

Skill / Job Recommender Application



BY

Team ID: PNT2022TMID05552

Team Size: 4

Team Leader: THOWBIK RAHMANS

Team Member: THANANJAYAN K

Team Member: VISHNU BALAJI T

Team Member: SARAN KUMAR S

1.INTRODUCTION

1.1 Project overview

This Project view provides an overviewof the skill and job recommended for individuals interestedin a career in any fields. It discusses the important role that any field plays in businesses andthevariousskills that are necessary for success in this field. It also outlines the different job opportunities available any field and the different types of companies that employ any field professionals.

1.2 Purpose

Having lots of skills but wondering whichjobwillbest suit you? Don't need to worry! we comeuppance with a skill recommender solution throughwhichthe fresher or the skilled person can loginandfindthe jobs by using search option or they candirectly interact with the chatbot and get their dreamjob.

To develop an end to end web applicationcapableodisplaying the current job openings basedontheskillset of the users. The users and their information are stored in the Database. An alert is sent when there is an opening based on the user skillset. User will interact with the chatbot and can get therecommendations based on his skills. We canusejobsearch API to get the current job

openings inthemarket which will fetch the data directlyfromthewebpage.

2. LITERATURE SURVEY

2.1 Existing problem

- 1. Students/Job seekers find their desiredjobbasedontheir skillset.
- 2. Integrating Intelligent CHATBOT for jobrecommendation application.
- 3. A study of LinkedIn as an Employment Tool forJobseeker & Recruiter.
- 4. Cloud storage and sharing services.

2.2 References

References Link:

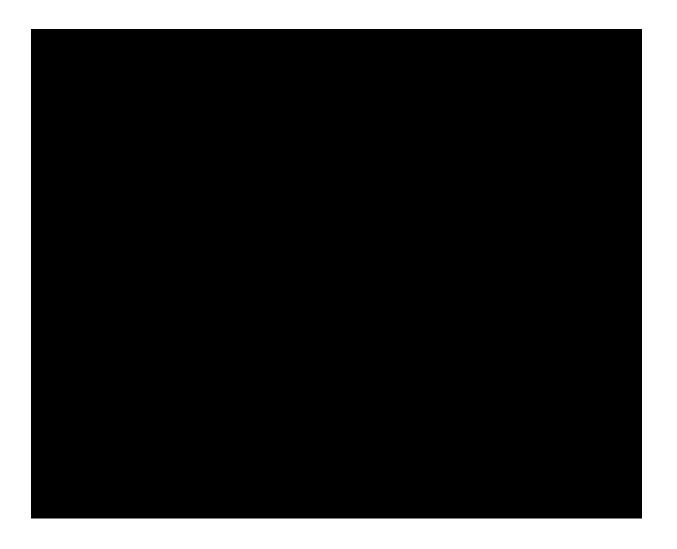
- 1.https://www.researchgate.net/publication/272802616_A_surve y_of_job_recommender_systems
- 2.https://www.researchgate.net/publication/360820692_Intellige nt_Chatbot
- 3. Journal Page:http://www.ijrpr.com/ ISSN 2582-7421
- 4. https://www.ijresm.com/

2.3 Problem Statement Definition

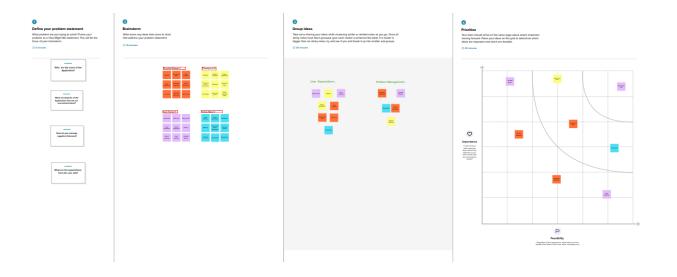
Dealing with the enormous amount of recruitinginformation on the internet, a job seeker always spendshours to find useful ones. Many times, people wholackindustry knowledge are unclear about what exactlytheyneed to learn in order to get a suitable job them. Weaddress for the problem of recommending suitablejobstopeople who seeking are new job. a recommender technology aims to help jobseekersinfinding jobs that match their skills. The internet caused a substantial impact through the creation of etherecruitment process recruiting platforms that become a primary recruitment channel inmost companies. While companies establishedjobpositions on these portals, job-seeker uses themtopublishtheir profiles. E-Recruitment platforms accomplishedclear advantages for both recruiters and job-seekersbyreducing the recruitment time and advertisement cost .Recommender system technology aims to helpusersinfinding items that match their preferences; it has asuccessful usage in a wide-range of applications todealwith problems related to information overloadefficiently. In order to improve the e-recruiting functionality, many recommender system approaches have been proposed. This paper will analyze e-recruiting process andrelatedissues for building personalized recommender systemofcandidates

3. IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas



3.2 Ideation and Brainstroming



3.3 Proposed Solution

Project Design Phase-I

Proposed Solution Template

Date Team ID	10 OCTOBER 2022 PNT2022TMID05552
Project Name	Project – Skill and Job Recommender (Cloud Application)
Maximum Marks	2 Marks

Proposed Solution Template:

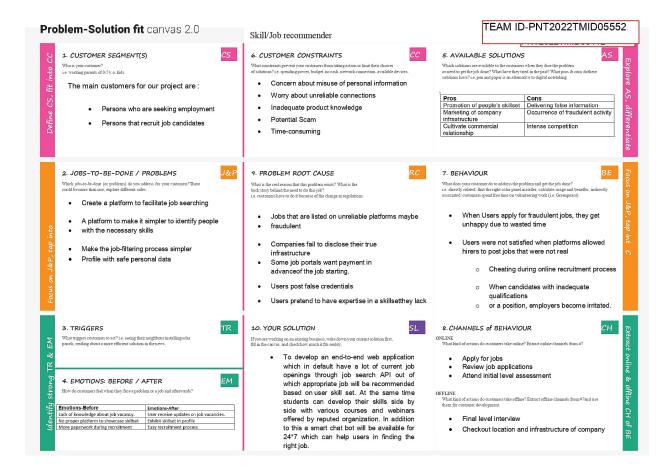
Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem	➤ In order to Enhance the
	to be solved)	Opportunities and challenges to
		provide job.
		> To Protect great volume of
		digital data
		> To Satisfy the on the basis of
		the need and requirement of
		satisfaction.
2.	Idea / Solution description	➤ To Reduce the Risk
		Assessment & Threat Analysis
		in the platform.
		Creating Prototype Solution so
		that user can access Easily.
3.	Novelty / Uniqueness	➤ On-demand self service which
		help the user to gain knowledge
		regarding on specified job
		➤ Mobile end point security that

		allows Organization to protect
		all the devices on their network
		and prevent unauthorized
		access.
4.	Social Impact / Customer	➤ Frequently updating about
	Satisfaction	requirements and Full filling
		the needs.
		➤ User will get a Responsive
		speed Regarding the job they
		have searched.
		User friendly Layout and
		approach design.
5.	Business Model (Revenue	➤ Commercializing about
	Model)	platforms in Social media,
	,	entertainment application so
		that user will have knowledge
		about our platforms how
		effective it is.
		➤ Generating Revenue through
		the advertisement that display
		on the platform.
6.	Scalability of the Solution	Hyper scaling capabilities that
		includes the ability to provide
		and add more resources to the
		platforms.
		To improve job opportunities
		to fresher and unemployed
		person and also carrier
		•

development to the
industrialization and
organization.

3.4 Problem Solution Fit



4. REQUIREMENT ANALYSIS

4.1 Function Requirement

Software Required:

Python, Flask, Docker

4.2 Non-Function Requirement

System Required:

8GB RAM, Intel Core i3, OS- Windows/Linux/MAC,Laptop or Desktop

5. PROJECT DESIGN

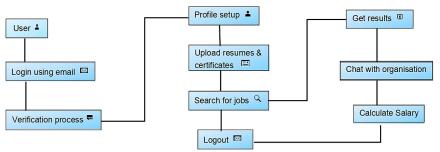
5.1 Data Flow Diagrams

Project Design Phase-II Data Flow Diagram & User Stories

Date	26 OCTOBER 2022
Team ID	PNT2022TMID05552
Project Name	Skill/Job Recommender Application
Maximum Marks	4 Marks

Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2
		USN-4	As a user, I can register for the application through Gmail		Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password		High	Sprint-1
	Dashboard	USN-5	As a user, I can access my dashboard after signing in.	I can access my account / dashboard	High	Sprint-1
Customer (Web user)	Access	USN-6	As a user, I can setup a profile, and basic details by signing in.			
		USN-7	As a user, I will upload my resume, certificates, and other requirements.	I can perform several task in the application	Medium	Sprint-1
Customer Care Executive	Chatbot	USN-8	As a user, I can seek guidance from the customer care executive.		High	Sprint-1
Administrator	DBMS	USN-9	As a administrator, I can keep the applications of your organization relies on running.	I can perform various modifications in the applications.	High	Sprint-1

