Online Job Portal

Project report submitted in partial fulfillment of the requirement for the degree of Bachelor of Technology

In

Computer Science and Engineering/Information Technology

By

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May - 2018

CANDIDATES' DECLARATION

We hereby declare that the work presented in this report entitled "GRAY SOLUTIONS -

An Online Job Portal" in partial fulfillment of the requirements for the award of the degree

of Bachelor of Technology in Information Technology submitted in the department of

Computer Science and Engineering and Information Technology, Jaypee University of

Information Technology, Waknaghat, is an authentic record of our own work carried out

over a period from January 2018 to May 2018 under the supervision of Mr. Manoj Kumar,

Designation, Infosys Ltd.

The matter embodied in the report has not been submitted for the award of any other degree

or diploma.

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This is to certify that the above statement made by the candidate is true to the best of my

knowledge.

Mr. Manoj Kumar

Infosys Ltd.

Dated: 22nd - May - 2018

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ABSTRACT

According to a report published by Deloitte, India is sitting on a demographic dividend goldmine. The report states that India has a median population of 27.3 years and has around 390 million millennials and about 440 million in the Gen-Z cohort. Hence for India to fully realize its demographic dividend, an Online Job Portal that is easy-to-use and hassle free, is the need of the hour. The current Job Portals provide an overly complicated and frustrating experience to Job Applicants and Recruiters alike. The average Indian Job Applicant isn't able to market himself well enough and search for a job that'll provide him with the job satisfaction and motivation to help him realize his full potential. As for the Recruiters, recruiting is a tiresome and lengthy process where they have to go through a plethora of irrelevant application.

This was the seed idea behind conceptualizing GRAY SOLUTIONS. With GRAY SOLUTIONS, we aim to simplify the process of how professionals connect with each other. As the proficiency and achievements of the Indian youth rely heavily on the kind of job opportunities they get, this project report highlights how our online website can viably expand opportunities and options for both job applicants and recruiters.

CHAPTER 1

INTRODUCTION

1.1 Introduction

AngularJS is a JavaScript based open-source front end web-based framework maintained by Google. The main idea behind AngularJS was to address many of the challenges in developing Single Page Applications (SPA). It lets you extend HTML vocabulary for other dynamic content through two-way data binding for the automatic synchronization of models and views. The resulting tool is extraordinarily readable, quick to develop and expressive. AngularJS extends HTML attributes with Directives and binds data to HTML with Expressions.AngularJS extends HTML with ng-directives:

- 1. The ng-app directive defines an AngularJS application.
- 2. The ng-model directive binds the value of HTML controls (input, select, textarea) to application data.
- 3. The ng-bind directive binds application data to the HTML view

AngularJS was originally developed in 2009 by Miško Hevery, as the software behind the online JSON storage service.

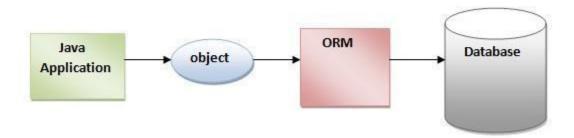
Bootstrap is used to build responsive, mobile-first projects on the web with the world's most popular front end libraries. It is an open source toolkit for developing with HTML, CSS and JS and includes HTML and CSS based design templates for typography, buttons, navigation, forms, tables, modals. It also allows optional JavaScript plugins. Bootstrap allows in building dynamic and responsive webpages.

Bootstrap was developed by Jacob Thornton and Mark Otto at Twitter Inc., and released as an open source product in August 2011 on GitHub. It was also awarded as the No.1 Project on GitHub, in June 2014.

JavaScript is a high-level, interpreted programming language. JavaScript along with HTML and CSS, forms the entire backbone of the World Wide Web. JavaScript happens to be such a dynamic and widely used language that it is not only limited to Web. Many desktop and server programs use JavaScript such as node.js. Some databases, like MongoDB and CouchDB, also make use of JS. In an online poll on JavaScript on GitHub in 2012, users characterized JS as dynamic, multi-paradigm, prototype based and weakly typed. JavaScript was invented by Brendan Eich in 1995, and became an ECMA standard in 1997. A little known yet interesting fact about JS is that its official name is ECMAScript.

JSP Sessions is used to store persistent data for a site visitor. PHP Sessions are a clever extension of cookies in the sense that cookies only store a unique ID on the client side and the actual data on the server side. When it receives the unique ID from the client side, it knows what data to load on the server. Sessions is an improvement as the real data is hidden from the client and the we can control when the data expires from the server side.

Hibernate Framework is used to simplify the interaction between the java application and the database. It is an open-source Object-Relational Mapping (ORM) tool. Hibernate simplifies the data creation, data manipulation and data access.



Hibernate Framework

The key feature of Hibernate is to map from Java classes to database tables, and to map from Java data types to SQL data types. It also automatically generates SQL query and frees the user from manual calling and object conversion of the result set. Hibernate uses an XML configuration file to generate skeleton source code for the persistence classes.

1.2 Problem Statement

- A web based Job Portal similar to GRAY SOLUTIONS already exists in the market.
- Many job seekers use a similar portal to hunt for desired jobs and stay abreast about various job openings. Recruiters use such portals to look out for the right candidates.
- The various web portals and apps provide users with various functionalities but they are laden with their own set of problems:
- The user interface is too messy and consequently tough to comprehend.
- Job applicants and recruiters both have to do a lot of probing to actually get around doing what they had in mind.
- Notifications are not sent out properly and the users not kept constantly updated on any new information.
- Many applicants are not made fully aware about the specifications of the job. Most often than not, applicants are kept in the dark about what is expected of them.
- We strived to create a web-based application that provides a wholesome experience to the user. GRAY SOLUTIONS is our attempt to better the user experience, be it applicant or recruiter.

