user) $message="Landline No.
changed";
                    else $message="telephone changed!";
            }
            if($newOthr)
            {
                db_update("telephone","user_id","other","$user",$newOthr);
                    if($val_user!=$user) $message="The other phone of
$user changed!";
                    else $message="Other Phone Changed!";
            }
            if($priv=="Admin")
            {
                db_update("users","username","user_type","$user","A");
                    $message="user $user become Admin !";
            }
            else if($priv=="User")
            {
                db_update("users","username","user_type","$user","U");
                    $message=" $user Low User!";
            }
            if($type=="Admin") dispHeader("User Profile $user");
                else dispHeader("To Profile");
                showUserProfile($user);
                echo "<br />";
                echo $message;
                echo "<br /><br />";
                displayUserOptions($user,$type);
                dispFooter();
                $message="";
            }
        }
    catch(Exception $e)
    {
        dispHeader("error with the profile $user:");
        echo $e->getMessage();
        dispURL('editUser.php?user='.$user, 'Edit Profile');
    }
}

```

```
    dispFooter();
    exit;
}
?>
```

- delUser.php

```
<?php
require_once("includes.php");
try{
check_valid_user();
$user=strval($_GET['user']);
db_del_user($user);
dispHeader('Deletion successful',2);
echo "user $user deleted".<br />;
dispURL('member.php', 'Members page');
dispFooter();
}
catch(Exception $e)
{
    dispHeader('Error');
    echo $e->getMessage();
    dispURL('member.php', 'Members page');
    dispFooter();
    exit;
}
?>
```

- displayUsers.php

```
<?php
include('includes.php');
try
{
check_valid_user();
    dispHeader("");
    dispCurrUsers();
    dispFooter();
}
```

```
catch(Exception $e)
{
    dispHeader("Error:");
    echo $e->getMessage();
    dispFooter();
    exit;
}
?>
```

- editCategories.php

```
<?php
include('includes.php');
if(isset($_POST['newCat'])) $newCat=$_POST['newCat']; else
$newCat=NULL;
if(isset($_POST['category'])) $delCat=$_POST['category']; else
$delCat=NULL;
try
{
    check_valid_user();
    if(filledOut($delCat))
    {
        dispHeader('Delete category');
        foreach($delCat as $cat)
        {
            echo "$cat <br />";
            db_del_cat($cat);
        }
        dispCategoriesSettings();
        dispFooter();
    }
    else if(filledOut($newCat))
    {
        $newCat=$_POST['newCat'];
        db_insert1('categories','category',"'$newCat'");
        dispHeader("new category $newCat");
        dispCategoriesSettings();
        dispFooter();
    }
    else
    {
        dispHeader("");
    }
}
```

```

        dispCategoriesSettings();
        dispFooter();
    }
}

catch(Exception $e)
{
    dispHeader("Error:");
    echo $e->getMessage();
    dispFooter();
    exit;
}
?>

```

- editFacilities.php

```

<?php
include('includes.php');
if(isset($_POST['newFac'])) $newFac=$_POST['newFac']; else
$newFac=NULL;
if(isset($_POST['facility'])) $delFac=$_POST['facility']; else
$delFac=NULL;
try
{
    check_valid_user();
    if(filledOut($delFac))
    {
        dispHeader('Delete facility');
        foreach($delFac as $fac)
        {
            echo "$fac <br />";
            db_del_fac($fac);
        }
        dispFooter();
    }
    else if(filledOut($newFac))
    {
        $newFac=$_POST['newFac'];
        db_insert1('facilities','facility',"'$newFac'");
        dispHeader("new facility $newFac");
        dispFacilitiesSettings();
        dispFooter();
    }
    else

```

```

    {
        dispHeader("");
        dispFacilitiesSettings();
        dispFooter();
    }
}
catch(Exception $e)
{
    dispHeader("Error:");
    echo $e->getMessage();
    dispFooter();
    exit;
}
?>

```

- editProperty.php

```

<?php
include('includes.php');
if(isset($_POST['newAddress']))
    $newAddress=trim($_POST['newAddress']); else $newAddress=NULL;
if(isset($_POST['newType'])) $newType=$_POST['newType']; else
    $newType=NULL;
if(isset($_POST['newArea'])) $newArea=$_POST['newArea']; else
    $newArea=NULL;
if(isset($_POST['newRegion']))
    $newRegion=trim($_POST['newRegion']); else $newRegion=NULL;
if(isset($_POST['newAfloor'])) $newAfloor=$_POST['newAfloor']; else
    $newAfloor=NULL;
if(isset($_POST['newConstrDate']))
    $newConstrDate=$_POST['newConstrDate']; else
    $newConstrDate=NULL;
if(isset($_POST['newPrice'])) $newPrice=$_POST['newPrice']; else
    $newPrice=NULL;
if(isset($_POST['typos'])) $typos=$_POST['typos']; else $typos=NULL;
if(isset($_POST['category'])) $category=$_POST['category']; else
    $category=NULL;
if(isset($_POST['delete'])) $delete=$_POST['imgId']; else
    $delete=NULL;
if(isset($_POST['add'])) $add=$_POST['add']; else $add=NULL;

```

```

if(isset($_POST['file_count'])) $file_count=$_POST['file_count']; else
$file_count=0;
if(isset($_POST['description'])) $description=$_POST['description']; else
$description="";
if(isset($_POST['comments'])) $comments=$_POST['comments']; else
$comments=NULL;
if(isset($_POST['facilities'])) $facilities=$_POST['facilities']; else
$facilities=NULL;
if(isset($_POST['deleteProperty']))
$deleteProperty=$_POST['deleteProperty']; else $deleteProperty=NULL;
$message="";
$propId=strval($_GET['propId']);
try{
    check_valid_user();
    if(isset($add))
    {
        if($add=="addfav")
        {
            db_insert('fav_prop','user_id','prop_id',"val_user",$propId);
            $message=<br />Mark as favorite <br />";
        }
        else
        {
            db_delete('fav_prop','user_id','prop_id',"val_user",$propId);
            $message=<br />Unmark <br />";
        }
    }
    if(isset($category))
    {
        $selectCat="select *from categories where
category='$category';";
        $cat_id=db_excecute($selectCat,"selectCat");
        $cat=mysql_fetch_array($cat_id);
        db_update("cat_prop","prop_id","cat_id",$propId,$cat['cat_id']);
        $message="category renewed";
    }
    if(isset($typos))
    {
        if($typos=="pwlhsh") $typos="S";
        else $typos="L";
        db_update("property","prop_id","offer_type",$propId,"$typos");
        $message="offer type renewed!";
    }
}

```

```

if(isset($newAddress))
{
    $flag=false;
    if(isset($_POST['latitude']) && $_POST['latitude']!="0")
    {
        if(isset($_POST['longitude']) &&
        $_POST['longitude']!="0")
        {
            $latitude=$_POST['latitude'];
            $longitude=$_POST['longitude'];
            $flag=true;
        }
    }
    if($flag==false)
    {
        throw new Exception('There was a problem with
        google maps.');
    }
    db_update("property","prop_id","latitude",$propId,$latitude);
    db_update("property","prop_id","longitude",$propId,$longitude);
    db_update("property","prop_id","address",$propId,"$newAddress"
    );
    $message="address changed!";
}
if(isset($newArea))
{
    db_update("property","prop_id","area",$propId,$newArea);
    $message="area changed!";
}
if(isset($newRegion))
{
    db_update("property","prop_id","region",$propId,"$newRegion");
    $message="region changed!";
}
if(isset($newAfloor))
{
    db_update("property","prop_id","Afloor",$propId,$newAfloor);
    $message="floors changed!";
}
if(isset($newConstrDate))
{

```

```

db_update("property","prop_id","constr_date",$propId,$newConst
rDate);
    $message="The year of property changed!";
}
if(isset($newPrice))
{
    db_update("property","prop_id","price",$propId,$newPrice);
    $message="The value of the property changed!";
}
if(isset($facilities))
{
    db_delete1("fac_prop","prop_id",$propId);
    $facilities=$_POST['facilities'];
    foreach($facilities as $fac)
    {
        $selectFac="select * from facilities where
facility='$fac';";
        $fac_id=db_excecute($selectFac,'select3');
        $fac=mysql_fetch_array($fac_id);

        db_insert('fac_prop','prop_id','fac_id',$propId,$fac['fac_id']);
    }
}
if(isset($comments))
{
    $comments=trim($comments);
    db_update("property","prop_id","comments",$propId,"$comments
");
    $message="The information of the property changed!";
}
for($i=0; $i<$file_count; $i++)
{
    if(isset($_FILES["new_file"]["error"][$i]))
    {
        $phMessage="you uploaded a file !!!\n";
        if($_FILES["new_file"]["error"][$i] > 0)
        {
            throw new Exception("Error: " .
$_FILES["new_file"]["error"][$i] . "<br />");
        }
        $phMessage.="Upload: " .
$_FILES["new_file"]["name"][$i] . "<br />";
    }
}

```