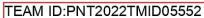
5.2 Solution & Technical Architecture

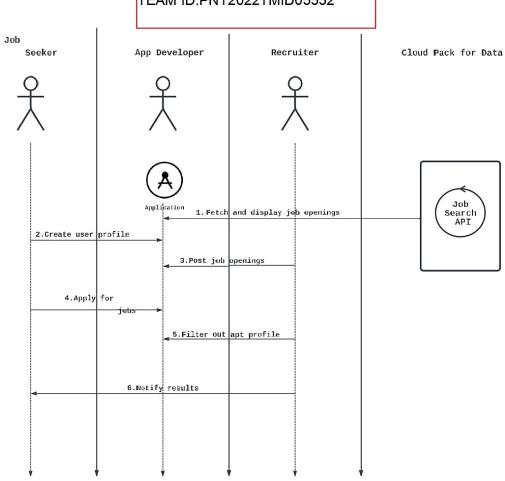
SOLUTION ARCHITECTURE

SOLUTION ARCHITECTURE

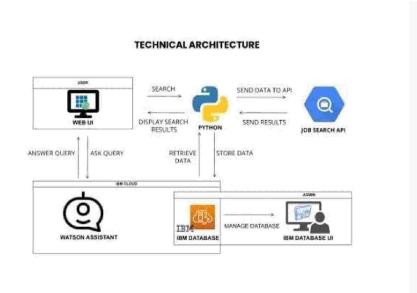
TITLE : SKILL/JOB RECOMMENDER

TECHNOLOGY : CLOUD APPLICATION DEVELOPMENT





TECHNICAL ARCHITECTURE



5.3 User Stories

User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2
		USN-4	As a user, I can register for the application through Gmail		Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password		High	Sprint-1
	Dashboard	USN-5	As a user, I can access my dashboard after signing in.	I can access my account / dashboard	High	Sprint-1
Customer (Web user)	Access	USN-6	As a user, I can setup a profile, and basic details by signing in.			
		USN-7	As a user, I will upload my resume, certificates, and other requirements.	I can perform several task in the application	Medium	Sprint-1
Customer Care Executive	Chatbot	USN-8	As a user, I can seek guidance from the customer care executive.		High	Sprint-1
Administrator	DBMS	USN-9	As a administrator, I can keep the applications of your organization relies on running.	I can perform various modifications in the applications.	High	Sprint-1

6. PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

Project Planning Phase

Project Planning Template (Product Backlog, Sprint Planning, Stories, Story points)

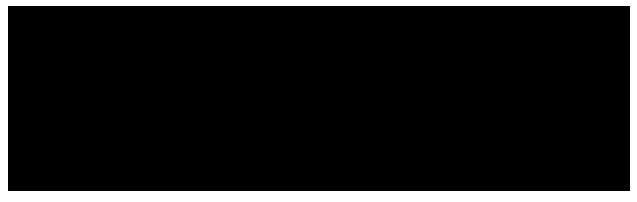
Date	7 Nov 2022
Team ID	PNT2022TMID05552
Project Name	Skill / Job recommender
Maximum Marks	8 Marks

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Use the below template to create product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	2	High	
Sprint-1		USN-2	As a user, I will receive confirmation email once I have registered for the application	1	High	
Sprint-2		USN-3	As a user, I can register for the application through Facebook	2	Low	
Sprint-1		USN-4	As a user, I can register for the application through Gmail	2	Medium	
Sprint-1	Login	USN-5	As a user, I can log into the application by entering email & password	1	High	
	Dashboard					

6.2 Sprint Delivery Schedule



VELOCITY:

Imagine we have a 10-day sprint duration, and the velocityofthe team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per

iteration unit (story points per day)

6.3 Report from JIRA

$$AV = \frac{sprint\ duration}{velocity} = \frac{20}{10} = 2$$

7. CODING & SOLUTIONING

7.1 Feature 1 JOB SEEKER

```
</head>
<body>
<nav class="navbar navbar-inverse rus">
                <div class="container-fluid">
                 <div class="navbar-header">
         <a class="navbar-brand" href="#">Skill and Job Recommender</a>
       </div>
       ul class="nav navbar-nav navbar-right">
         <a href="#"><span class="glyphicon glyphicon-log-in"></span> Logout</a>
       </div>
          </nav>
        <div class="container">
          ul class="nav nav-tabs">
             class="active"><a data-toggle="tab" href="#home">Profile</a>
             <a data-toggle="tab" href="#menu1">Eligibility Test</a>
             <a data-toggle="tab" href="#menu2">Find Job</a>
          <div class="tab-content">
             <div id="home" class="tab-pane fade in active">
               <h3>PROFILE</h3>
               <hr>>
               <form>
                  <div class="alert alert-danger">
                  <div class="form-group">
                       <label for="name"><span clss="black">Name: </span></label>
                       <input type="text" class="form-control" id="name" value="Mahadevan">
                    </div>
                    <div class="form-group">
                       <label for="email"><span class="black">Email Address </span></label>
                       <input type="text" class="form-control" id="email"</pre>
        value="Mahadevan@gmaiil.com">
```

```
</div>
                     <div class="form-group">
                       <label for="email"><span class="black">Mobile No </span></label>
                       <input type="text" class="form-control" id="email" value="9003824096">
                     </div>
                     <div class="form-group">
                       <label for="quali"><span class="black">What is your Nationality
        </span></label>
                       <input type="text" class="form-control" id="quali" value="India">
                     </div>
                     <div class="form-group">
                       <label for="quali">What is your Qualification</label>
                       <input type="text" class="form-control" id="quali" value="BE">
                     </div>
                     <div class="form-group">
                       <label for="quali">What year did you complete your bachelorDegree?</label>
                       <input type="text" class="form-control" id="quali" value="2023">
                      </div>
        ?</label>
<div class="form-group">
  label for="experience">How many years of work experience do you have
  <input type="text" class="form-control" id="experience" value="0">
</div>
```

```
<div class="form-group">
               <label for="place">Where have you graduated high school degree ?</label>
               <input type="text" class="form-control" id="place" value="Government highschool</pre>
Ariyalur">
             </div>
             <div class="form-group">
               <label for="SSLC">What is your SSLC Percentage :</label>
               <input type="text" class="form-control" id="SSLC" value="90">
             </div>
             <div class="form-group">
               <label for="HSC">What is your HSC Percentage :</label>
               <input type="text" class="form-control" id="HSC" value="90">
             </div>
             <div class="form-group">
               <label for="degree">What is your Percentage in bachelor Degree:</label>
               <input type="text" class="form-control" id="degree" value="90.5">
             </div>
             <textarea class="form-control" id="aboutyou" rows="3" placeholder="Writefew
words about yourself"></textarea> <br> <br>
             <button type="submit" class="btn btn-primary btn-success">Savechanges</button>
<br>> <br>>
             </div>
          </form>
     </div>
```

```
<div id="menu1" class="tab-pane fade">
  <h3>Eligibility Test </h3> <hr>
```

```
<div class="alert alert-info">
  <label>What function is used to display output on the screen?</label>
  <div class="radio">
  <label><input type="radio" name="print">printf()</label>
  </div>
  <div class="radio">
  <label><input type="radio" name="scanf">scanf()</label>
  <div class="radio">
  <label><input type="radio" name="switch">switch</label>
  </div>
</div> <hr>
<div class="alert alert-info">
  <label>What function is used to display output on the screen?</label>
  <div class="radio">
  <label><input type="radio" name="print">printf()</label>
  </div>
  <div class="radio">
  <label><input type="radio" name="scanf">scanf()</label>
  </div>
  <div class="radio">
  <label><input type="radio" name="switch">switch</label>
  </div>
</div> <hr>
<div class="alert alert-info">
  <label>What function is used to display output on the screen?</label>
  <div class="radio">
  <label><input type="radio" name="print">printf()</label>
  </div>
  <div class="radio">
  <label><input type="radio" name="scanf">scanf()</label>
  </div>
  <div class="radio">
  <label><input type="radio" name="switch">switch</label>
  </div>
</div> <hr>
```

```
<div class="alert alert-info">
  <label>What function is used to display output on the screen?</label>
  <div class="radio">
  <label><input type="radio" name="print">printf()</label>
  </div>
  <div class="radio">
  <label><input type="radio" name="scanf">scanf()</label>
  <div class="radio">
  <label><input type="radio" name="switch">switch</label>
  </div>
</div> <hr>
<div class="alert alert-info">
  <label>What function is used to display output on the screen?</label>
  <div class="radio">
  <label><input type="radio" name="print">printf()</label>
  </div>
  <div class="radio">
  <label><input type="radio" name="scanf">scanf()</label>
  </div>
  <div class="radio">
  <label><input type="radio" name="switch">switch</label>
  </div>
</div><hr>
<div class="alert alert-info">
  <label>What function is used to display output on the screen?</label>
  <div class="radio">
  <label><input type="radio" name="print">printf()</label>
  </div>
  <div class="radio">
  <label><input type="radio" name="scanf">scanf()</label>
  </div>
  <div class="radio">
  <label><input type="radio" name="switch">switch</label>
  </div>
</div>
```

```
<br/>
<br/>
<br/>
<br/>
<br/>
<br/>
<div id="menu2" class="tab-pane fade"><br/>
<h3>Find the job</h3> <hr>
<br/>
<
```

```
job">
<div class="container">
<!>
<form>
  <div class="input-group">
  <input type="text" class="form-control" id="myInput" placeholder="Look for a</pre>
  <div class="input-group-btn">
     <button class="btn btn-default" type="submit">
     <i class="glyphicon glyphicon-search"></i>
     </button>
  </div>
  </div>
</form> <br>> <br>></form>
<!>
<div style="width: 600px;">
  <!-- Left-aligned -->
```

```
<div class="media">
  <div class="media-left">
  <img src="images/img_avatar1.png" class="media-object" style="width:60px">
  <div class="media-body">
  <h4 class="media-heading">Java Developer</h4>
  <h5 class="media-heading"> Company Name : JK Software Solution</h4>
  Job Location : Chennai
   Salary : 45000
  <button type="submit" class="btn btn-primary btn-success">Apply </button>
     <br >> <hr>
                 </div>
               </div>
            </div>
            <br>
            <div style="width: 600px;">
               <!-- Left-aligned -->
               <div class="media">
                 <div class="media-left">
                 <img src="images/img_avatar1.png" class="media-object" style="width:60px">
                 </div>
                 <div class="media-body">
                 <h4 class="media-heading">.NET Developer</h4>
                 <h5 class="media-heading"> Company Name : JK Software Solution</h4>
```

```
</div>
       </div>
       <div style="width: 600px;">
          <!-- Left-aligned -->
          <div class="media">
            <div class="media-left">
            <img src="images/img_avatar1.png" class="media-object" style="width:60px">
            </div>
            <div class="media-body">
            <h4 class="media-heading">PHP Developer</h4>
            <h5 class="media-heading"> Company Name : JK Software Solution</h4>
            Job Location : Chennai
             Salary : 45000
            <button type="submit" class="btn btn-primary btn-success">Apply </button>
<br >> <hr>>
            </div>
          </div>
       </div>
       <div style="width: 600px;">
          <!-- Left-aligned -->
          <div class="media">
            <div class="media-left">
            <img src="images/img_avatar1.png" class="media-object" style="width:60px">
            </div>
            <div class="media-body">
            <h4 class="media-heading">UX /UI Designer</h4>
            <h5 class="media-heading"> Company Name : JK Software Solution</h4>
            Job Location : Chennai
             Salary : 45000
            <button type="submit" class="btn btn-primary btn-success">Apply </button>
<br >> <hr>>
            </div>
          </div>
       </div>
```

```
</div>
</div>
</div>
script>
$(document).ready(function(){
    $("#myInput").on("keyup", function())
    { var value =
    $(this).val().toLowerCase();
    $("#myDIV *").filter(function()) {
        $(this).toggle($(this).text().toLowerCase().indexOf(value) > -1)
        });
    });
    });
</body>
```