1.3 Objectives

The target of the design of the alternative system is to provide a better platform for professionals to connect with each other. The proposed system also aims to provide a smooth and hassle free user experience with the aim that maximum users find success with respect to what they had in mind in the minimum stipulated time.

The proposed system will allow multiple users to upload their resumes, and for different companies to post job openings. Applicants will be able to view and apply for jobs based on their desirous companies and designations. They will have a better chance to market their skills with our additional facilities.

As for the companies, they will be able to post multiple openings and invite in prospective applications on the job listings and conduct various screening rounds to filter in more suitable candidates.

1.4 Methodology

With an exponential increase in Internet penetration in India, and an increase in ably skilled youth, an efficient Job Portal is the present need of the hour. Developing a system that would stand the test of time and remain relevant is increasingly becoming difficult. Hence it is obligatory for systems to adopt and constantly accommodate changes in this ever constant changing industry.

These days, developers are using the Agile Methodology which is most proficiently utilized by software developers in incremental and rapid cycles. The agile system, for most part, results in small incremental releases with each cycle implementing and building up on past functionalities. Each addition is thoroughly tested to maintain system integrity of the highest order. It consists of flexible and on-the-go planning, risk management, customer involvement and continuous evaluation and testing.

The task is divided into different sprints. Our project was divided into three sprints of ten days each. The sprint planning was done during sprint 0 and standup meetings. Planning included dividing the projects into modules to be completed during that sprint.

1.5 ORGANISATION

This report is classified into 5 parts starting from introduction as the first part of the report, second part of the report include the literature survey i.e. the brief explanations about the languages we have worked upon for the implementation of this project, third part includes the system development shown through snippets, fourth part is about the testing and validations i.e. performance analysis and last part is conclusion.

Chapter 2

LITERATURE SURVEY

According to Morgan Freeman, world renowned technologist, "A literature survey is a text of a scholarly paper, which includes the current knowledge including substantive findings, as well as theoretical and methodological contributions to a particular topic. Literature reviews are secondary sources, and do not report new or original experimental work. Most often associated with academic-oriented literature, such reviews are found in academic journals, and are not to be confused with book reviews that may also appear in the same publication." This literature survey was conducted with the aim to study the current development and knowledge about the various Online Job Portals present. The end goal of this review was to underline and outline the current world so as to understand and distinguish the gap in current research so as to aid us in developing a system better adept at handling various functionalities envisioned by us at the time of starting of this project.

2.1 RESEARCH PAPER

2.1.1 "Trends and Challenges in Online Job Portals with special reference to Indian Market – An Empirical Study from an Entrepreneurial Perspective"

Authors: Soma Parupalli, Kiranmayi Pulipaka

The paper talks about the current trends in the Online Job Portal scene in India and brings to light the challenges faced by both the applicants and the recruiters. The research paper also highlights the challenges faced by the Job Portals keeping in mind the Entrepreneurial perspective. The results of a questionnaire surveys with 438 employees and 32 employers was published in the paper which verified the hypothesized role of understanding of the relevant jobs, brand recognition, posting the relevant jobs and ease of integrated recruitment process in achieving maximum job portal efficiency. The study implied that the current job portals need to improve their system and services to attract Job seekers & recruiters effectively.

Chapter 3

SYSTEM DEVELOPMENT

3.1 INTRODUCTION

This part shows how we implemented all the features as mentioned in the objectives above starting from sign up page for both recruiter as well as applicant, after sign up we move to login page where the user have to login first before availing all the features of our website where as a recruiter they can post multiple jobs, view the posted jobs, view the list of eligible candidates and send email if they are eligible whereas the applicant can search jobs on the basis of their skill and company, apply for the job, view the applied jobs. For the proper implementation we have made the Bean classes, Entity classes, Service Implementation classes for both recruiter as well the applicant and DAO Implementations classes and the work flow goes in the manner starting from html page to entity classes then from entity classes to service implementation classes and then finally to DAO classes where we extract the attributes from the database based on condition and requirements.

3.2 SNIPPETS WITH ITS APPLICATION

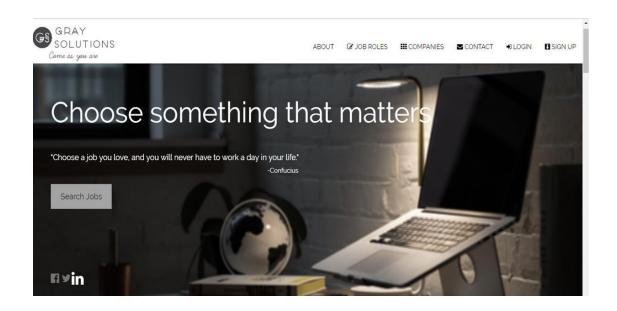
In this we will be showing the development of our project through the snippets with the brief explanation of each and every snippet which clarifies our project in a better and appropriate manner starting from the home page followed by sign up page of the recruiter and its dashboard covering all the features as mentioned above in the objective part and then sign up page for the applicant followed by its dashboard.

• Starting from the home page of our website. The name of our website is GRAY SOLUTIONS. This page various features like about which describes the non-functional requirements, job roles with respect to different fields, companies you want to work with, our companies contact details then login and sign up feature and by clicking on search jobs we will be directly taken to login page of applicant where after doing login we can search jobs. Bottom of the page you will see the social handles of our website.