```

$phMessage.="Type: " .
$_FILES["new_file"]["type"][$i] . "<br />";
$phMessage.="Size: " .
($_FILES["new_file"]["size"][$i] / 1024) . " Kb<br />";
$phMessage.="Stored in: " .
$_FILES["new_file"]["tmp_name"][$i];
$uploadName=$_FILES["new_file"]["name"][$i];
$mimeType=$_FILES["new_file"]["type"][$i];
$size=($_FILES["new_file"]["size"][$i] / 1024);
$stored=$_FILES["new_file"]["tmp_name"][$i];
$pwd=getcwd();
$photosD="photos/".$propId "/";
$middle="/";
$findRows="select * from images where
prop_id=$propId";
$result=db_exec($findRows,"exists");
$rows=mysql_num_rows($result);
$filename=$photosD.$propId."-".$rows."-
".$_FILES["new_file"]["name"][$i];
$destination=$pwd.$middle.$filename;
$phMessage.= "<br /> Destination directory:
".$destination;
$phMessage.= "<br /> Source directory: ".$stored;
$phMessage.= "<br /> filename: ".$filename;
$phMessage.= "<br /> file_count: ".$file_count;
$phMessage.= "<br /> description: ".$description[$i];
$filename=addslashes($filename);
$phMessage.= "<br /> Actual filename that is insert
into database: ".$filename;
$description_=trim($description[$i]);
if($description_=="description") $description_="";
$insert="insert into images
(prop_id,filename,mime_type,image_size,description) values
($propId,'$filename','$mimeType','$size','$description_')";
if(!copy($stored,$destination)) throw new
Exception("Failed to copy the file... ");
db_exec($insert,"insert image");
$message="image $uploadName inserted.";
}
}

if(isset($delete))
{
}

```



```

$selectFile="select * from images where image_id=$delete";
$result=db_excecute($selectFile,"selectFile");
$row = mysql_fetch_array($result);
$pwd=getcwd();
$filename=$pwd."/".$row['filename'];
if(unlink($filename)==false) throw new Exception("Unable
to delete file".$row['filename']);
db_delete("images","image_id","prop_id",$delete,$propId);
}
if(isset($deleteProperty))
{
    db_del_prop($propId);
    dispHeader("delete ad");
    echo "<br /><br /> ad deleted";
    dispFooter();
}
else
{
    dispHeader("Edit ad",'2');
    showProperty($propId);
    echo "<br />";
    echo $message;
    echo "<br /><br />";
    dispPropOptions($propId);
    showPropPhotosDel($propId);
    dispFooter();
}
}
catch(Exception $e)
{
    dispHeader("There was an error processing the property
    $propId:");
    echo $e->getMessage();
    dispURL('editProperty.php?propId='.$propId, 'Edit Profil');
    dispFooter();
    exit;
}
?>

```

- editUser.php

```
<?php
include('includes.php');
if(isset($_POST['oldPassword'])) $oldPas=$_POST['oldPassword']; else
$oldPas=NULL;
if(isset($_POST['newPassword1'])) $pas1=$_POST['newPassword1'];
else $pas1=NULL;
if(isset($_POST['newPassword2'])) $pas2=$_POST['newPassword2'];
else $pas2=NULL;
if(isset($_POST['newEmail'])) $newMail=$_POST['newEmail']; else
$newMail=NULL;
if(isset($_POST['newMob1'])) $newMob1=$_POST['newMob1']; else
$newMob1=NULL;
if(isset($_POST['newName'])) $newName=$_POST['newName']; else
$newName=NULL;
if(isset($_POST['newLast'])) $newLast=$_POST['newLast']; else
$newLast=NULL;
if(isset($_POST['newMob2'])) $newMob2=$_POST['newMob2']; else
$newMob2=NULL;
if(isset($_POST['newHome'])) $newHome=$_POST['newHome']; else
$newHome=NULL;
if(isset($_POST['newOthr'])) $newOthr=$_POST['newOthr']; else
$newOthr=NULL;
if(isset($_POST['privilege'])) $priv=$_POST['privilege']; else
$priv=NULL;
$user=strval($_GET['user']);
try{
    check_valid_user();
    if(!$oldPas&&!$pas1&&$pas2&&!$newMail&&!$newMob1&&
    !$newName&&!$newLast&&!$newMob2&&!$newHome&&!$newOthr
    &&!$priv)
    {
        dispHeader("");
        showUserProfile($user);
        echo "<br /><br />";
        displayUserOptions($user,$type);
        dispFooter();
    }
    else
    {
}
```

```

if($type=="User")
{
    if($oldPas && $pas1 && $pas2)
    {
        if($pas1 != $pas2)
        {
            throw new Exception('The passwords
you entered are different!');
        }
        else
        {
            $new=db_check("users","username","password","$user","$oldPa
s");
            if($new==false) throw new
Exception('Wrong password');
            db_update("users","username","password","$user","$pas1");
            $message="password changed!";
        }
    }
    else if((($oldPas && (!$pas1 || !$pas2)) || ($pas1 &&
(!$oldPas || !$pas2)) || ($pas2 && (!$oldPas || !$pas1))) )
    {
        throw new Exception('form not filled
correctly,try again');
    }
}
else
{
    if($pas1 && $pas2)
    {
        if($pas1 != $pas2)
        {
            throw new Exception('password not
same');
        }
        else
        {
            db_update("users","username","password","$user","$pas1");
            $message="password of $user changed!";
        }
    }
    else if((!$pas1 && $pas2) || ($pas1 && !$pas2))
    {
}
}

```

```

        throw new Exception('form not filled
correctly,try again');
    }
}
if($newMail)
{
    $ret=valid_email($newMail);
    if($ret==false) throw new Exception('The email
address you entered is invalid');
    db_update("users","username","email","$user","$newMail");
    if($val_user!=$user) $message="email of $user
changed!";
    else $message="email changed!";
}
if($newMob1)
{
    db_update("telephone","user_id","mobile1","$user",$newMob1);
    if($val_user!=$user) $message="mobile no. of $user
changed!";
    else $message="Your mobile has changed!";
}
if($newName)
{
    db_update("users","username","name","$user","$newName");
    if($val_user!=$user) $message="name of $user
changed!";
    else $message="name changed!";
}
if($newLast)
{
    db_update("users","username","surname","$user","$newLast");
    if($val_user!=$user) $message="surname of $user
changed!";
    else $message="Surname changed!";
}
if($newMob2)
{
    db_update("telephone","user_id","mobile2","$user",$newMob2);
    if($val_user!=$user) $message="mobile no of $user
changed!";
    else $message="";
}
]
];
}

```

```

        if($newHome)
        {
            db_update("telephone","user_id","home","$user",$newHome);
            if($val_user!=$user) $message="Landline No
changed";
            else $message="telephone changed!";
        }
        if($newOthr)
        {
            db_update("telephone","user_id","other","$user",$newOthr);
            if($val_user!=$user) $message="The other phone of
$user changed!";
            else $message="Other Phone Changed!";
        }
        if($priv=="Admin")
        {
            db_update("users","username","user_type","$user","A");
            $message="user $user become Admin !";
        }
        else if($priv=="User")
        {
            db_update("users","username","user_type","$user","U");
            $message=" $user Low User!";
        }
        if($type=="Admin") dispHeader("User Profile $user");
        else dispHeader("To Profile");
        showUserProfile($user);
        echo "<br />";
        echo $message;
        echo "<br /><br />";
        displayUserOptions($user,$type);
        dispFooter();
        $message="";
    }
}
catch(Exception $e)
{
    dispHeader("error with the profile $user:");
    echo $e->getMessage();
    dispURL('editUser.php?user='.$user, 'Edit Profile');
    dispFooter();
    exit;
}

```

?>

- favAdvs.php

```
<?php
include('includes.php');
if(isset($_POST['remProperty'])) $remProp=$_POST['remProperty'];
else $remProp=NULL;
if(isset($_GET['page'])) $page=$_GET['page']; else $page=1;
try
{
    check_valid_user();
    if(isset($remProp))
    {
        foreach($remProp as $prop)
        {
            db_delete('fav_prop','prop_id','user_id',$prop,"$val_user");
        }
    }
    $select="select * from fav_prop where user_id='$val_user'";
    $result=db_excecute($select,"select");
    $message="select distinct
property.prop_id,address,price,offer_type,area,views,category from
property,categories,cat_prop where (";
    if(mysql_num_rows($result)>0)
    {
        while($row=mysql_fetch_assoc($result))
        {
            $message.=" property.prop_id='".$row['prop_id']."'.
or";
        }
        $message=substr($message,0,-2);
        $message.=" )";
    }
    $message.=" and property.prop_id=cat_prop.prop_id and
categories.cat_id=cat_prop.cat_id";
    //echo $message;
    check_valid_user();
    dispHeader("");
    echo "<div class='header-bar-full'><h1 class='blue'>My Favourite
Ads</h1></div>";
    if(!(mysql_num_rows($result)>0)) echo "
<div class=\"content-box-1\">
```