BACK END OF FEATURE 1

```
from flask import *#importing flask (Install it using python -m pip install flask)import os import ibm_db import bcrypt #import send_from_directory app = Flask( name ) #initialising flaskapp.secret_key = "

PEOPLE_FOLDER = os.path.join('static', 'people_photo')

import ibm_db 
conn = ibm_db.connect("DATABASE=bludb;HOSTNAME=54a2f15b-5c0f-46df-8954-7e38e612c2bd.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=32733;SECURITY=SSL;S

SLServerCertificate=DigiCertGlobalRootCA.crt;PROTOCOL=TCPIP;UID=phb43134;PWD=mTTnIE45Raj9A0rr",",")

@app.route("/") #defining the routes for the home() funtion (Multiple routes can beused as seen here)
@app.route("/home")

def dashboard():
```

```
ibm_db.bind_param(prep_stmt, 8, degree)
ibm_db.bind_param(prep_stmt, 9, per_sslc)
ibm_db.bind_param(prep_stmt, 10, per_hsc)
ibm_db.bind_param(prep_stmt, 11,
per_degree)ibm_db.execute(prep_stmt)
return render_template('dashboard.html')
```

return render_template('dashboard.html',name='Home')

```
@app.route('
    /logout')def
    logout():
session.pop('email',None) return redirect(url_for('login'))
```

7.2 Feature 2

```
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.6.0/
jquery.min.js"></script>
  <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/
bootstrap.min.js"></script>
  <style>
    .rus{
       border-radius: 0%
   };
   .black{
     color:
     black;
   }
</style>
</head>
<body>
<nav class="navbar navbar-inverse rus">
   <div class="container-fluid">
     <div class="navbar-header">
       <a class="navbar-brand" href="#">Skill and Job
Recommender</a>
     </div>
```

```
<a href="#"><span class="glyphicon"
glyphicon-log-in"></span> Log out</a>
     </div>
 </nav>
<div class="container">
 <a data-toggle="tab"</pre>
href="#home">CompanyProfile</a>
   <a data-toggle="tab" href="#menu2">Find</a>
candidate</a>
 <div class="tab-content">
   <div id="home" class="tab-pane fade in active">
     <h3>COMPANY PROFILE</h3>
     <hr>
     <form>
       <div class="alert alert-danger">
       <div class="form-group">
           <label for="name"><span clss="black">Company
</span></label>
           <input type="text" class="form-control"</pre>
id="name"value="Mahadevan">
         </div>
         <div class="form-group">
```

```
<label for="email"><span</pre>
class="black">Company EmailAddress </span></label>
             <input type="text" class="form-control"</pre>
id="email"value="Mahadevan@gmaiil.com">
           </div>
           <div class="form-group">
             <label for="email"><span class="black">Mobile No
</span></label>
             <input type="text" class="form-control"</pre>
id="email"value="9003824096">
           </div>
           <div class="form-group">
             <label for="quali"><span</pre>
class="black">Location</span></label>
             <input type="text" class="form-control"</pre>
id="quali"value="India">
           </div>
           <textarea class="form-control" id="aboutyou"</pre>
rows="3"placeholder="Write few words about
company"></textarea> <br>
<hr>
           <button type="submit" class="btn btn-primary</pre>
btn-success">Save changes</button> <br> <br>
           </div>
        </form>
```

```
</div>
```

```
<div id="menu2" class="tab-pane fade">
    <h3>Find the Condidate</h3> <hr>
<br>
         <div class="container">
         <!_>
         <form>
         <div class="input-group">
             <input type="text" class="form-control"</pre>
                           id="myInput"
  placeholder="Look for a candidate">
  <div class="input-group-btn">
                                <button class="btn btn-default"</pre>
  type="submit">search"></i></i>
              <i class="glyphicon glyphicon-</pre>
          </button>
        </div>
```

```
</div>
</form> <br> <br>>
      <!>
      <div style="width: 600px;">
                          <!-- Left-aligned -->
                          <div class="media">
                            <div class="media-left">
                                <img
src="images/img_avatar1.png"class="media-object"
style="width:60px">
                            </div>
                            <div class="media-body">
                               <h4 class="media-heading">Name
Mahadevan</h4>
          <h5 class="media-heading"> Qualification : B.E
(Computer Science Engineering ) </h4>
          <button type="submit" class="btn btn-primary</pre>
btn-success">Know More </button> <br> <hr>
                        </div>
                      </div>
                </div>
      <br>
```

```
<div style="width: 600px;">
                             <!-- Left-aligned -->
                             <div class="media">
                               <div class="media-left">
                                  <img
  src="images/img_avatar1.png"class="media-object"
  style="width:60px">
                               </div>
                               <div class="media-body">
                                  <h4 class="media-heading">Name
  Manikandan</h4>
             <h5 class="media-heading"> Qualification : B.E
   (Computer Science Engineering ) </h4>
             <button type="submit" class="btn btn-primary</pre>
  btn-success">Know More </button> <br> <hr>
                      </div>
                             </div>
                   </div> <br>
<div style="width: 600px;">
                             <!-- Left-aligned -->
                             <div class="media">
                               <div class="media-left">
                                  <img
  src="images/img_avatar1.png"class="media-object"
  style="width:60px">
                               </div>
```

```
Kavi</h4>
                    <div class="media-body">
                     <h4 class="media-heading">Name :
<h5 class="media-heading"> Qualification : B.E
    (Computer Science Engineering ) </h4>
               <button type="submit" class="btn btn-primary</pre>
    btn-success">Know More </button> <br> <hr>
                       </div>
                              </div>
                     </div> <br>
 <div style="width: 600px;">
                               <!-- Left-aligned -->
                              <div class="media">
                                 <div class="media-left">
                                    <img
    src="images/img_avatar1.png"class="media-object"
    style="width:60px">
                                 </div>
                                 <div class="media-body">
```

```
<h4 class="media-heading">Name
Ram < /h4 >
      <h5 class="media-heading"> Qualification : B.E
(Computer Science Engineering ) </h4>
          <button type="submit" class="btn btn-primary</pre>
btn-success">Know More </button> <br> <hr>
                        </div>
                      </div>
                </div> <br>
    </div>
  </div>
</div>
<script>
  $ (document) .ready (function() {
    $("#myInput").on("keyup", function()
    { var value =
    $(this).val().toLowerCase();
    $("#myDIV *").filter(function() {
   $(this).toggle($(this).text().toLowerCase().indexOf(v
                             alue)
```

1

```
});
});

});

//script>

//b
od
y>

<ht
ml>
```

CHATBOT:

Chatbot has been implemented to provide assistance

```
window.watsonAssistantChatOptions = {
integrationID: "d73273d3-3f44-4304- 84ee-8fd243016d1d",
// The ID of thisintegration.
    region: "jp-tok", // The region your integration is
hosted in. serviceInstanceID: "81229104-ee6b-46da-ac1c-
67ede110663a", // The ID of your service instance.
onLoad: function(instance)
{instance.render(); }
};
```

```
setTimeout(funct
ion(){const
t=document.createElement('
```

```
script');
    t.src="https://web-
chat.global.assistant.watson.a
ppdomain.cloud/versions/" +
    (window.watsonAssistantChatOpt
ions.clientVersion ||
    'latest') +
    "/WatsonAssistantChatEntry.js
";
    document.head.appendChild(t);
});
```