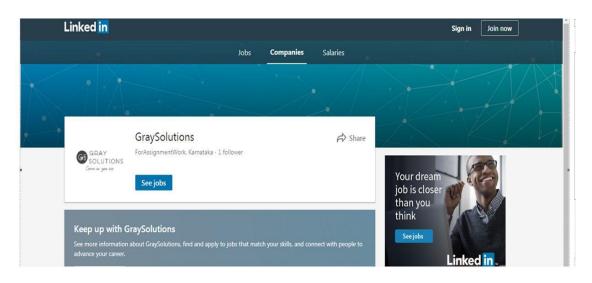


Snippet-1 (Home Page)

• This page specifies the presence of our website on various social handles.

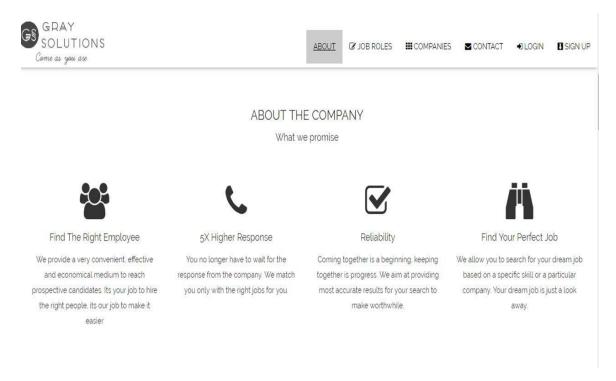


Snippet-2 (Social Handles)



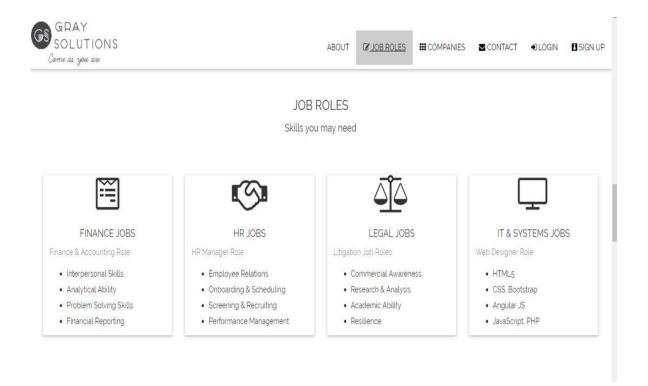
Snippet-3 (LinkedIn Page)

Moving on to details of home page starting from ABOUT. It tells what we promise to our users in terms of reliability. The moment we clicked on to about it directly takes to the about feature of our home page. We have used animations also the moment we take our cursor over about it gets underlined with a light gray color covering it. Similarly we have done for all the other features also.



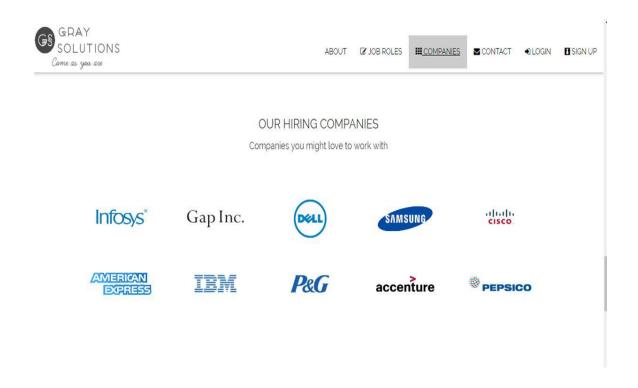
Snippet-4 (ABOUT)

This page describes about the various job roles associated with different fields like
finance jobs include finance and accounting roles which requires different skills like
interpersonal skills, HR Jobs include HR Manager role having the functionalities like
Employee Relations, On Boarding and scheduling, Screening recruiting and
performance management.



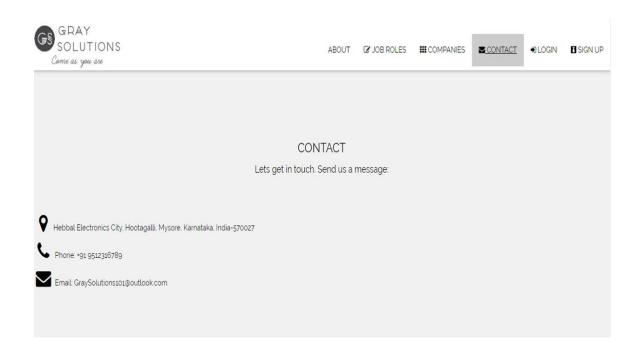
Snippet-5 (JOB ROLES)

Moving on towards another feature of our home page is our companies you want to
with it includes the various companies like American express, Infosys, Accenture,
Cisco, PEPSICO etc when we hover over the companies their logo rises up and the
moment we click on the company we will be go directly to the company's website.
 We have also included transform animation features in this functionality also.



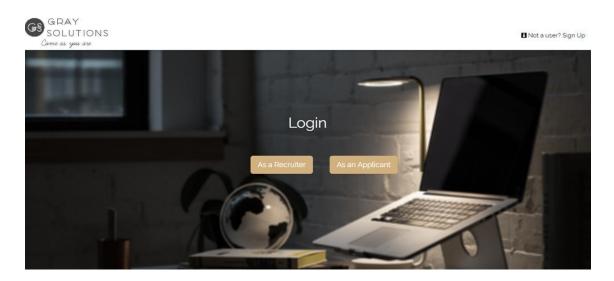
Snippet-6 (COMPANIES)

Moving on towards the contact feature of our website. This page includes the contact
details of our website i.e. the address- the place where we work from, contact details,
and the email id and after this we move on to main functionalities of our website
starting from sign up page and login page.