```

<div class=\"content-box-1-top\"></div>
<div class=\"content-box-1-middle\">
<div class=\"content-box-1-content\">
<h3> You have not put any advertisement on your favorite! </ h3>
<p> to add a favorite ad simply click the Add button! </ P>
    <a href=member.php> Back to Profile </ a> <br/>
    <a href=main.php> Back to Home </ a>
</div>
</div>
<div class=\"content-box-1-bottom\">&nbsp;</div>
</div>      ";
        else propertySearch($message,"Favourites",$page);
        dispFooter();
    }
catch(Exception $e)
{
    dispHeader("Error:");
    echo $e->getMessage();
    dispFooter();
    exit;
}
?>

```

- homeAdertise.php

```

<?php
include('includes.php');
try
{
    check_valid_user();
    dispHeader("");
    dispHomeAdvertise();
    dispFooter();
}
catch(Exception $e)
{
    dispHeader('Error');
    echo $e->getMessage();
    dispFooter();
    exit;
}

```

?>

- homeAdvertiseNew.php

```
<?php
include('includes.php');
try
{
    check_valid_user();
    dispHeader("");
    dispHomeAdvertise();
    dispFooter();
}
catch(Exception $e)
{
    dispHeader('Error');
    echo $e->getMessage();
    dispFooter();
    exit;
}
?>
```

- homeSearch.php

```
<?php
include('includes.php');
try
{
    $_SESSION['prevPage']="homeSearch.php";
    check_valid_user(1);
    dispHeader("");
    dispHomeSearch();
    dispFooter();
}
catch(Exception $e)
{
    dispHeader("Error:");
    echo $e->getMessage();
    dispFooter();
    exit;
}
```

?>

- homeSearchRes.php

```
<?php
require_once('includes.php');
if(isset($_POST['delProperty'])) $delProp=$_POST['delProperty']; else
$delProp=NULL;
if(isset($_POST['mainQuery'])) $mainQuery=$_POST['mainQuery'];
else $mainQuery=NULL;
if(isset($_GET['page'])) $page=$_GET['page']; else $page=1;
if(isset($_GET['results'])) $results=$_GET['results']; else $results=15;
try
{
    if(isset($mainQuery))
    {
        $message="select distinct
property.prop_id,address,price,offer_type,area,views,category from
property,categories,cat_prop,fac_prop,facilities";
        $message.=" where (property.address like '%$mainQuery%'
or categories.category like '%$mainQuery%' or facilities.facility like
'%$mainQuery%')";
        $message.=" and property.prop_id=cat_prop.prop_id and
categories.cat_id=cat_prop.cat_id and facilities.fac_id=fac_prop.fac_id
and property.prop_id=fac_prop.prop_id";
        $message.=$message.";";
    }
    else
    {
        if($_SESSION['prevPage']=="homeSearchRes.php")
        {
            $message=$_SESSION['query'];
            if(isset($delProp))
            {
                foreach($delProp as $prop)
                {
                    db_del_prop($prop);
                }
            }
            else
            {

```

```

$_SESSION['prevPage']="homeSearchRes.php";
$message="select distinct
property.prop_id,address,price,offer_type,area,views,category from
property,categories,cat_prop";
if(isset($_POST['facilities']))
$message.=",fac_prop,facilities";
$message.=" where property.propState='T'";
if(isset($_POST['typos']))
{
    $message.=" and";
    $typos=$_POST['typos'];
    $message.=" (";
    foreach ($typos as $typ)
    {
        $message.=" property.offer_type='$typ'
or";
    }
    $message=substr($message,0,-2);
    $message.=" )";
}
if(isset($_POST['category']))
{
    $message=$message." and";
    $category=$_POST['category'];
    $message.=" (";
    foreach ($category as $cat)
    {
        $message.=" categories.category='$cat'
or";
    }
    $message=substr($message,0,-2);
    $message.=" )";
}
if(isset($_POST['low_price']))
{
    $value=$_POST['low_price'];
    if($value!="nolimit")
    {
        $message.=" and
property.price>=$value";
    }
}
if(isset($_POST['high_price']))

```

```

{
    $value=$_POST['high_price'];
    if($value!="nolimit")
    {
        $message.=" and
property.price<=$value";
    }
}
if(isset($_POST['low_area']))
{
    $value=$_POST['low_area'];
    if($value!="nolimit")
    {
        $message.=" and property.area>$value";
    }
}
if(isset($_POST['high_area']))
{
    $value=$_POST['high_area'];
    if($value!="nolimit")
    {
        $message.=" and property.area<$value";
    }
}
if(isset($_POST['Afloor']))
{
    $message=$message." and";
    $Afloor=$_POST['Afloor'];
    $message.=" (";
    foreach($Afloor as $fl)
    {
        $message.=" property.Afloor=$fl or";
    }
    $message=substr($message,0,-2);
    $message.=" )";
}
if(isset($_POST['etos_katask']))
{
    $value=$_POST['etos_katask'];
    if($value!="nolimit")
    {
        $message.=" and
property.constr_date>$value";
    }
}

```

```

        }
    }
    if(isset($_POST['facilities']))
    {
        $message=$message." and";
        $facility=$_POST['facilities'];
        $message.=" (";
        foreach ($facility as $fac)
        {
            $message.=" facilities.facility='".$fac."' or";
        }
        $message=substr($message,0,-2);
        $message.=" )";
        $message.=" and
property.prop_id=fac_prop.prop_id and
facilities.fac_id=fac_prop.fac_id";
    }
    $message.=" and property.prop_id=cat_prop.prop_id
and categories.cat_id=cat_prop.cat_id ORDER BY property.prop_id
DESC";
    $message=$message.":";
    $_SESSION['query']=$message;
}

if(isset($message)) $_SESSION['message']=$message;
else $message=$_SESSION["message"];
check_valid_user(1);
dispHeader();
echo "<div class='header-bar-full'><h1 class='blue'>Search
Results</h1></div>";
$result=db_exec($message,"searchRes");
if(mysql_num_rows($result)==0) echo "No ads on the criteria you
selected!";
else propertySearch($message,"Delete",$page,$results);
dispFooter();
}

catch (Exception $e)
{
    dispHeader('Error:');
    echo $e->getMessage();
    dispFooter();
    exit;
}

```

```
}
```

```
?>
```

- includes.php

```
<?php
    session_start();
        if(isset($_SESSION['user_type'])) $type=$_SESSION['user_type'];
        if(isset($_SESSION['valid_user']))
            $val_user=$_SESSION['valid_user'];
            if(isset($_SESSION['prevPage']))
                $prevPage=$_SESSION['prevPage']; else $prevPage=NULL;
                if(isset($_SESSION['query'])) $query=$_SESSION['query']; else
                    $prevPage=NULL;
                    require_once('html_functions.php');
                    require_once('main_functions.php');
?>
```

- login.php

```
<?php
include('includes.php');
dispHeader();
if(!isset($val_user))
{
    dispLoginBox();
}
else
{
    echo "You are connected!";
    dispURL("logout.php","logout");
}
dispFooter();
?>
```

- logout.php

```
<?php
include('includes.php');

if(isset($_POST['logout'])) $logout=$_POST['logout']; else
    $logout=NULL;
```

```

if(isset($_POST['nologout'])) $nologout=$_POST['nologout']; else
$nologout=NULL;
$oldUser = $_SESSION['valid_user'];
if(isset($oldUser))
{
    if(isset($logout))
    {
        unset($_SESSION['valid_user']);
        session_destroy();
        sleep(2);
        header( 'Location: main.php' );
    }
    else if(isset($nologout))
    {
        sleep(1);
        header( 'Location: main.php' );
    }
    else
    {
        dispHeader("");
        dispLogout();
        dispFooter();
    }
}
else
{
    dispHeader ('Logout');
echo '<br /><br /> You were not connected. <br />';
echo "<br /><br /> <a href=\"main.php\"> Back to home page </ a>";
    dispLogout();
}
?>

```

- main.php

```

<?php
include('includes.php');

try
{
    check_valid_user(1);
    dispHeader();

```

```

        dispMainPage();
        dispFooter();
    }
    catch(Exception $e)
    {
        dispHeader();
        echo $e->getMessage();
        dispFooter();
        exit;
    }
?>