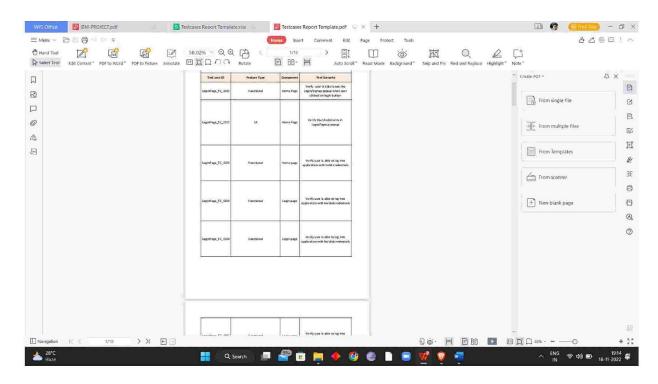
7.3 Database Schema(if Applicable):

```
import os
from sendgrid import SendGridAPIClientfrom
sendgrid.helpers.mail import Mail
# from_address we pass to our Mail object, edit with your nameFROM_EMAIL =
'Your_Name@SendGridTest.com'
def SendEmail(to_email):
     """ Send an email to the provided email addresses
     :param to email = email to be sent to
     :returns API response code
     :raises Exception e: raises an exception """message = Mail(
          from email=FROM EMAIL,
          subject='A Test from SendGrid!',
          html_content='<strong>Hello there from SendGrid your URL is: ' + '<a
          href="https://github.com/cyberjive">right here!</a></strong>')
     try:
          sg = SendGridAPIClient(os.environ.get('SENDGRID_API_KEY'))response =
          code, body, headers = response.status_code, response.body, response.headersprint(f"Response Code: {code}
          print(f"Response Body: {body} ") print(f"Response
          Headers: {headers} ")print("Message Sent!")
     except Exception as e: print("Error:
          {0}".format(e))
return str(response.status_code)\
```

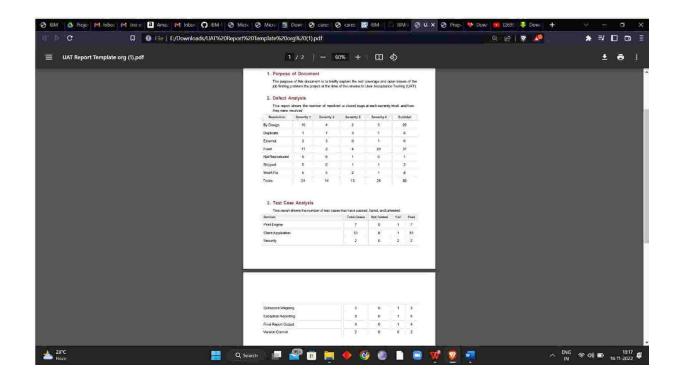
```
f _name_ == "_main_":
SendEmail(to_email=input("Email address to send to? "))
```

8. TESTING

8.1 Test Cases



8.2 User Acceptance Testing



9. RESULTS

The project has been completed as we expected. We ensured that Database was designed and well connected to our project. The Expected results were gotten

10. ADVANTAGES & DISADVANTAGES ADVANTAGES:

Person who looks for a job can easily find a suitablejobbased on their skill set.

Person can check their eligibility by attendingeligibilitytest. Most of the Recruiters find the suitable personbasedonthe scores they have gotten in the eligibility.

DISADVANTAGES

Person Job May get technical difficulty whiletakingtheeligibility Job seeker may have trouble to contact recruitersdirectly.

11. CONCLUSION

The application has been developed to make jobsearcheasier. The application that we have developed is user friendly. User can find a job based on their skillset in the short periodof time. The jobseeker certainly get benefit by usingthisapplication. In the addition, Chatbot Has been implemented with the help of IBM whatson. The chatbot helps jobseeker and organization when they experience the difficulties. 12. FUTURE SCOPE The linked in the wellknown application to find a job seekers and organization use linked into find a job. In the future, There are lots of possibilities to enhance our project similar to linked in.

13. APPENDIX

SOURCE CODE

Sprint 1:

Index.html

<!DOCTYPEhtml>
<html lang="en">

```
<head>
    <meta charset="utf-8">
     <meta name="viewport" content="width=device-width,</pre>
initial-scale=1">
    <title>Log-in Page </title>
     <link href="css/bootstrap.min.css"</pre>
rel="stylesheet">
     <script src="chat.js"></script>
  </head>
  <style>
     .pad{
                          padding-top: 40%;
                     }
                     .bold{
                          font-weight: bolder;
                          .backgroundcolour{
                               background-color: beige;
                          .font{
                               font-
                               weight:
                               bolder;
                               color:white
                               smoke;
                  </style>
                     <body>
                               <div class="container">
                                     <div class="row">
                                          <div class="col-sm-6">
                                          </div>
                                          <div class="col-sm-6">
```

```
<div class="pad ">
```

```
<ce
 nter><imgsrc="images/logo.png"</pre>
 class="img-responsive" width="20%"
 height="20%"> </center> <HR>
                                       <form>
                                             <div
 class="input-group">
                                               <sp
                                               an
 class="input-group-addon"><i</pre>
 class="glyphiconglyphicon-
 user"></i></span>
                                               <i
 nputid="email" type="text" class="form-
 control" name="email"
 placeholder="Enter Your Registered
 Email ID" required>
 class="input-group">
</div>
<br>
<div
  <span
 class="input-group-addon"><i</pre>
 class="glyphiconglyphicon-
 lock"></i></span>
                                               <in
                                               put
```

```
id="password" type="password" class="form-
control" name="password"
placeholder="Enter YourPassword"
required>
```

</div>

<hr>

<div class="row">
 <div class="col-sm-6">
 <button type="submit" id="" class="btn
btn- success btn-block"> LOG IN
 </button>

</div>

<div class="col-sm-6">

</button>

br>

</div>

</div>

```
href="signup.html"> <button</pre>
type="submit" id="" class="btn btn-
primary btn-block"><span</pre>
class="font">CREATE AN ACCOUNT </span>
</button>
</a>
                            </div>
                 </div>
           </div>
           </div>
           <script
src="js/jquery.min.js"></s</pre>
cript>
           <script
src="js/bootstrap.min.js"></script>
           <script src="chat.js"></script>
     </body>
</html>
```

FORGET-PASSWORD.html

```
padding-right: 20%;
  }
   .bold{
        font-weight: bolder;
   }
</style>
   <body>
                  <div
             class="contain
                  er">
                  <div class="pad">
                   <form>
                       <center> <H3
  class="bold">FORGET
  PASSWORD</H3></center> <hr>
                       <div class="form-group">
                          <label
                          for="email">Email
  address:</label>
                          <input type="email"</pre>
  class="form-control" id="email"
  placeholder="Enter Your
  Registered EmailAddtress">
                       </div>
                       <div class="form-group">
                          <label
  for="pwd">OTP</label>
                          <input type="password"</pre>
  class="form-control" id="pwd"
  placeholder="Enteryour OTP ">
```

padding-top: 20%;
padding-left: 20%;

```
</div>
```

SIGN UP.html

```
<!DOCTYPE html>
```

```
<style>
    .pad{
                                       padding-top: 10%;
                                    padding-bottom: 10%;
                                  }
                                  .bold{
                                      font-weight: bolder;
                                  }
                               </style>
                                  <body>
                                            <div class="container">
                                                        class="pad">
                                                                <div
<h3
                                 class="bold">CREATE AN
                                 ACCOUNT</h3>
                                                                 <H
                                                                 R>
                                       <form> class="form-group">
                               <div
                                      <label
                                 for="name">First
                                 Name</label>
                                       <input
                                 type="name"
                                 class="form-control"
```

```
id="name"
placeholder="Enter
Your First Name">
```

</div> class="form-

group">

<label for="name">Last
Name</label>

<div

</div>

<div class="form-group">

</div>

<div class="form-group">

</div> class="form-group">

<div

<label
for="repwd">Reenter
Password:</label>

</div>

```
class="btn btn-primary
btn-blockbtn-
danger">CREATE AN
ACCOUNT</button>
```