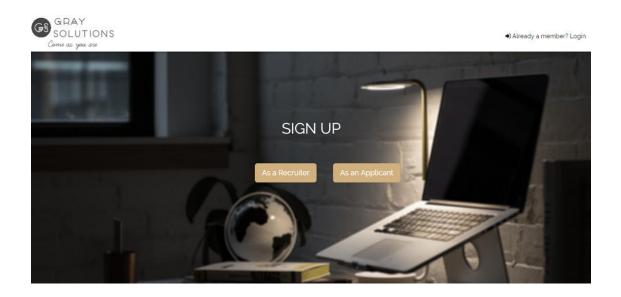
Snippet-7 (Contact Details)

• Moving on towards the login page of our website. The login page includes two buttons which asks you whether you want to login as a recruiter or as an applicant. When we want to login as a recruiter we click on the button "As a Recruiter" then it directly takes you to recruiter login page whereas when we want to login as an applicant we just click on the button "As an Applicant" it will direct you to login page of applicant and at top right corner we have link of sign up given as name of Not a user? Sign Up which will take you to the sign up page if you haven't sign up.



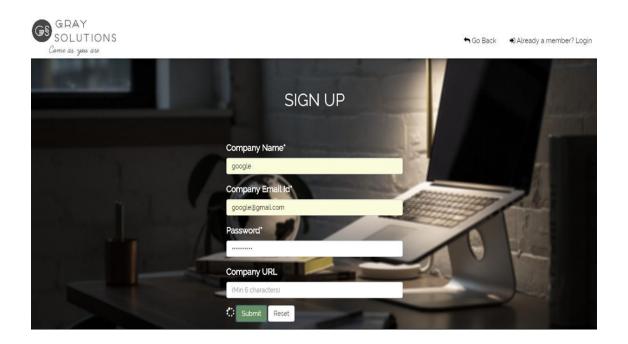
Snippet-8 (LOGIN PAGE)

• Moving on towards the Sign Up page of our website. The sign up page includes two buttons which asks you whether you want to sign up as a recruiter or as an applicant. When we want to sign up as a recruiter we click on the button "As a Recruiter" then it directly takes you to recruiter sign up page whereas when we want to sign up as an applicant we just click on the button "As an Applicant" it will direct you to sign up page of applicant and at top right corner we have link of login page given as "Already a member? Login" which will take you to the login page if you have sign up.



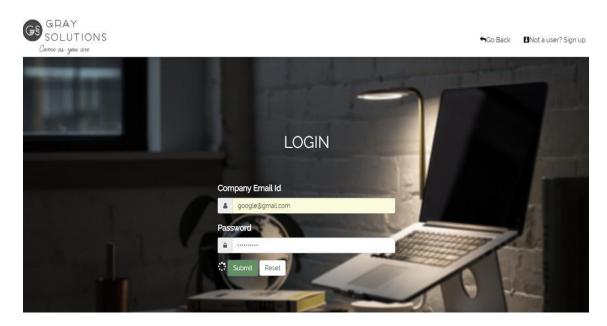
Snippet-9 (SIGN UP PAGE)

• Now moving on towards another functionality "Signing up as a recruiter". For signing as a recruiter we just click on the button "As a Recruiter" present on the sign up page of our website. The sign up page for the recruiter consists of attributes company name, company URL, password which should be minimum 6 character long and maximum 15 characters long, and company email id. We have also included font awesome spin which indicates the initialization time before the user gets registered.



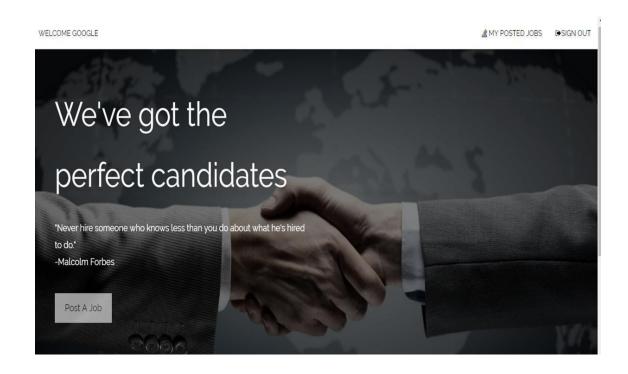
Snippet-10 (Sign Up As a Recruiter)

• Now once you have filled up all the details as a recruiter and click on submit button you will get directed towards the login page of recruiter where you have two fields to fill up before you initiate you login and those two fields are company's email id and company's password and then click on submit button to instantiate your login as a recruiter. Here also we have used font awesome spin which indicates the time taken before your dash board is instantiated. At top right corner we have two option one for go back and other for sign up if you haven't signed up.