- member.php

<?php
include('includes.php');
if(isset($_POST['username'])) $username = $_POST['username']; else
$username=NULL;
if(isset( $_POST['password'])) $passwd = $_POST['password']; else
$passwd=NULL;
if ($username && $passwd)
{
    try
    {
        $type_=login($username, $passwd);
        $_SESSION['valid_user'] = $username;
        $val_user=$_SESSION['valid_user'];
        if ($type_=="A") $type_="Admin";
        else $type_="User";
        $_SESSION['user_type'] = $type_;
        $type=$_SESSION['user_type'];
        header('Location: main.php');
    }
    catch(Exception $e)
    {
        dispHeader("");
        echo "<div class='header-bar-full'><h1 class='blue'>Home</h1></div>
              <div class='content-box-1'>
                <div class='content-box-1-top'></div>
                <div class='content-box-1-middle'>
                  <div class='content-box-1-content'> <div align='left'>
                    <h3> Unable to load the page. </h3>
                  </div>
                </div>
              </div>";
    }
}

```

```

<h4 class='blue-tip-text'> The username or password you entered
was incorrect. </h4> <br/> ";
echo $e->getMessage();
dispURL('login.php', 'try again');
echo "<br /> <br /> you're not a member?; Register Now?";
dispURL("signup.php","Registration");
echo "</div></div></div>
<div class='content-box-1-bottom'>&nbsp;</div></div>";
dispFooter();
exit;
}
}
check_valid_user();
dispHeader("");
if (isset($_SESSION['user_type']))
{
    echo "<div class='header-bar-full'><h1 class='blue'>Home page
settings</h1></div>";
    if($type=="Admin")
    {
        echo "<div id='sub-header-left'>Welcome<span
class='yellow'>$val_user</span>!</div>
<div class='content-box-1'>
<div class='content-box-1-top'></div>
<div class='content-box-1-middle'>
<div class='content-box-1-content'> <div align='left'>
        <h4> You are logged in as admin </ h4> ";
        dispURL ("editUser.php? user =". $val_user, "Edit my profile");
        echo "<br />";
        dispURL ("displayUsers.php", "Show user");
        echo "<br />";
        dispURL ("editCategories.php", "View/Edit Category");
        echo "<br />";
        dispURL ("editFacilities.php", "View/Edit benefit");
        echo "<br />";
        dispURL ("showNewAdvs.php", "View/Edit Newest ads");
        echo "<br />";
        dispURL ("favAdvs.php", "View of my favorite ads");
        echo "<br />";
        dispURL ("myProperties.php", "View my ads");
        echo "<br />";
        echo "<br />";
        echo "
    
```

```

<form method="post" action="member.php" >
<input type="submit" name="testData" value="Display options for the test data!" >
</form>
";
if(isset($_POST['testData']))
{
echo "
<fieldset>
<legend>entry of test data</legend>

<form method="post" action="member.php" >
1.<input type="submit" name="createSProperties" value="Create Random 1000 Property (Sales)!" >
</form>
";
echo "
<form method="post" action="member.php" >
2.<input type="submit" name="createLProperties" value="Create Random 500 properties (rental)!" >
</form>
</fieldset>
";
}
if(isset($_POST['createSProperties'])) createSProperties();
if(isset($_POST['createLProperties'])) createLProperties();

echo "
<form method="post" action="member.php" >
<fieldset>
<legend>Send email</legend>
<input type="text" name="email" value="email" />
<input type="text" name="subjEmail" value="sub" /><br />
<textarea name="textEmail" rows="2" cols="41">text</textarea>
<input type="submit" name="emailTest" value="Send email!" >

```

```

        </fieldset>
        </form>
        ";
        if(isset($_POST['emailTest']))
        {
            $headers = 'From: uttam@gmail.com' . "\r\n" .
            'Reply-To: uttam@hghg.com' . "\r\n" .
            'X-Mailer: PHP/' . phpversion();
            $ret=mail_utf8($_POST['email'],
            $_POST['subjEmail'], $_POST['textEmail'], $headers);
            if($ret==true) echo "The mail was sent!<br />";
            else echo "The mail is not sent!<br />";
        }
    }
    else
    {
        echo "<div id='sub-header-left'>welcome <span
        class='yellow'>$val_user</span>!</div>
        <div class='content-box-1'>
        <div class='content-box-1-top'></div>
        <div class='content-box-1-middle'>
        <div class='content-box-1-content'> <div align='left'>";
        dispURL("editUser.php?user=".$val_user,"Edit My
        Profile");
        echo "<br />";
        dispURL("favAdvs.php","View my favorite ads");
        echo "<br />";
        dispURL("myProperties.php","View my own ads");
        echo "<br />";
    }
    dispURL("logout.php","logout");
    echo "</div></div></div>
<div class='content-box-1-bottom'>&nbsp;</div></div>";
}
dispFooter();
?>

```

- myProperties.php

```

<?php
include('includes.php');
if(isset($_POST['remProperty'])) $remProp=$_POST['remProperty']; else
$remProp=NULL;

```

```

if(isset($_POST['delProperty'])) $delProp=$_POST['delProperty']; else
$delProp=NULL;
if(isset($_GET['page'])) $page=$_GET['page']; else $page=1;
if(isset($_GET['results'])) $results=$_GET['results']; else $results=15;

try
{
    if(isset($delProp))
    {
        foreach($delProp as $prop)
        {
            db_del_prop($prop);
        }
    }
    check_valid_user();
    $messageT="select distinct
property.prop_id,address,price,offer_type,area,views,category from
property,categories,cat_prop,fac_prop,facilities";
    $messageT.= " where property.user_id='$val_user' and
property.propState='T'";
    $messageT.= " and property.prop_id=cat_prop.prop_id and
categories.cat_id=cat_prop.cat_id";
    $messageT.=";";
    $messageF="select distinct
property.prop_id,address,price,offer_type,area,views,category from
property,categories,cat_prop,fac_prop,facilities";
    $messageF.= " where property.user_id='$val_user' and
property.propState='F'";
    $messageF.= " and property.prop_id=cat_prop.prop_id and
categories.cat_id=cat_prop.cat_id";
    $messageF.=";";
    $resultT=db_excecute($messageT,"myProperty1");
    $resultF=db_excecute($messageF,"myProperty2");
    check_valid_user();
    dispHeader("");
    echo "<div class='header-bar-full'><h1 class='blue'>My own
properties </h1></div>";
    if(!(mysql_num_rows($resultT)>0) &&
!(mysql_num_rows($resultF)>0))
    {
        echo "<br /> You have no property!<br />";
    }
    else

```

```

    {
        echo "<div id='sub-header'><span
class='yellow'>approved</span>ads</div>";
        if(!(mysql_num_rows($resultT)>0)) echo "<br /> You have
no approved advert!<br />";
        else
            propertySearch($messageT,"UserDelete",$page,$results);
            echo "<div id='sub-header'><span class='yellow'> In
Waiting for Approval </span>ads</div>";
            if(!(mysql_num_rows($resultF)>0)) echo "<br /> You have
no ad to be approved!<br />";
            else
                propertySearch($messageF,"UserDelete",$page,$results);
        }
        dispFooter();
    }
    catch(Exception $e)
    {
        dispHeader("Error:");
        echo $e->getMessage();
        dispFooter();
        exit;
    }
?>

```

- profUser.php

```

<?php

include('includes.php');
try
{
    check_valid_user();
    $user=strval($_GET['user']);
dispHeader("");
    showUserProfile($user);
    dispFooter();
}
catch (Exception $e)
{
    dispHeader('error:');
    echo $e->getMessage();
    dispFooter();
}

```

```
        exit;  
    }  
?>
```

- showNewAdvs.php

```
<?php  
include('includes.php');  
if(isset($_POST['accProperty'])) $accProp=$_POST['accProperty']; else  
$accProp=NULL;  
if(isset($_GET['page'])) $page=$_GET['page']; else $page=1;  
  
try  
{  
    check_valid_user();  
    if(isset($accProp))  
    {  
        foreach($accProp as $prop)  
        {  
            echo "$prop <br />";  
            db_update('property','prop_id','propState',$prop,'"T"');  
        }  
    }  
    dispHeader();  
    echo "<div class='header-bar-full'><h1  
class='blue'>Ads</h1></div>";  
    $message="select distinct  
property.prop_id,address,price,offer_type,area,views,category from  
property,categories,cat_prop";  
    $message.=" where property.propState='F' and";  
    $message.=" property.prop_id=cat_prop.prop_id and  
categories.cat_id=cat_prop.cat_id";  
    $message=$message.":";  
    $result=db_excecute($message,"fevAds");  
    if(mysql_num_rows($result)==0) echo "<h3>There are no new  
property! </h3>  
<a href=member.php> Back to Profile </ a> <br/>  
<a href=main.php> Back to Home </a> ";  
    else propertySearch($message,"Accept",$page);  
    dispFooter();  
}  
catch(Exception $e)  
{
```