<hr>

</div>

</form>

</di

 $\triangle >$

</div>

BACK END:

```
impo rt os
import
ibm_dbimport
bcrypt
         #import send_from_directory
        app = Flask(name) #initialising
        flaskapp.secret key = ''
        PEOPLE_FOLDER = os.path.join('static',
         'people_photo')import ibm_db
        conn =
        ibm db.connect("DATABASE=bludb; HOSTNAME=54a2f15b-
         5c0f-46df-8954-
        7e38e612c2bd.clogj3sd0tgtu0lqde00.databases.appdomai
        n.cloud;P
        ORT=32733; SECURITY=SSL; SSLServerCertificate=DigiCert
        GlobalRoo
        tCA.crt; PROTOCOL=TCPIP; UID=phb43134; PWD=mTTnIE45Raj9
        A0rr", '', '')
        @app.route("/") #defining the routes for the home()
        funtion (Multiple routes can be used as seen here)
        @app.route("/home")
        def home():
             return render_template("home.html")
         #rendering ourhome.html contained within
        /templates @app.route("/login")
        def login():
             if request.method ==
                 'POST': email =
                 request.form['email
                 ' ]
                 password =
                 request.form['password']if
                 not email or not password:
                     return
        render template('login.html',error='Pleasefill all
        fields')
```

```
query = "SELECT * FROM USER WHERE
        email=?"stmt =
        ibm_db.prepare(conn, query)
        ibm_db.bind_param(stmt, 1, email)
        ibm_db.execute(stmt)
        isUser =
        ibm_db.fetch_assoc(stmt)
        print(isUser, password)
        if
            n
            0
            t
            i
            S
            U
            S
            е
            r
            t
            u
            r
render_template('login.html',error='Invalid Credentials')
        isPasswordMatch =
bcrypt.checkpw(password.encod
e('utf-
8'),isUser['PASSWORD'].encode(
'utf-8'))
        if not
            isPassword
            Match:
            return
render_template('login.html', error='Invalid
        Credentials')session['email'] =
        isUser['EMAIL']
```

```
return
    redirect(url_for('user_dashboard'))
    return
    render_template('login.html', name='Home')
app.config["UPLOAD DIR"] = "uploads"
@app.route("/register", methods=['GET', '
POST'])def register():
  if request.method ==
    'POST': email =
    request.form['email
    ' ]
    password =
    request.form['password']
    firstname=request.form['firstn
    ame']
    middlename=request.form['mid
    dlename']
    lastname=request.form['lastn
    ame']
    dob=request.form['dob']
    age=request.form['age']
    drno=request.form['drno']
    landmark1=request.form['lnmk
    1']
    landmark2=request.form['lnmk
    2'| village
    =request.form['village']
    district=request.form['distr
    ict']
    pincode=request.form['pincod
    e'1
    country=request.form['countr
    country_code=request.form['count
    ryCode']
    phone=request.form['phone']
    schlname10=request.form['schlnam
    e10']
    maxmark10=request.form['maxmark1
    actmark10=request.form['actmark1
    0 ' 1
    schlname212=request.form['schlna
```

```
me212']
    maxmark212=request.form['maxmark
    212']
    actmark212=request.form['actmark
    clgname=request.form['clgname']
    clgmaxmark=request.form['clgmaxm
    clgactmark=request.form['clgactm
    ark']
    stream=request.form['stream']
    graduation=request.form['graduat
    ion']
    grayear=request.form['grayear']
    branch=request.form['branch']
    skills=request.form['form[]']
    q1=request.form['Q1']
    q2=request.form['Q2']
    q3=request.form['Q3']
    q4=request.form['Q4']
    q5=request.form['Q5']
    position=request.form['positio
    n']
    experience=request.form['expye
    ars']
    designation=request.form['desi
    gnation']tum =
    request.files['resume']
tum.save(os.path.join(app.config['UPLOAD_DIR'], tum.f
    ilename))
    hash=bcrypt.hashpw(password.encode('utf-
8'),bcrypt.gensalt())
    query = "SELECT EMAIL FROM JOBSEEKER WHERE EMAIL=?"
    stmt =
```

```
query)
    ibm_db.bind_param(stmt, 1,
    email)
    ibm db.execute(stmt)
    isUser = ibm_db.fetch_assoc(stmt)
    if not is User:
      insert sql = "INSERT INTO JOBSEEKER (EMAIL,
PASSWORD, FIRSTNAME, MIDDLENAME, LASTNAME, DOB,
AGE, DOOR NO, LANDMARK1, LANDMARK2, VILLAGE,
DISTRICT, PINCODE, COUNTRY, COUNTRY_CODE, PHONE,
SCHOOL_NAME, SC_MAX_MARK,
SC ACT MARK, HSC SCHOOL NAME, HSC MAX MARK,
HSC_ACT_MARK, COLLEGE_NAME, COLLEGE_MAX, COLLEGE_ACT,
STREAM, GRADUATION, GRADUATION_YEAR, BRANCH,
SKILLS, PRESENTATION, HACKATHON, CODING, WON,
PRIZE WON, POSITION, EXPYEARS, DESIGNATION, RESUME)
VALUES
,?,?,?,?,
?,?,?,?,?,?,?,?,?)"
     prep stmt = ibm db.prepare(conn, insert sql)
      ibm_db.bind_param(prep_stmt, 1, email)
      ibm_db.bind_param(prep_stmt, 2, password)
      ibm_db.bind_param(prep_stmt, 3, firstname)
      ibm_db.bind_param(prep_stmt, 4, middlename)
      ibm_db.bind_param(prep_stmt, 5, lastname)
      ibm db.bind param(prep stmt, 6, dob)
      ibm_db.bind_param(prep_stmt, 7, age)
      ibm_db.bind_param(prep_stmt, 8, drno)
      ibm_db.bind_param(prep_stmt, 9, landmark1)
      ibm_db.bind_param(prep_stmt, 10, landmark2)
      ibm_db.bind_param(prep_stmt, 11, village)
      ibm_db.bind_param(prep_stmt, 12, district)
      ibm_db.bind_param(prep_stmt, 13, pincode)
      ibm_db.bind_param(prep_stmt, 14, country)
```

ibm_db.prepare(conn,

```
ibm_db.bind_param(prep_stmt, 15, country_code)
      ibm_db.bind_param(prep_stmt, 16, phone)
      ibm_db.bind_param(prep_stmt, 17, schlname10)
      ibm_db.bind_param(prep_stmt, 18, maxmark10)
      ibm_db.bind_param(prep_stmt, 19, actmark10)
      ibm_db.bind_param(prep_stmt, 20, schlname212)
      ibm db.bind param(prep stmt, 21, maxmark212)
      ibm_db.bind_param(prep_stmt, 22, actmark212)
      ibm_db.bind_param(prep_stmt, 23, clgname)
      ibm_db.bind_param(prep_stmt, 24, clgmaxmark)
      ibm_db.bind_param(prep_stmt, 25, clgactmark)
      ibm_db.bind_param(prep_stmt, 26, stream)
      ibm db.bind param(prep stmt, 27, graduation)
      ibm_db.bind_param(prep_stmt, 28, grayear)
      ibm_db.bind_param(prep_stmt, 29, branch)
      ibm_db.bind_param(prep_stmt, 30, skills)
      ibm_db.bind_param(prep_stmt, 31, q1)
      ibm_db.bind_param(prep_stmt, 32, q2)
      ibm_db.bind_param(prep_stmt, 33, q3)
      ibm_db.bind_param(prep_stmt, 34, q4)
      ibm_db.bind_param(prep_stmt, 35, q5)
      ibm_db.bind_param(prep_stmt, 36, position)
      ibm_db.bind_param(prep_stmt, 37, experience)
      ibm db.bind param(prep stmt, 38, designation)
      ibm_db.bind_param(prep_stmt,
      39, tum)
      ibm_db.execute(prep_stmt)
      return
    render_template('register.html')
    else:
      return
render_template('register.html', error='Invalid
Credentials')
  return
render_template('register.html', name='Home')
@app.route("/orgregister")
def orgregister():
```

```
return render_template("orgregister.html")
#rendering ourregister.html contained within
/templates @app.route("/user_dashboard")
def user_dashboard():
    return render_template("user_dashboard.html")
@app.route('/logout')
def logout():
    session.pop('email', Non
    e) return
    redirect(url_for('login'
    ))
if ___name __ == "___main_": #checking if ___name_'s
value is '__main_'. name_is_an python environment
variable who's value will always be '__main_' till
this is the first
```

```
instatnce of app.py running
    app.run(debug=True, port=8080) #running flask
(Initalisedon line 4)
```

SPRINT 2 Index.html

```
<link href="css/bootstrap.min.css" rel="stylesheet">
   <script src="chat.js"></script>
</head>
<style>
   .pad{
       padding-top: 40%;
   }
   .bold{
        font-weight: bolder;
   }
   .backgroundcolour{ background
       -color: beige;
   }
   .font{
```

```
}
```

```
</style>
font-weight: bolder;
color:whitesmoke;
          <body>
               <br>
               <div class="container">
                     <div class="row">
                     <div class="col-sm-6">
                          <div class="pad ">
```

```
<center><img
src="images/ORGANIZATION_LOGO.png" class="img-
responsive"width="20%" height="20%"> </center> <BR>
                           <form>
                                     <div class="input-group">
                                        <span
class="input-group-addon"><i class="glyphicon"</pre>
glyphicon-user"></i></span>
                                        <input id="email"</pre>
type="text" class="form-control" name="email"
placeholder="EnterYour Organization Registered Email
ID" >
                                     </div>
                                     <br>
                                     <div class="input-group">
                                        <span
class="input-group-addon"><i class="glyphicon"</pre>
glyphicon-lock"></i></span>
                                        <input
id="password"type="password" class="form-
```

control" name="password" placeholder="Enter Your

Password">

</div>

</div>

</form>

<ahref="Organization/Create_Account/org_create_account.html">
<button type="submit" id="" class="btn btn-primary btnblock">CREATE AN ACCOUNT
</button>

</div>

```
</div>
                     <div class="col-sm-6">
                     <div class="pad ">
                                    <center><img
src="images/logo.png" class="img-responsive"
width="20%"height="20%"> </center> <br>
group">
<form>
     <div class="input-
       <span class="input-</pre>
group-addon"><i class="glyphicon glyphicon-user"></i></span>
                                            <input
```

```
id="email" type="text" class="form-control"
name="email" placeholder="EnterYour Registered Email
ID" required>
                                          </div>
                                          <br>
group">
<div class="input-
  <span class="input-</pre>
group-addon"><i class="glyphicon glyphicon-lock"></i></span>
                                            <input
id="password"type="password" class="form-control"
name="password" placeholder="Enter Your Password"
required>
                                          </div>
                                          <hr>
```

```
<div class="row">
     <div class="col-sm-
                                                   <but
on type="submit" id="" class="btn btn-success btn-
block"> <spanclass="font">LOG IN </span></button>
6">
                                   </div>
                                   <div class="col-sm-
<button id="" class="btn btn-danger btn-block">
<a href="forget_password.html">
<span class="font">FORGET PASSWORD </span></a></button>
                                     </div>
                                </div> <br>
                                    </form>
                                    <a href="signup.html">
```

```
<button type="submit" id="" class="btn btn-primary btn-
block">

<span class="font">CREATE AN ACCOUNT </span> </button>

</a></div>

</div>

</div>

<script src="js/jquery.min.js"></script>

<script src="js/bootstrap.min.js"></script>

<script src="chat.js"></script>

</body>

</html>
```