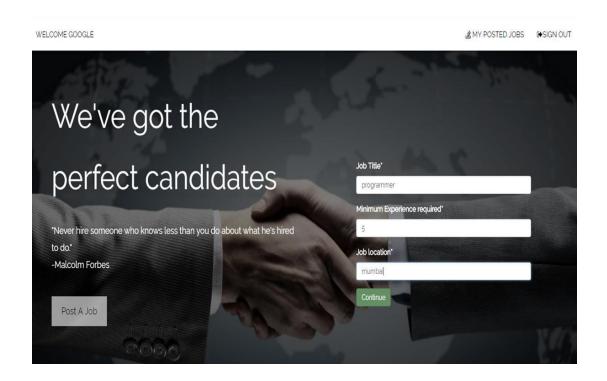
Snippet-11 (Login Recruiter)

• Once you have login correctly by filling the correct credentials the dashboard of the recruiter opens having multiple options i.e. providing the recruiter to post a job, view all the jobs posted by him/her. At top of left corner of the dashboard has the name of the recruiter mentioned. We have also created a session for the recruiter and once the work is completed the recruiter can sign out of the session just by clicking over sign out option.



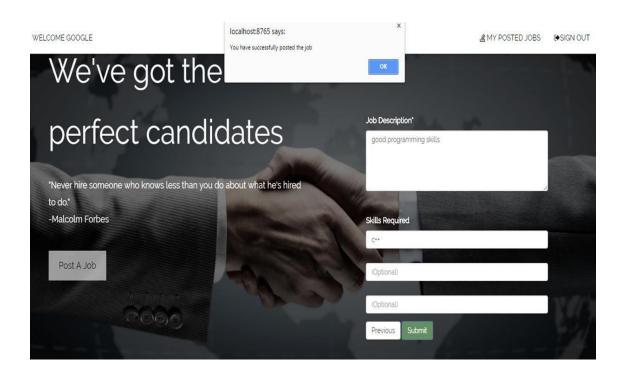
Snippt-12 (Recruiter Dashboard)

• Now moving on towards another functionality of the recruiter i.e. Post A Job. The recruiter can post a job by simply clicking the button Post A Job and for posting a job the fields have to be filled first like job title, minimum experience required, job location and then click on the continue button as this is first page of fields to be filled to post a job by the recruiter.



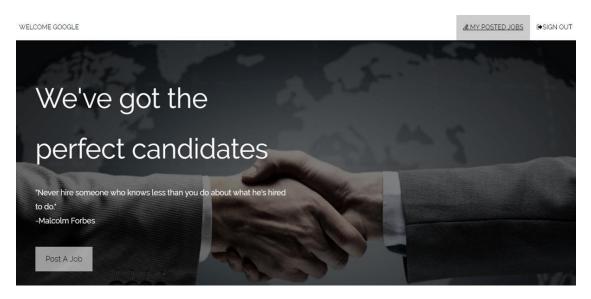
Snippet-13 (First Page of Post a Job)

• Now moving on to the next page of posting job this page also include the fields like job description, skills required here filling of first skill is mandatory rest all the fields are optional for skills and once we click on submit button after filling all the fields then a pop up box appears which states that you have successfully posted a job.

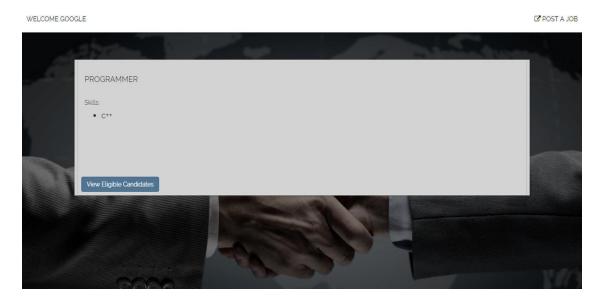


Snippet-14 (Second Page for Posting a Job)

• We can view the jobs posted by recruiter just by clicking my posted jobs and then a list of jobs posted by recruiter comes as seen in the following snippets.

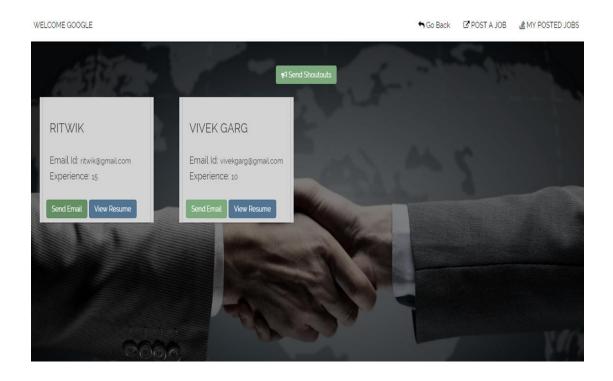


Snippet-15 (My Posted Jobs)



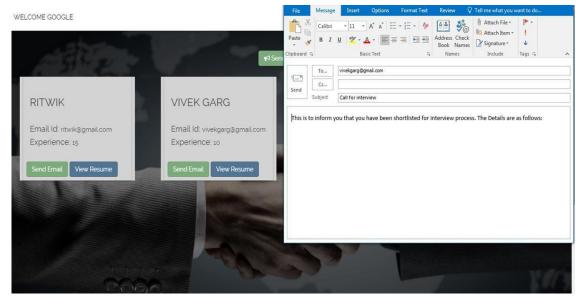
Snippet-16 (Job Post List)

We can view the list of eligible candidates by clicking on the button "View Eligible
Candidates" and a list of candidates appears which can be seen in following snippet.
As we clicked on view eligible candidate candidates list appeared whose skills set
matches to our posted job skill set with their names, email id and experience they
have working on that particular job skill.