```
    dispHeader("Error:");
    echo $e->getMessage();
    dispFooter();
    exit;
}
```

```
?>
```

- **signup.php**

```
<?php
include('includes.php');
dispHeader("");
dispRegForm();
dispFooter();
```

```
?>
```

- **signup_new.php**

```
<?php
include('includes.php');
if(isset($_POST['username'])) $username=$_POST['username']; else
$username=NULL;
if(isset($_POST['pwd'])) $passwd=$_POST['pwd']; else
$passwd=NULL;
if(isset($_POST['pwd2'])) $passwd2=$_POST['pwd2']; else
$passwd2=NULL;
if(isset($_POST['mail'])) $email=$_POST['mail']; else $email=NULL;
if(isset($_POST['homephone'])) $home=$_POST['homephone']; else
$home=NULL;
if(isset($_POST['mob1phone'])) $mob1=$_POST['mob1phone']; else
$mob1=NULL;
if(isset($_POST['mob2phone'])) $mob2=$_POST['mob2phone']; else
$mob2=NULL;
if(isset($_POST['othrnumber'])) $othr=$_POST['othrnumber']; else
$othr=NULL;
if(isset($_POST['frstname'])) $frst=$_POST['frstname']; else
$frst=NULL;
if(isset($_POST['lstname'])) $lst=$_POST['lstname']; else $lst=NULL;

try
{
```

```

if (!filledOut($username) || !filledOut($passwd) ||
!filledOut($passwd2) || !filledOut($email) || !filledOut($mob1))
{
    throw new Exception('You have not filled out the form
correctly,try again');
}

if (!valid_email($email))
{
    throw new Exception('This mail you entered is not valid.');
}

if ($passwd != $passwd2)
{
    throw new Exception('password not matched.');
}

if (strlen($passwd)<4 || strlen($passwd) >16)
{
    throw new Exception('The length of your password must be
between 4 and 16.');
}

if (strlen($mob1)!=10 || !(is_numeric($mob1)))
{
    throw new Exception('cell should contain only numbers and
has exactly 10 digits.');
}

if (strlen($mob2)>0 && (strlen($mob2)!=10 ||
!(is_numeric($mob2))))
{
    throw new Exception('mobile no should only contain
numbers and have exactly 10 digits.');
}

if (strlen($othr)>0 & (strlen($othr)!=10 || !(is_numeric($othr))))
{
    throw new Exception('other phone should only contain
numbers and have exactly 10 digits.');
}

if (strlen($home)>0 & (strlen($home)!=10 ||
!(is_numeric($home))))
{
    throw new Exception('The landline should contain only
numbers and have exactly 10 digits.');
}

```

```

    }

register($username, $passwd, $email, $mob1);

if($frst)
db_update("users","username","name","$username","","$frst");
if($lst)
db_update("users","username","surname","$username","","$lst");
if($home)
db_update("telephone","user_id","home","$username","","$home");
if($mob2)
db_update("telephone","user_id","mobile2","$username","","$mob2
"));

if($othr)
db_update("telephone","user_id","other","$username","","$othr");
$message = "Welcome". $username. " at Real Estate Project.\n";

$message = wordwrap($message, 70);
$to = $email;
$subject = 'Real Estate Project';
$headers = 'From: uttamdhabas@gmail.com' . "\r\n" .
'Reply-To: uttamdhabas@gmail.com' . "\r\n" .
'X-Mailer: PHP/' . phpversion();
$ret=mail_utf8($email, $subject, $message,$headers);

dispHeader();
echo "<div class='header-bar-full'><h1 class='blue'>successful
Registration</h1></div>
<div class='content-box-1'>
<div class='content-box-1-top'></div>
<div class='content-box-1-middle'>
<div class='content-box-1-content'>
    <h3> Registration was successful! </ h3> Welcome to Real Estate
Project! <br/>
    You can now log in via the login page. <br/> <br/> ";
    dispURL('login.php', 'Login page');
echo "</div></div>
    <div class='content-box-1-bottom'>&nbsp;</div></div>";
    dispFooter();
}

catch (Exception $e)
{
    dispHeader('Error:');
}

```

```

        echo $e->getMessage();
        dispFooter();
        exit;
    }

?>

- viewProperty.php

<?php

require_once("includes.php");
if(isset($_GET['propId'])) $id=strval($_GET['propId']); else $id=NULL;
if(isset($_POST['add'])) $add=$_POST['add']; else $add=NULL;
try
{
    $message="";
    if(isset($add)&&!isset($val_user))
    {
        if($add=="add!")
        {

db_insert('fav_prop','user_id','prop_id',"val_user",$id);
            $message=<br />advertisement added to your
Favourite Ads! <br />;
        }
        else
        {
            db_delete('fav_prop','user_id','prop_id',"val_user",$id);
            $message=<br />advertisement erased from your
favorite listings! <br />;
        }
    }
    else if(isset($add)&&!isset($val_user))
    {
        check_valid_user();
    }
    check_valid_user(1);
    dispHeader("");
    db_update('property','prop_id','views',$id,'views+1');