FORGET-PASSWORD.html

```
</head>
<style>
   .pad{
                             padding-top: 20%;
                             padding-left: 20%;
                             padding-right: 20%;
                   .bold{
                        font-weight: bolder;
                </style>
                   <body>
                        <div class="container">
                                  <div class="pad">
                                   <form>
                                       <center> <H3
                  class="bold">FORGET
                  PASSWORD</H3></center> <hr>
                                       <div class="form-group">
                                          <label
                                          for="email">Email
                  address:</label>
                                          <input type="email"</pre>
                  class="form-control" id="email"
                  placeholder="Enter Your Registered
                  EmailAddtress">
                                       </div>
                                       <div class="form-group">
                                          <label
                  for="pwd">OTP</label>
                                          <input type="password"</pre>
                  class="form-control" id="pwd"
                  placeholder="Enteryour OTP ">
```

```
</div>
```

SIGNUP.html

```
</head>
<style>
  .pad{
                                         padding-top: 10%;
                                       padding-bottom: 10%;
                               }
                               .bold{
                                        font-weight: bolder;
                                   }
                            </style>
                                    <body>
                                         <div class="container">
                                                    class="pad">
                                                            <div
```

```
class="bold">CREATE AN
ACCOUNT</h3>
```

<HR>

<form> class="form-group">

<div

<label
for="name">First
Name</label>

</div> class="form-group">

<div

<label
for="name">Last
Name</label>

```
type="name"
class="form-control"
id="name"
placeholder="Enter Your Last
Name">
     </div>
     <div class="form-group">
     <label
for="email">Email
address:</label>
     <input type="email"</pre>
class="form-control"
id="email"
placeholder="Enter Your
Email ID">
     </div>
     <div class="form-group">
     <label
for="pwd">Password:</label>
     <input
type="password"
class="form-control"
id="pwd"
placeholder="Enter Your
```

<input

</div> class="form-group">

<div

<label for="repwd">Reenter

Password:</label>

</div>

</div>

</form>

</div>

</div>

HOME PAGE:

Forgot password.html

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
              <meta name="viewport"</pre>
content="width=device-width,initial-scale=1">
    <title>Responsive Sample</title>
              ink
href="css/bootstrap.min.css"
rel="stylesheet">
  </head>
  <style>
              .pad{
               padding-top: 20%;
               padding-left: 20%;
               padding-right: 20%;
              }
```

```
.bold{
                 font-weight: bolder;
    </style>
}
<body>
 <div class="container">
      <div class="pad">
                   <form>
                            <center> <H3
 class="bold">FORGETPASSWORD</H3></center> <hr>
                            <div class="form-group">
                              <label for="email">Email
 address:</label>
                              <input type="email" class="form-</pre>
 control" id="email" placeholder="Enter Your Registered
 EmailAddtress">
                            </div>
                            <div class="form-group">
```

```
<input type="password"</pre>
class="form-control" id="pwd" placeholder="Enter your
OTP ">
                           </div>
                           <button type="submit"</pre>
class="btn btn-default">Recover Password</button>
                   </form>
                </div>
                </div>
</html>
 <script src="js/jquery.min.js"></script>
 <script src="js/bootstrap.min.js"></script>
</body>
```

<label for="pwd">OTP</label>

Signup.html

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
              <meta name="viewport"</pre>
content="width=device-width,initial-scale=1">
    <title>Creating New Account </title>
              ink
href="css/bootstrap.min.css"
rel="stylesheet">
  </head>
  <style>
              .pad{
               padding-top: 10%;
        padding-bottom: 10%;
              }
              .bold{
               font-weight: bolder;
              }
```

```
</style>
              <body>
               <div class="container">
ACCOUNT</h3>
  <div class="pad">
       <h3 class="bold">CREATE AN
       <HR>
       <form>
<div class="form-group">
```

for="name">First Name</label>

<input

type="name"

class="form-control" id="name" placeholder="Enter Your
FirstName">

</div>

for="name">Last Name</label>

<div class="form-group">

<label

<input type="name"</pre>

class="form-control" id="name" placeholder="Enter Your
LastName">

</div>

<div class="formgroup">

```
<label
<input type="email"</pre>
class="form-control" id="email" placeholder="Enter Your
EmailID">
for="pwd">Password:</label>
</div>
<div class="form-group">
     <label
     <input
type="password" class="form-control" id="pwd"
placeholder="EnterYour Password">
                                          </div>
                             <div class="form-group">
                                               <label
for="repwd">Reenter Password:</label>
                                               <input
```

for="email">Email address:</label>

type="password" class="form-control" id="repwd"
placeholder="Enter Your Password Again">

</div>

<button

type="button" id="" class="btn btn-primary btn-block btn-danger">CREATE AN ACCOUNT</button>

<hr>

<button

type="submit" id="login_already" class="btn btn-primary
btn-block btn-success">Do you have an Account Already
?</button>

</div>

</form>

</div>

</html>

BACKEND

APP.PY

```
from flask import *#importing flask (Install it using
    python -mpip install flask)

import os

import

ibm_db

import

bcrypt

    #import send_from_directory

    app = Flask(name) #initialising

flaskapp.secret_key = ''

PEOPLE_FOLDER = os.path.join('static', 'people_photo')

import ibm_dbconn =
```

```
ibm_db.connect("DATABASE=bludb; HOSTNAME=54a2f15b-5c0f-
46df-8954-
7e38e612c2bd.clogj3sd0tgtu0lqde00.databases.appdomain.c
loud; PORT
=32733; SECURITY=SSL; SSLServerCertificate=DigiCertGlobalR
ootCA.cr
t;PROTOCOL=TCPIP;UID=phb43134;PWD=mTTnIE45Raj9A0rr",'','
1)
@app.route("/") #defining the routes for the home()
funtion(Multiple routes can be used as seen here)
@app.route("/home")
def home():
    return render_template("index/INDEX.html")
#rendering ourhome.html contained within /templates
@app.route("
/login")def
login():
    if request.method ==
        'POST': email =
        request.form['email
        ']
```

```
password =
        request.form['password']if
        not email or not password:
            return
render_template('login.html',error='Pleasefill all
fields')
        query = "SELECT * FROM USER WHERE
        email=?"stmt =
        ibm_db.prepare(conn, query)
        ibm_db.bind_param(stmt,1,email)
        ibm_db.execute(stmt)
        isUser =
        ibm_db.fetch_assoc(stmt)
        print(isUser, password)
        if not isUser:
            return
render_template('login.html',error='InvalidCredentials')
        isPasswordMatch =
bcrypt.checkpw(password.encode('utf-
8'),isUser['PASSWORD'].encode('utf-8'))
        if not isPasswordMatch:
```

```
return
render_template('login.html',error='InvalidCredentials')
        session['email'] = isUser['EMAIL']
        return redirect(url_for('user_dashboard'))
    return render_template('login.html', name='Home')
app.config["UPLOAD_DIR"] = "uploads"
@app.route("/register", methods=['GET'
,'POST'])def register():
  if request.method ==
    'POST': email =
    request.form['email
    ' ]
    password =
    request.form['password']
    firstname=request.form['firstn
    ame']
```

```
middlename=request.form['mid
dlename']
lastname=request.form['lastn
ame']
dob=request.form['dob']
age=request.form['age']
drno=request.form['drno']
landmark1=request.form['lnmk
1']
landmark2=request.form['lnmk
2'] village
=request.form['village']
district=request.form['distr
ict']
pincode=request.form['pincod
e']
country=request.form['country']
country_code=request.form['coun
tryCode']
phone=request.form['phone']
schlname10=request.form['schlna
```

```
me10']
maxmark10=request.form['maxmark
10'1
actmark10=request.form['actmark
10'1
schlname212=request.form['schln
ame212']
maxmark212=request.form['maxmar
k212']
actmark212=request.form['actmar
k212']
clgname=request.form['clgname']
clgmaxmark=request.form['clgmax
mark']
clgactmark=request.form['clgact
mark']
stream=request.form['stream']
graduation=request.form['gradua
tion'l
grayear=request.form['grayear']
branch=request.form['branch']
skills=request.form['form[]']
q1=request.form['Q1']
q2=request.form['Q2']
```

```
q4=request.form['Q4']
    q5=request.form['Q5']
    position=request.form['position
    ' ]
    experience=request.form['expyea
    rs']
    designation=request.form['desig
    nation']
    tum = request.files['resume']
tum.save(os.path.join(app.config['UPLOAD_DIR'],tum.filename))
    hash=bcrypt.hashpw(password.encode('ut
f-8'), bcrypt.gensalt())
    query = "SELECT EMAIL FROM ORGANIZATION WHERE EMAIL=?"
    stmt =
```