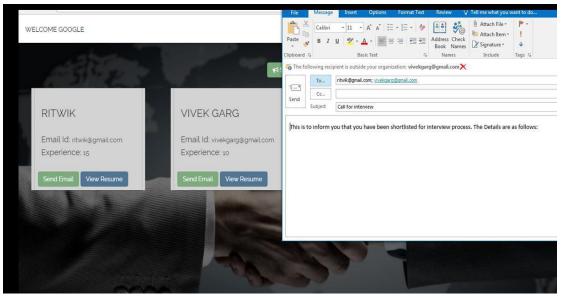


Snippet-17 (Eligible Candidate List)

We can send email either one by one to the eligible candidates or to the complete list
of candidates just by clicking on send email or clicking on shoutouts respectively and
mail box window appears with subject, mail id, matter dynamically filled which can
be seen in the following snippets:

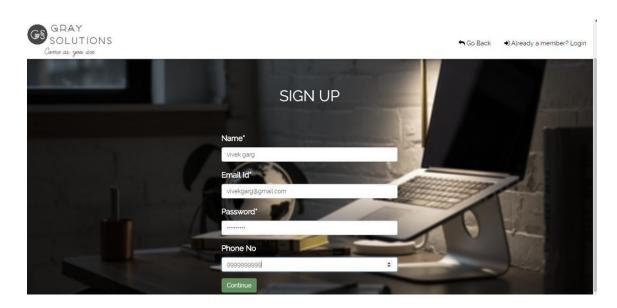


Snippet-18 (Sending email one by one)



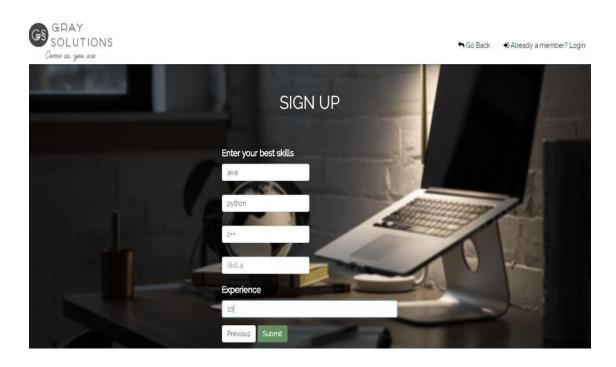
Snippet-19 (Sending Shout outs)

• Now moving on towards the applicant features starting from Sign Up as an Applicant. For signing up as an applicant you need to click on the button As An Applicant present on the sign up page which will redirect to you to sign up page of the applicant which consists of various fields with a particular set of fields present on the first page of sign up as an applicant these fields include name, email id, password and phone number out of these phone number is not mandatory rest all the fields are mandatory on this first sign up page for applicant and then click on the continue button to move onto the next page for filling in the details.



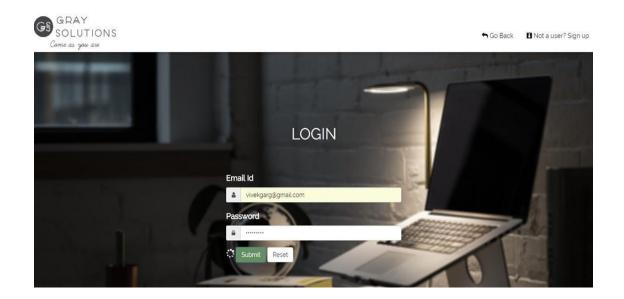
Snippet-20 (Sign Up As An Applicant)

• Now moving on towards the next page for filling the details as per required for sign up as an applicant for completing the details we need to fill up the fields like skill1, skill2, skill3, skill4 out of which skill1 is mandatory to fill rest all are options and followed by experience field to be filled and then after filling these fields click on submit to register yourself as an applicant if any of the fields you filled is wrong then submit option won't be working.



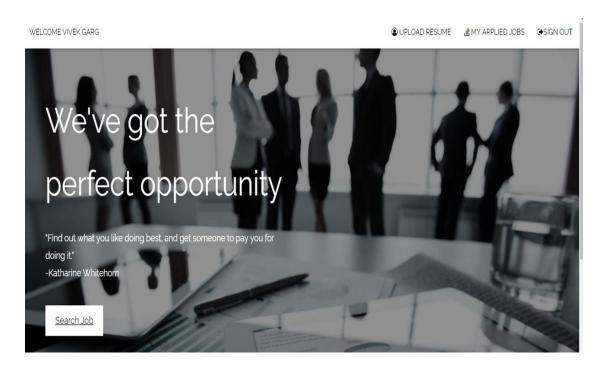
Snippet-21 (Sign Up As An Applicant Continues)

• Once you have signed up as an applicant then you will be directed to the login page of an applicant where you need to fill two fields as per required for initiating login for the applicant these two fields include email id and password. We have also included font awesome spin which indicates the initialization time before loading the dashboard for an applicant. After clicking on submit button you will be directed to the applicant's dashboard.



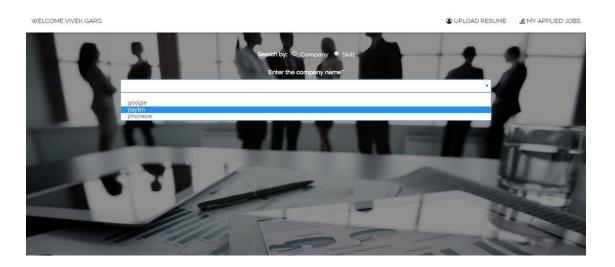
Snippet-22 (Login As An Applicant)

• After logging in As An Applicant the dashboard of the applicant appears which includes the various features like search a job, upload resume, view the applied jobs and we have also created a session for the applicant as the work for the applicant gets over he/ she can click on sign out button to get out of their respective sessions following is the snippet of the dashboard of the applicant. On clicking on search a job we can search a job on the basis of the skill set and company.