showProperty($id);
}

```

```
    echo $message;
    dispFooter();
}
catch(Exception $e)
{
    dispHeader('Error');
    echo $e->getMessage();
    dispFooter();
    exit;
}
?>
```

4.4 Snap shots of user interface

■ home page

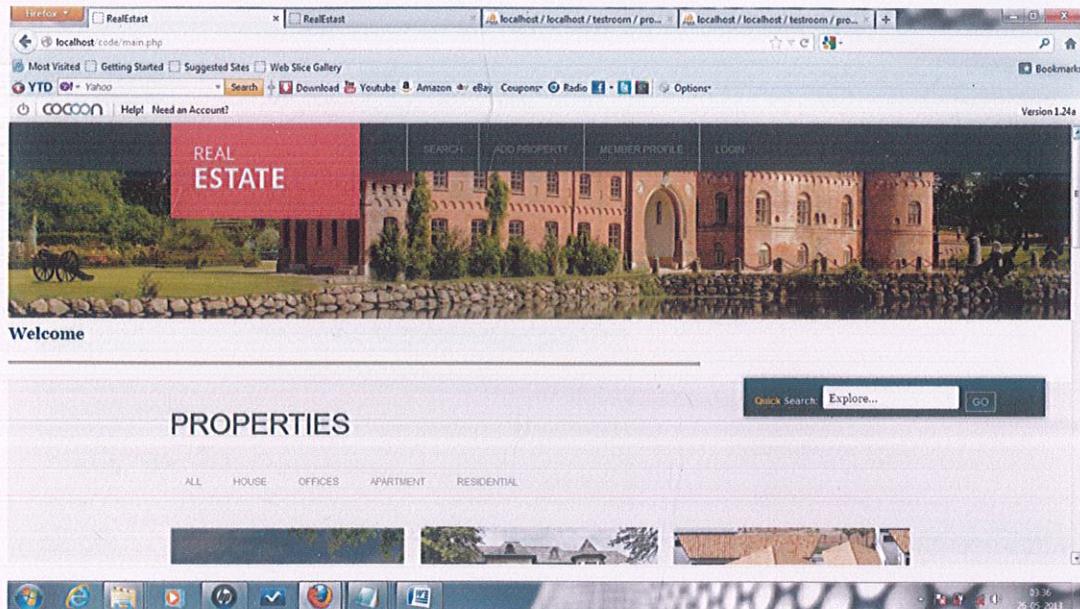


Fig-18

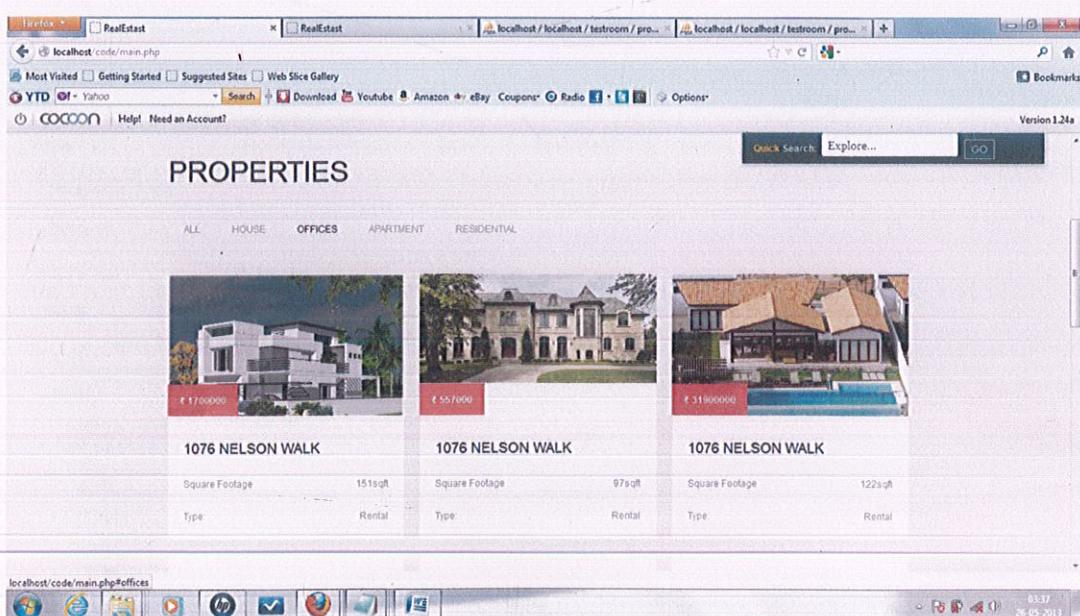


Fig-19

■ Search page

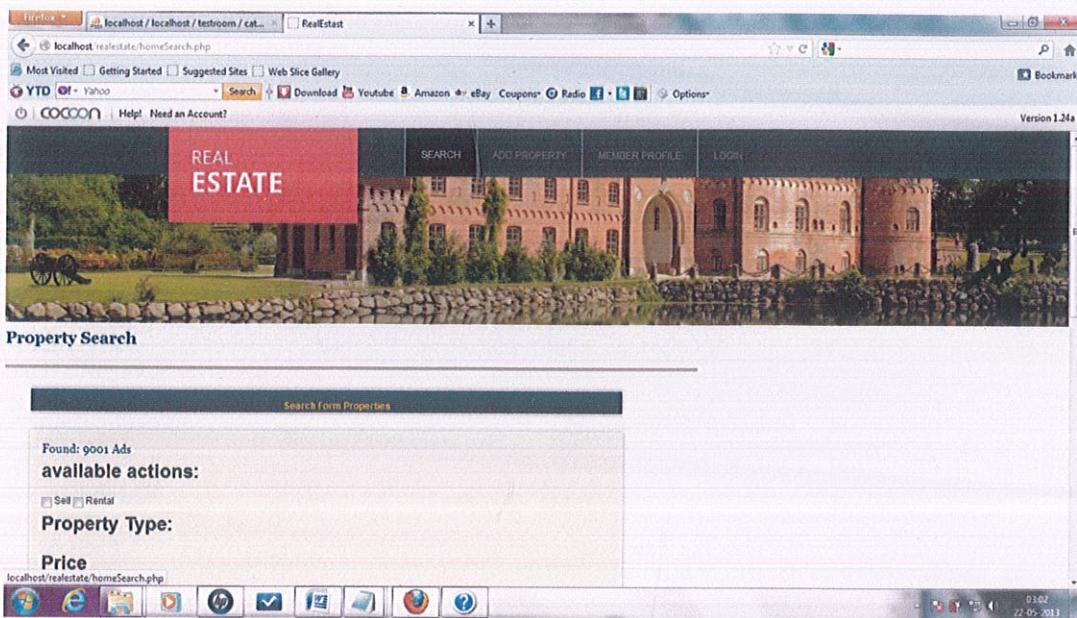


Fig-20

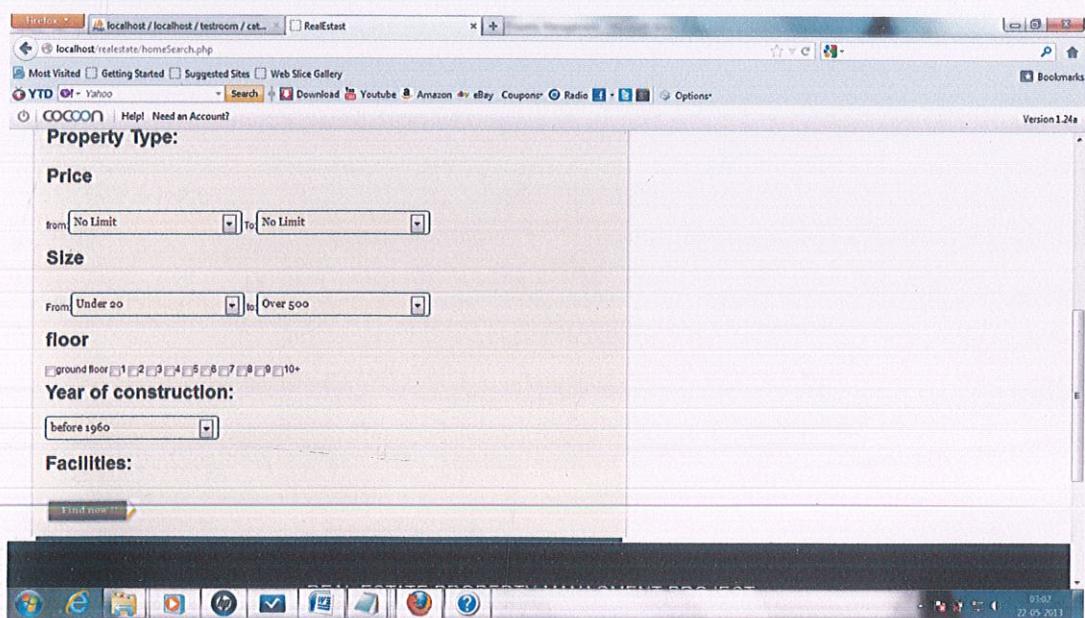


Fig-21

■ Add property page

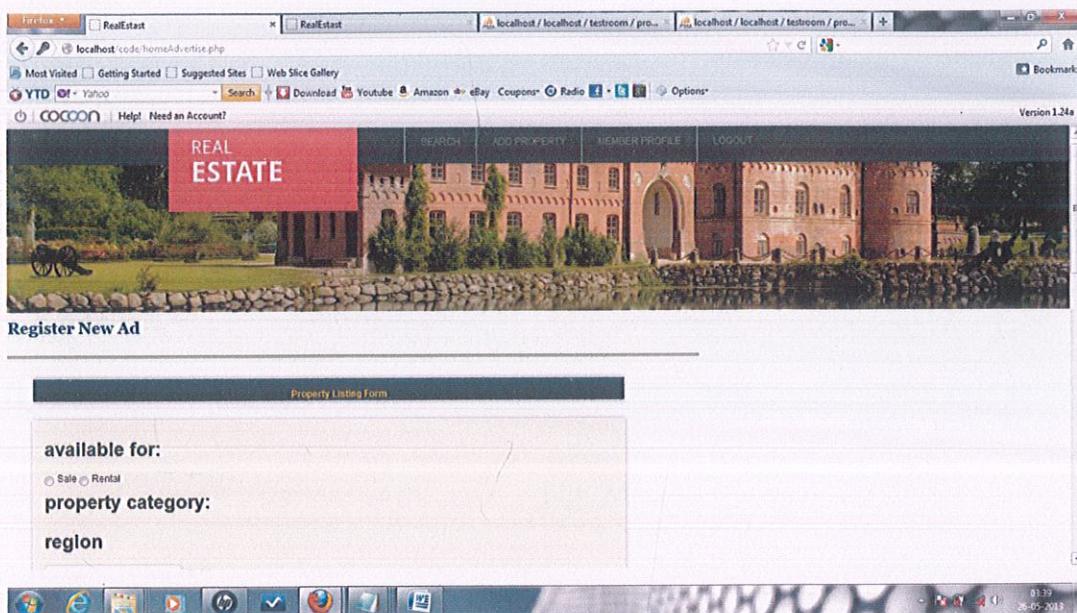


Fig-22

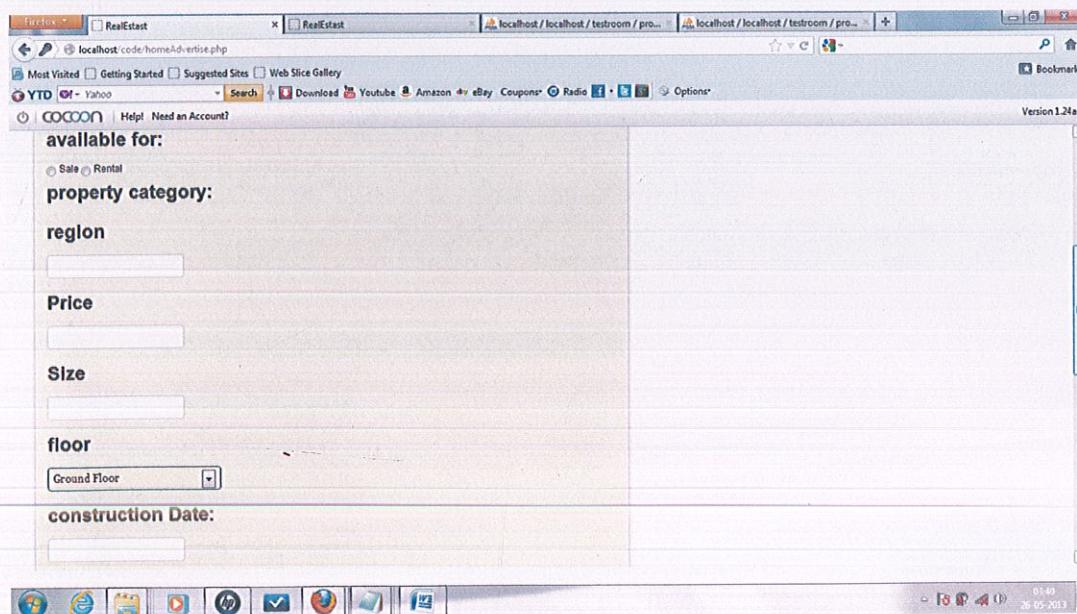


fig-23

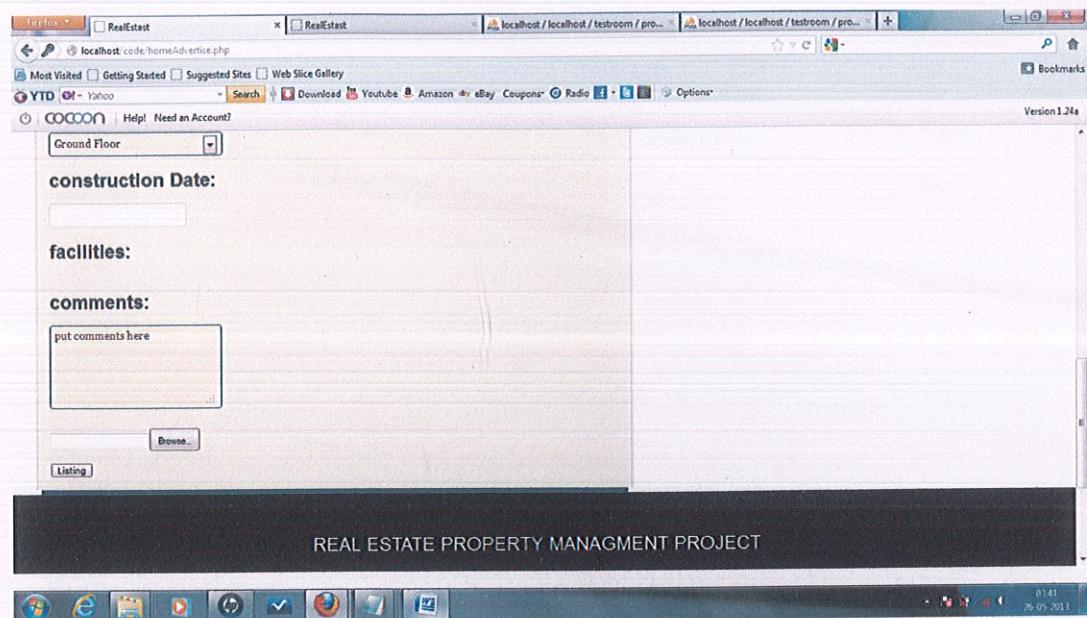


Fig-24

■ Member profile of administrator

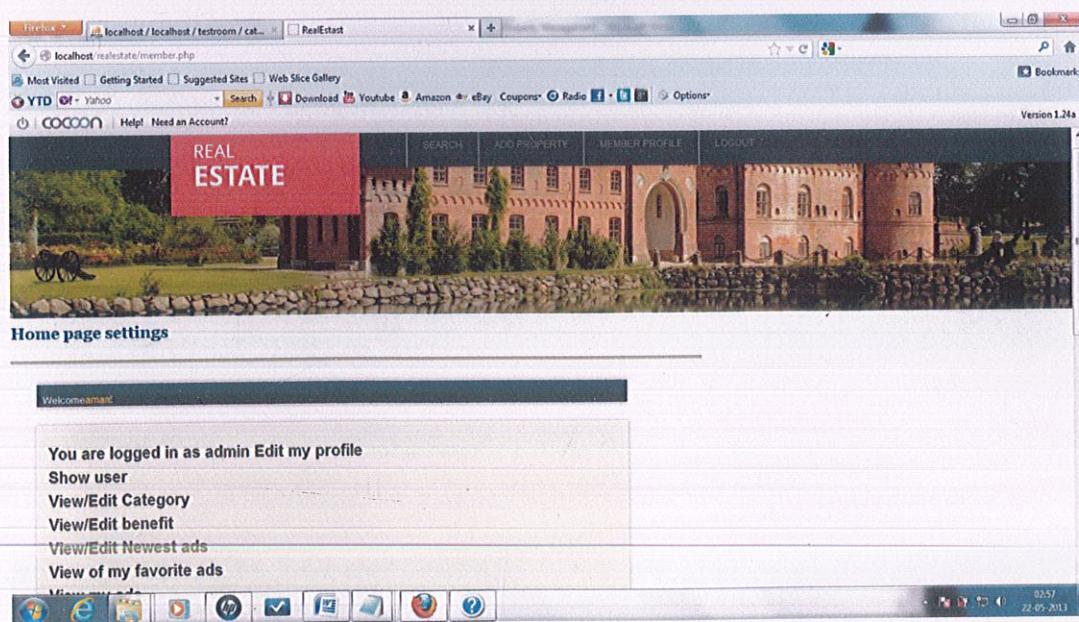


Fig-25

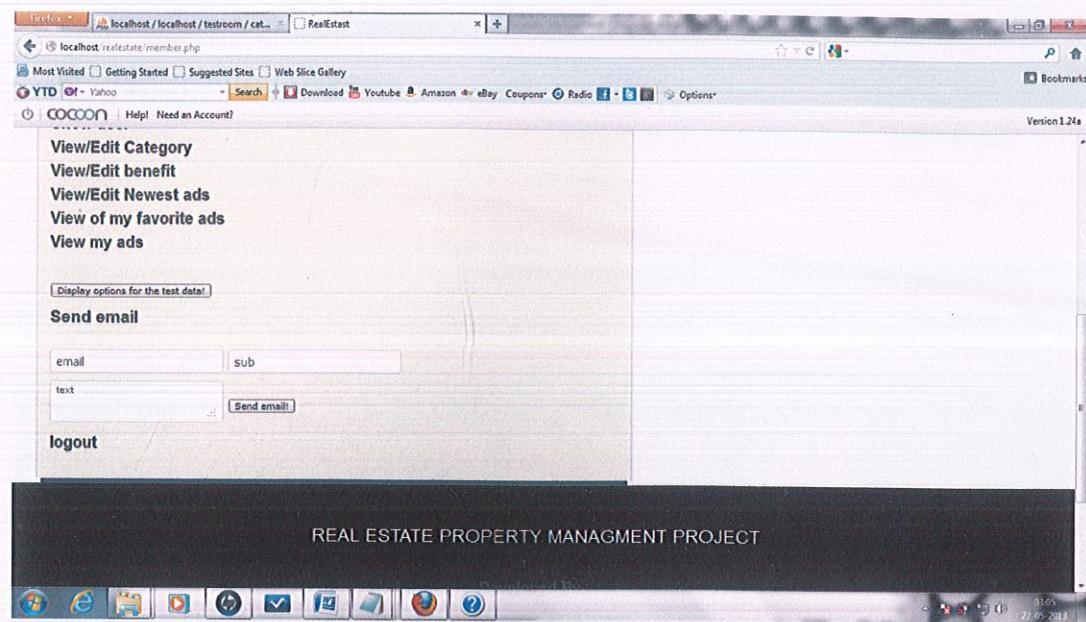


Fig-26

■ Member profile of user

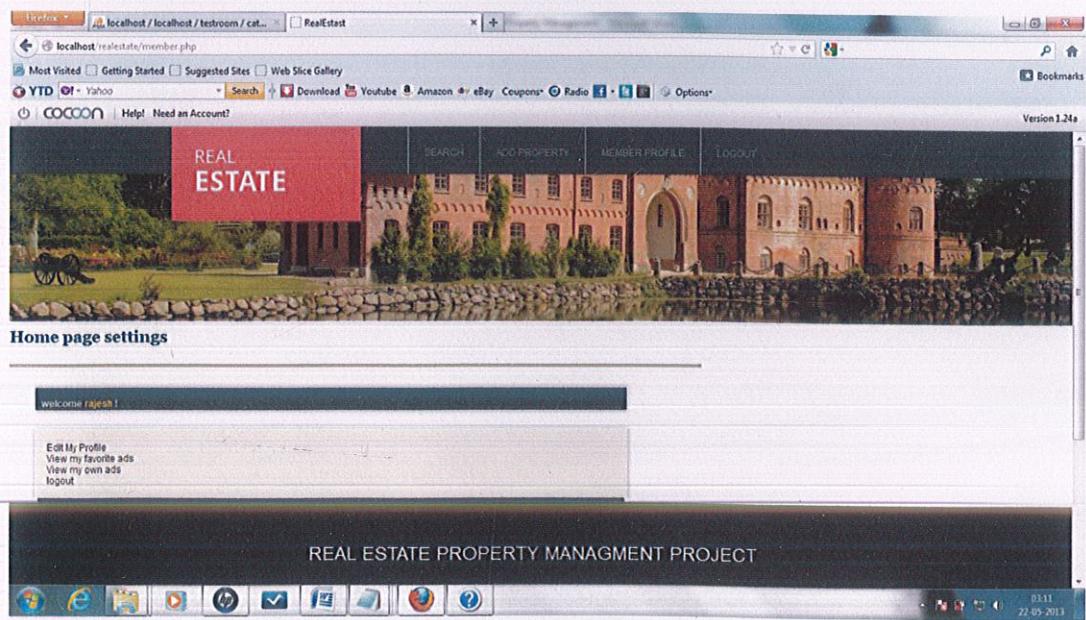


Fig-27

■ Registration page

The screenshot shows a Firefox browser window with the URL `localhost/realestate/signup.php`. The page has a header with a red banner containing the text "REAL ESTATE" and a large image of a brick building. Below the header is a navigation bar with links for "SEARCH", "ADD PROPERTY", "MEMBER PROFILE", and "LOGIN". A sub-header reads "User Registration". A dark blue bar below it contains the instruction "Fill in your details below Registration Form". A note states "Fields marked with * are mandatory". The main form section is titled "Username and Password" and contains three input fields: "username*", "password*", and "Repeat Password*". Below the form are several small icons. The status bar at the bottom right shows the date and time as "22-05-2013 03:06".

Fig-28

The screenshot shows a Firefox browser window with the same URL as Fig-28. The page layout is identical, featuring the "User Registration" section and the "Username and Password" form. However, the "Repeat Password*" field is now empty. Below this, a new section titled "contact" is visible, containing seven input fields: "E-mail*", "Home Phone*", "Mobile*", "Mobile No 2*", "other number*", "First Name*", and "Last Name*". A "SUBMIT" button is located at the bottom of this section. The status bar at the bottom right shows the date and time as "22-05-2013 03:06".

Fig-29

■ Login page

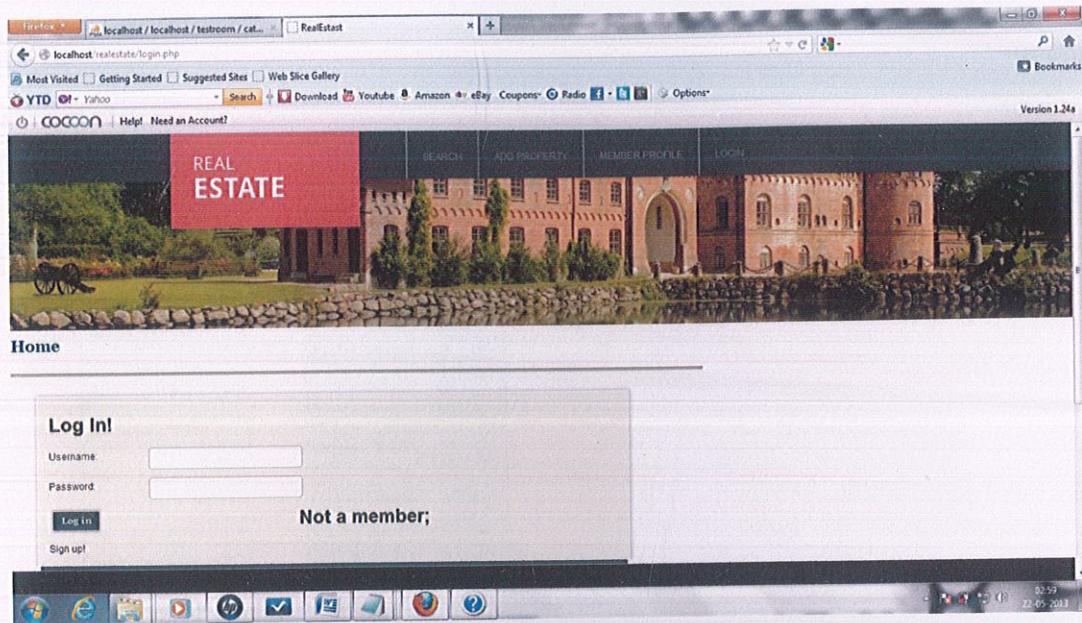


Fig-30

■ Logout page

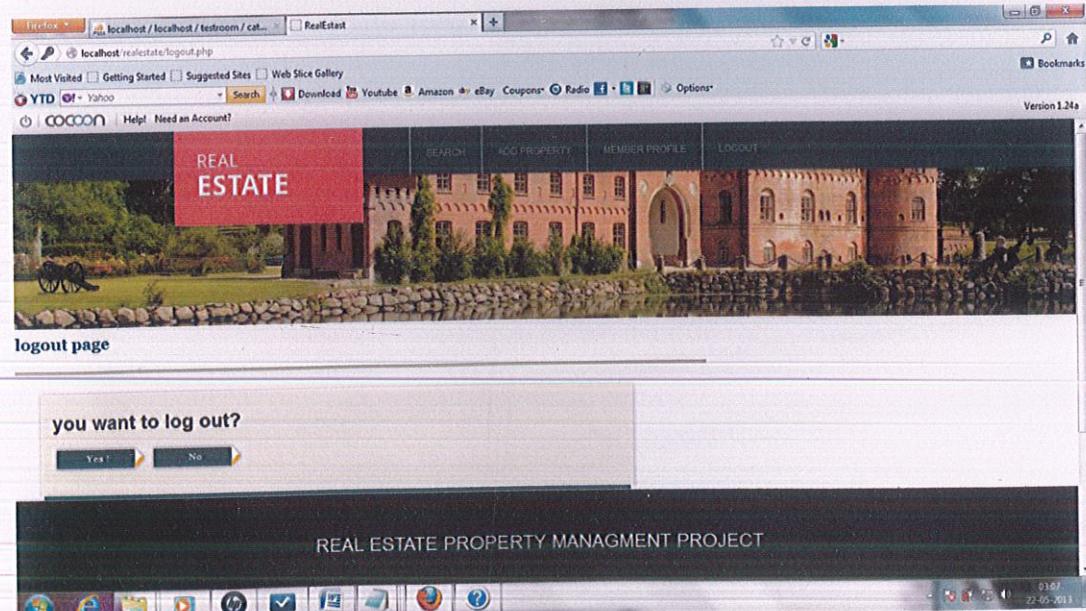


Fig-31

User Details Page

ID	Name	Email	Delete	Edit	View
user1383		user1383@gmail.com	Delete	Edit	View
user1384		user1384@gmail.com	Delete	Edit	View
user1385		user1385@gmail.com	Delete	Edit	View