q3=request.form['Q3']

```
ibm_db.prepare(conn,
    query)
    ibm_db.bind_param(stmt, 1,
    email)
    ibm_db.execute(stmt)
    isUser = ibm_db.fetch_assoc(stmt)
    if not isUser:
      insert_sql = "INSERT INTO ORGANIZATION
(ORGANIZATION_NAME, ORGANIZATION_ID,
ORGANIZATION_ADDRESS, SET_PASSWORD, REENTERPASSWORD)
VALUES (?,?,?,?,?)"
      prep_stmt = ibm_db.prepare(conn, insert_sql)
      ibm_db.bind_param(prep_stmt, 1, ORGANIZATION_NAME)
      ibm_db.bind_param(prep_stmt, 2, ORGANIZATION_ID)
      ibm_db.bind_param(prep_stmt, 3, ORGANIZATION_ADDRESS)
      ibm_db.bind_param(prep_stmt, 4, SET_PASSWORD)
      ibm_db.bind_param(prep_stmt, 5, REENTERPASSWORD)
      ibm_db.execute(prep_stmt)
render_template('Organization\Create_Account\org_create_
account.html')
    else:
```

```
render_template('Organization\Create_Account\org_create_
account.html',error='Invalid Credentials')
  return render_template('create_account.html', name='Home')
@app.route("/orgreg
ister")def
orgregister():
    return render_template("org_create_account.html")
#renderingour register.html contained within /templates
@app.route("/user_da
shboard") def
user_dashboard():
    return render_template("user_dashboard.html")
@app.route('
/logout')def
logout():
```

return

```
e) return
    redirect(url_for('login'
    ) )
ifname== "main": #checking ifname's value is
'main'.nameis an python environment variable who's
value will always be 'main' till this is the first
instatnceof app.py running
    app.run(debug=True, port=8080) #running flask
(Initalised online 4)
    hash=bcrypt.hashpw(password.encode('ut
f-8'), bcrypt.gensalt())
    query = "SELECT EMAIL FROM JOBSEEKER WHERE EMAIL=?"
    stmt =
    ibm_db.prepare(conn,
    query)
    ibm_db.bind_param(stmt, 1,
```

session.pop('email', Non

```
email)
    ibm_db.execute(stmt)
    isUser = ibm_db.fetch_assoc(stmt)
    if not isUser:
      insert_sql = "INSERT INTO JOBSEEKER (FIRSTNAME,
LASTNAME, EMAIL_ADDRESSS, PWD, REPWD=?"
      prep_stmt = ibm_db.prepare(conn, insert_sql)
      ibm_db.bind_param(prep_stmt, 1, firstname)
      ibm_db.bind_param(prep_stmt, 2, lastname)
      ibm_db.bind_param(prep_stmt, 3, email_address)
      ibm_db.bind_param(prep_stmt, 4, pwd)
      ibm_db.bind_param(prep_stmt, 5, repwd)
      ibm_db.execute(prep_stmt)
      return render_template('Job
    Seeker\signup.html')else:
      return render_template('Job
Seeker\signup.html',error='Invalid Credentials')
  return render_template('signup.html', name='Home')
```

JAVASCRIPT:

```
window.watsonAssistantChatOptions= {
```

```
integrationID: "d73273d3-3f44- 4304-84ee-
8fd243016d1d", // The ID ofthis integration.
    region: "jp-tok", // The regionyour integration is
hosted in.
    serviceInstanceID: "81229104-ee6b-46da-ac1c-
67edel10663a", // The ID of your service instance.
    onLoad: function(instance)
{instance.render(); }
 };
  setTimeout(function(){const
t=document.createElement('script');t.src="https://web-
chat.global.assistant.watson.appdomain
.cloud/versions/" + (window.watsonAssistantChatOptions.cli
entVersion || 'latest') + "/WatsonAssistantChatEntry.js";
    document.head.appendChild(t);
  });
```

Verify.py

```
from flask import request
from flask_restful import
```

```
Resource from utils.tokener
import confirm_tokenfrom
utils.dbQuery import
insertQuery class
Verify(Resource):
data=request.json
token=data["token"]
email=confirm_token(
token)if(not email):
return {"status":"Couldn't verify"},400
res=insertQuery("UPDATE user set verified=True
whereemail=?", (email,))
if(not res):
return {"status":"Couldn't
Update"},400 return
{"status":"verified
successfully"},200
```

SPRINT:3

FRONT END

DASHBROAD.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Bootstrap Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width,</pre>
initial-scale=1">
  <link rel="stylesheet"</pre>
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/cs
s/bootstrap.min.css">
  <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.6.0/
jquery.min.js"></script>
  <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/
bootstrap.min.js"></script>
  <style>
    .rus{
        border-radius: 0%
    };
    .black{
```

```
color:black;
     }
  </style>
  </head>
  <body>
  <!_
  ______
  <nav class="navbar navbar-inverse rus">
<div class="container-fluid">
<div class="navbar-header">
         <a class="navbar-brand" href="#">Skill and Job
  Recommender</a>
       </div>
       <a href="#"><span class="glyphicon</pre>
  glyphicon-log-in"></span> Log out</a>
       </div>
```

```
</nav>
<div class="container">
 <a data-</pre>
toggle="tab"
href="#home">Profile</a>
   <a data-toggle="tab" href="#menu1">Eligibility
Test</a>
   <a data-toggle="tab" href="#menu2">Find Job</a>
 <div class="tab-content">
   <div id="home" class="tab-pane fade in active">
     <h3>PROFILE</h3>
     <hr>
     <form>
       <div class="alert alert-danger">
       <div class="form-group">
```

```
<label for="name"><span clss="black">Name:
</span></label>
             <input type="text" class="form-control"</pre>
id="name"value="Mahadevan">
          </div>
          <div class="form-group">
             <label for="email"><span class="black">Email
            Address
</span></label>
             <input type="text" class="form-control"</pre>
id="email"value="Mahadevan@gmaiil.com">
          </div>
          <div class="form-group">
             <label for="email"><span class="black">Mobile No
</span></label>
             <input type="text" class="form-control"</pre>
id="email"value="9003824096">
          </div>
          <div class="form-group">
             <label for="quali"><span class="black">What
```

```
is yourNationality </span></label>
             <input type="text" class="form-control"</pre>
id="quali"value="India">
           </div>
 <div class="form-group">
             <label
for="quali">What is your
Qualification</label>
             <input type="text" class="form-control"</pre>
             id="quali"
value="BE">
           </div>
           <div class="form-group">
             <label for="quali">What year did you
complete yourbachelor Degree?</label>
             <input type="text" class="form-control"</pre>
id="quali"value="2023">
            </div>
           <div class="form-group">
             <label for="experience">How many years of
workexperience do you have ?</label>
             <input type="text"</pre>
class="form-control"id="experience"
value="0">
```

```
</div>
```

:</label>
<div class="form-group">

```
<label for="HSC">What is your HSC Percentage
<input type="text" class="form-control" id="HSC"</pre>
  value="90">
             </div>
             <div class="form-group">
               <label for="degree">What is your
  Percentage inbachelor Degree:</label>
               <input type="text" class="form-control"</pre>
  id="degree"value="90.5">
             </div>
             <textarea class="form-control" id="aboutyou"</pre>
  rows="3"placeholder="Write few words about
  yourself"></textarea> <br>
  <br>
             <button type="submit" class="btn btn-primary</pre>
  btn-success">Save changes</button> <br> <br>
             </div>
           </form>
      </div>
```

```
<div id="menu1" class="tab-pane fade">
      <h3>Eligibility Test </h3> <hr>
      <div class="alert alert-info">
        <label>What function is used to display output
on thescreen?</label>
              <div class="radio">
                       <label><input
type="radio"
name="print">printf() </label>
                      </div>
                      <div class="radio">
                       <label><input
type="radio"
name="scanf">scanf()</label>
                      </div>
                       <div class="radio">
                       <label><input
type="radio"
name="switch">switch</label>
                      </div>
      </div> <hr>
```

```
<div class="alert alert-info">
        <label>What function is used to display output
on thescreen?</label>
              <div class="radio">
                       <label><input
type="radio"
name="print">printf() </label>
                       </div>
                       <div class="radio">
                       <label><input
type="radio"
name="scanf">scanf()</label>
                       </div>
                       <div class="radio">
                       <label><input
type="radio"
name="switch">switch</label>
                       </div>
      </div> <hr>
```

<label>What function is used to display output
on thescreen?</label>

<div class="alert alert-info">

```
<label><input
type="radio"
name="print">printf()</label>
                       </div>
                       <div class="radio">
                       <label><input
type="radio"
name="scanf">scanf()</label>
                       </div>
                       <div class="radio">
                       <label><input
type="radio"
name="switch">switch</label>
                       </div>
      </div> <hr>
      <div class="alert alert-info">
        <label>What function is used to display output
on thescreen?</label>
              <div class="radio">
                       <label><input
type="radio"
name="print">printf() </label>
                       </div>
```

<div class="radio">

```
<div class="radio">
                       <label><input
type="radio"
name="scanf">scanf()</label>
                      </div>
                      <div class="radio">
                       <label><input
type="radio"
name="switch">switch</label>
                  </div>
      </div> <hr>
      <div class="alert alert-info">
        <label>What function is used to display output
on thescreen?</label>
              <div class="radio">
                      <label><input
type="radio"
name="print">printf()</label>
                       </div>
                       <div class="radio">
                       <label><input
type="radio"
name="scanf">scanf()</label>
```