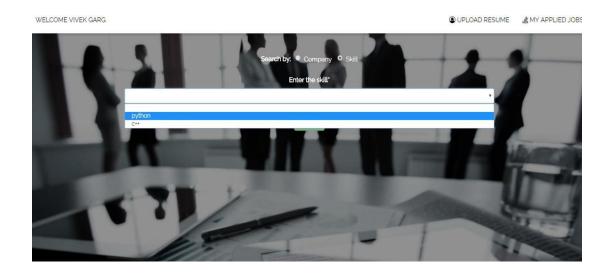


Snippet-23 (Applicant's Dashboard)

We can search the jobs on the basis of company just by clicking on radio button
present on left side of company attribute and a list of company appears. We can also
search job on the basis of skill set just by clicking on radio button on left of skill
following are the snippet:

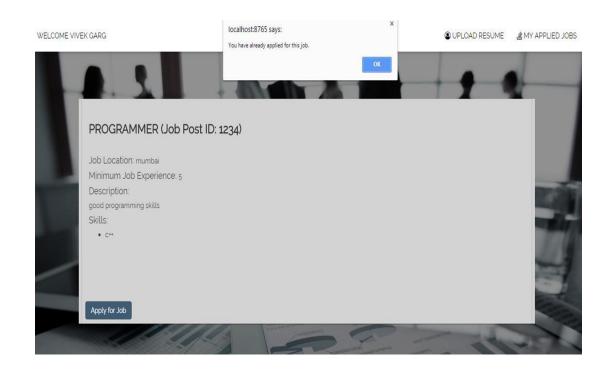


Snippet-24 (Search Job Based on Company)



Snippet-25 (Search Job Based on Skill set)

• After searching the job either on the basis of company or on the basis of skill set you can apply for the job as after searching a list of jobs appears based on your criteria describing the job post id, job description, location, skills and a button at the bottom apply for the job once you click on the button a pop up box appears stating that you have applied for the job if you have already applied then a pop up box appears that you have already applied for the job following is the snippet:



Snippet-26 (Apply For Job)

• You can view your applied jobs just by clicking on My Applied Jobs and a list of yours applied job appears following are the snippets:

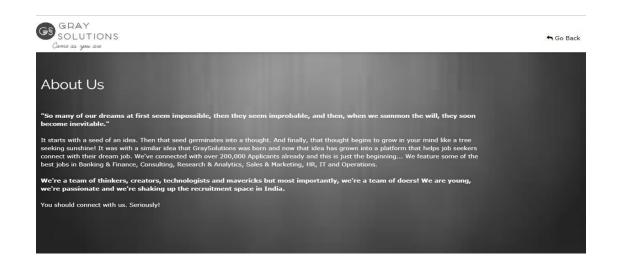


Snippet-27 (My Applied Jobs)



Snippet-28 (List Of Applied Jobs)

• This page tells about the footers we have included in our website following are the snippets:

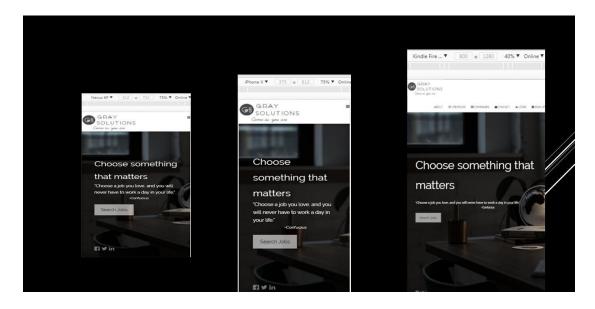


Snippet-29 (About Us)



Snippet-30 (FAQ)

• This page tells us about the responsiveness of our website following is the snippet:



Snippet-31 (Responsiveness)

Chapter 4

PERFORMANCE ANALYSIS

We have used agile methodology for evaluating the performance of our website. Agile methodology defines the set of methodology which is iterative and incremental, work load is divided among the small teams with the teams deciding what can be done within a particular amount of time and in agile methodology testing is done after every sprint.

Advantages of Agile Methodology:

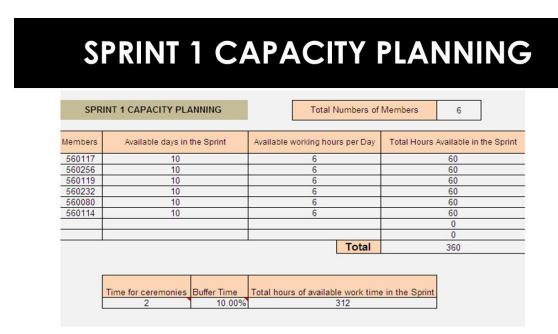
- High return on investment.
- Adaptive to changes even at the last moment.
- Providing working deliverables to clients after every sprint.
- Teams are well coordinated and interactive to each other.

Sprint is a time box activity. Each sprint is divided into four phases which are plan, produce, inspect and adapt.