user1386		user1386@gmail.com	Delete	Edit	View
user1387		user1387@gmail.com	Delete	Edit	View
user1388		user1388@gmail.com	Delete	Edit	View
user1389		user1389@gmail.com	Delete	Edit	View
user1390		user1390@gmail.com	Delete	Edit	View
user1391		user1391@gmail.com	Delete	Edit	View
user1392		user1392@gmail.com	Delete	Edit	View
user1393		user1393@gmail.com	Delete	Edit	View
user1394		user1394@gmail.com	Delete	Edit	View
user1395		user1395@gmail.com	Delete	Edit	View
user1396		user1396@gmail.com	Delete	Edit	View
user1397		user1397@gmail.com	Delete	Edit	View

Fig-32

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- <http://www.microsoft.com>
- <http://www.programmer2programmer.net>
- <http://www.codeproject.com>
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- <http://www.sqltuner.com>
- <http://www.wikipedia.com>

Books

- The complete java reference
- Computer Networks 4th Ed - Andrew S. Tanenbaum
- McGraw Hill - Software Engineering - A Practitioner's Approach - Pressman (5th Ed)(2001)
- (Wiley) The Art Of Software Testing 2nd Edition
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- (Wiley) The Art Of Software Testing 2nd Edition
- data And Databases Concepts In Practice - Joe Celkos
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