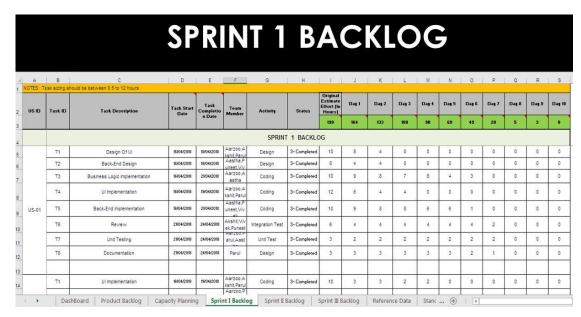
Our project was also divided into 3 sprints with each sprint having capacity planning, backlog and dashboard which indicated our progress and helped in evaluating our performance and in analyzing the defects and overcoming them in a more efficient manner which can be seen in following snippets:

Following are the snippets of capacity planning, sprint backlog and dashboard of three sprints:

• Sprint 1:

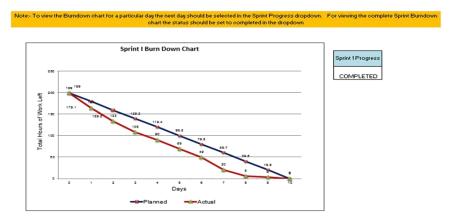


Snippet-32 (Capacity Planning Sprint-1)



Snippet-33 (Sprint-1 Backlog)

DASHBOARD



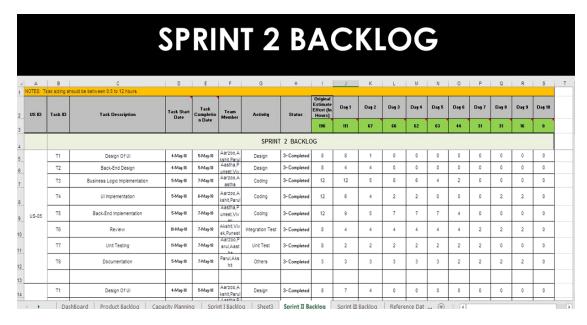
Snippet-34 (Sprint-1 Dashboard)

• Sprint 2:

SPRINT 2 CAPACITY PLANNING

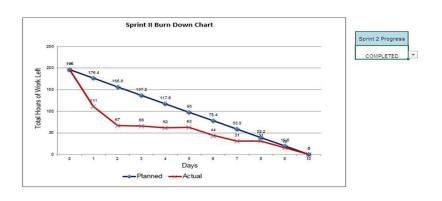
SPRI	NT 2 CAPACITY PLANNING	Total Numbers of	Members 6
Members	Available days in the Sprint	Available working hours per Day	Total Hours Available in the Spr
560117	10	7	70
560256	10	7	70
560119	10	7	70
560232	10	7	70
560080	10	7	70
560114	10	7	70
			0
		20	0
		Total	420
	Time for ceremonies Buffer Time Total hours of available work time in the Sprint 2 10.00% 366		

Snippet-35 (Sprint-2 Capacity Planning)



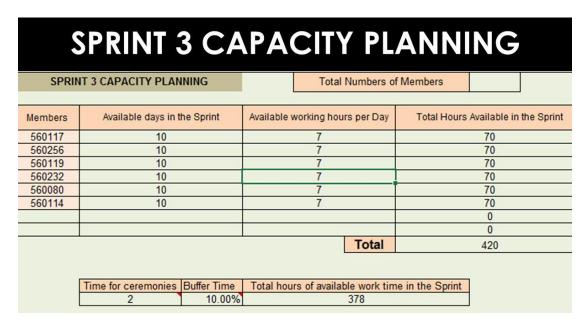
Snippet-36 (Sprint-2 Backlog)

DASHBOARD

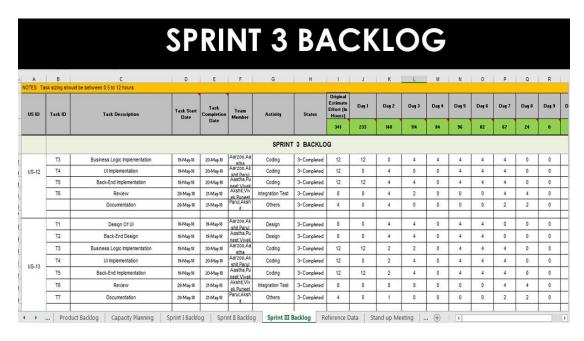


Snippet-37 (Sprint-2 Dashboard)

• Sprint 3:



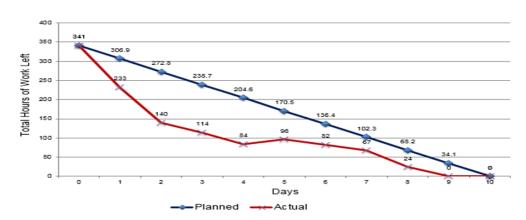
Snippet-38 (Sprint-3 Capacity Planning)



Snippet-39 (Sprint-3 Backlog)

DASHBOARD

Sprint III Burn Down Chart



Snippet-40 (Sprint-3 Dashboard)

Chapter 5

CONCLUSION

We have designed this project "Online Job Portal" using features of Angular JS, Bootstrap, CSS, Hibernate framework and Java Server Pages. All the functionalities mentioned in the report are working completely with no alternations for both the applicant as well as for the recruiter.

Benefits of online job portal:

- Applicants can get their dream job on the basis of their skills or on the basis of the company they want to work for.
- Recruiters can filter out the eligible candidates as per their posted profiles.
- Better security features in terms of data leakage and miss use of information provided through different levels of authentication.

Disadvantages:

- Larger databases to be maintained with ever growing users.
- Basic knowledge of computer is required for operating the website.

REFERENCES

- Infosys Learning Platform
- https://www.naukri.com/
- http://getbootstrap.com/
- https://angularjs.org/