```
</div>
                       <div class="radio">
                       <label><input
type="radio"
name="switch">switch</label>
                       </div>
      </div><hr>
      <div class="alert alert-info">
        <label>What function is used to display output
on thescreen?</label>
              <div class="radio">
                       <label><input
type="radio"
name="print">printf()</label>
                       </div>
                       <div class="radio">
                       <label><input
type="radio"
name="scanf">scanf()</label>
                       </div>
                       <div class="radio">
```

```
<label><input
type="radio"
name="switch">switch</label>
                       </div>
      </div>
                 <button type="submit" class="btn</pre>
btn-primarybtn-success">Submit the test</button>
<br ><
  </div>
    <div id="menu2" class="tab-pane fade">
      <h3>Find the job</h3> <hr>
      <br>
      <div class="container">
      <form>
    <div class="input-group">
        <input type="text" class="form-control"</pre>
id="myInput" placeholder="Look for a job">
```

```
type="submit">
search"></i>
       <button class="btn btn-default"</pre>
           <i class="glyphicon glyphicon-</pre>
       </button>
     </div>
  </div>
</form> <br> <br>>
      <div style="width: 600px;">
                           <!-- Left-aligned -->
                           <div class="media">
                             <div class="media-left">
```

```
<img
src="images/img_avatar1.png"class="media-object"
style="width:60px">
                           </div>
                           <div class="media-body">
                              <h4 class="media-heading">Java
Developer</h4>
          <h5 class="media-heading"> Company Name : JK
SoftwareSolution</h4>
                              Job Location : Chennai
           Salary : 45000
          <button type="submit" class="btn btn-primary</pre>
btn-success">Apply </button> <br> <hr>
                       </div>
                         </div>
                </div>
      <br>
      <div style="width: 600px;">
                         <!-- Left-aligned -->
                         <div class="media">
```

```
<div class="media-left">
                                 <img
  src="images/img_avatar1.png"class="media-object"
  style="width:60px">
                              </div>
                              <div class="media-body">
                                 <h4 class="media-heading">.NET
  Developer</h4>
            <h5 class="media-heading"> Company Name : JK
  SoftwareSolution</h4>
                                 Job Location : Chennai
             Salary : 45000
            <button type="submit" class="btn btn-primary</pre>
  btn-success">Apply </button> <br> <hr>
                     </div>
                            </div>
                  </div>
<div style="width: 600px;">
                            <!-- Left-aligned -->
                            <div class="media">
```

<div class="media-left">

```
<ima
src="images/img_avatar1.png"class="media-object"
style="width:60px">
                           </div>
                           <div class="media-body">
                              <h4 class="media-heading">PHP
Developer</h4>
          <h5 class="media-heading"> Company Name : JK
SoftwareSolution</h4>
                              Job Location : Chennai
           Salary : 45000
          <button type="submit" class="btn btn-primary</pre>
btn-success">Apply </button> <br> <hr>
                           </div>
                         </div>
                </div>
<div style="width: 600px;">
                         <!-- Left-aligned -->
                         <div class="media">
                           <div class="media-left">
                               <ima
src="images/img_avatar1.png"class="media-object"
style="width:60px">
                           </div>
```

```
<div class="media-body">
                               <h4 class="media-heading">UX
                              /UI
Designer</h4>
          <h5 class="media-heading"> Company Name : JK
SoftwareSolution</h4>
                               Job Location : Chennai
           Salary : 45000
          <button type="submit" class="btn btn-primary</pre>
btn-success">Apply </button> <br> <hr>
                       </div>
                     </div>
                </div>
</div>
</div>
</div>
<script>
  $ (document) .ready (function() {
    $("#myInput").on("keyup", function()
    { var value =
    $(this).val().toLowerCase();
```

```
$("#myDIV *").filter(function() {
            $(this).toggle($(this).text().toLowerCase().indexOf(val
1
)
});
});
}
)
       </script>
</b
od
у>
</h
 tm
 1>
```

BACKEND:

```
from flask import *#importing flask (Install it using
python -mpip install flask)
impo
```

```
rt
os
impo
rt
ibm
db
impo
rt
bcry
pt
#import send_from_directory
app = Flask(name) #initialising
flaskapp.secret_key = ''
PEOPLE_FOLDER = os.path.join('static',
'people_photo')import ibm_db
conn = ibm_db.connect("DATABASE=bludb;
HOSTNAME=54a2f15b-5c0f-46df-8954-
7e38e612c2bd.clogj3sd0tgtu0lqde00.databases.appdomain.cloud;PO
=32733; SECURITY=SSL;
SSLServerCertificate=DigiCertGlobalRootCA.crt;PROTOCOL=TCPIP;U
=phb43134;PWD=mTTnIE45Raj9A0rr", '', '')
@app.route("/") #defining the routes for the home()
funtion (Multiple routes can be used as seen here)
@app.route("
```

```
/home")def
dashboard():
    return
render_template("dashboard.html")
def createjobseeker_profile():
  if request.method ==
    'POST': name =
    request.form['name']
    email =
    request.form['email
    ']
    mobileno=request.form['mobileno']
    nationality=request.form['nationality']
    qualification=request.form['qualification']
    passout=request.form['passout']
    experience=request.form['experience"];
    degree=request.form['degree'];
    per_sslc=request.form['per_sslc'];
    per_hsc=request.form['per_hsc'];
    per_degree=request.form['per_degree'];
    tum = request.files['resume']
```

```
tum.save(os.path.join(app.config['UPLOAD_DIR'], tum.f
    ilename))
    hash=bcrypt.hashpw(password.encode('utf-
8'),bcrypt.gensalt())
    query = "SELECT EMAIL FROM JOBSEEKER WHERE EMAIL=?"
    stmt =
    ibm_db.prepare(conn,
    query)
    ibm_db.bind_param(stmt, 1,
    email)
    ibm db.execute(stmt)
    isUser =
    ibm_db.fetch_assoc(stmt)
    if not isUser:
      insert_sql = "INSERT INTO JOBSEEKER (name,
email, mobileno, nationality,
 qualification, passout, experience,
degree, per_sslc, per_hsc, per_degree) VALUES
(?,?,?,?,?,?,?,?,?,?,?)"
      prep_stmt = ibm_db.prepare(conn, insert_sql)
      ibm_db.bind_param(prep_stmt, 1, name)
      ibm_db.bind_param(prep_stmt, 2, email)
```

```
ibm_db.bind_param(prep_stmt, 3, mobileno)
           ibm_db.bind_param(prep_stmt, 4, nationality)
           ibm_db.bind_param(prep_stmt, 5, qualification)
           ibm_db.bind_param(prep_stmt, 6, passout)
           ibm_db.bind_param(prep_stmt, 7, experience)
           ibm_db.bind_param(prep_stmt, 8, degree)
           ibm_db.bind_param(prep_stmt, 9, per_sslc)
           ibm_db.bind_param(prep_stmt, 10, per_hsc)
           ibm_db.bind_param(prep_stmt, 11, per_degree)
           ibm_db.execute(prep_stmt)
           return render_template('dashboard.html')
       return render_template('dashboard.html', name='Home')
     @app.route('/logout')
     def logout():
session.pop('email', None) return redirect(url_for('login'))
```

SPRINT 4:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Bootstrap Example</title>
```

```
<meta charset="utf-8">
  <meta name="viewport" content="width=device-width,</pre>
initial-scale=1">
  <link rel="stylesheet"</pre>
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/cs
s/bootstrap.min.css">
  <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.6.0/
jquery.min.js"></script>
  <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/
bootstrap.min.js"></script>
  <style>
    .rus{
        border-radius: 0%
    };
    .black{
      color:
      black;
    }
</style>
```

```
</head>
  <body>
  <!_
  <nav class="navbar navbar-inverse rus">
<div class="container-fluid">
<div class="navbar-header">
        <a class="navbar-brand" href="#">Skill and Job
  Recommender</a>
      </div>
       <a href="#"><span class="glyphicon"
  glyphicon-log-in"></span> Log out</a>
       </div>
    </nav>
  <!_
```

```
<div class="container">
 <a data-toggle="tab"</pre>
href="#home">CompanyProfile</a>
   <a data-toggle="tab" href="#menu2">Find
candidate</a>
 <div class="tab-content">
   <div id="home" class="tab-pane fade in active">
     <h3>COMPANY PROFILE</h3>
     <hr>
     <form>
       <div class="alert alert-danger">
       <div class="form-group">
           <label for="name"><span clss="black">Company
          Name:
</span></label>
```

```
<input type="text" class="form-control"</pre>
id="name"value="Mahadevan">
           </div>
           <div class="form-group">
             <label for="email"><span</pre>
class="black">Company EmailAddress </span></label>
             <input type="text" class="form-control"</pre>
id="email"value="Mahadevan@gmaiil.com">
           </div>
           <div class="form-group">
             <label for="email"><span class="black">Mobile No
</span></label>
             <input type="text" class="form-control"</pre>
id="email"value="9003824096">
           </div>
           <div class="form-group">
             <label for="quali"><span</pre>
class="black">Location</span></label>
             <input type="text" class="form-control"</pre>
id="quali"value="India">
           </div>
```

<div id="menu2" class="tab-pane fade">

```
<h3>Find the Condidate</h3> <hr>
      <br>
      <div class="container">
      <!_
>
      <form>
                        <div class="input-group">
                           <input type="text" class="form-</pre>
                           control"
id="myInput" placeholder="Look for a candidate">
                           <div class="input-group-btn">
                             <button class="btn btn-default"</pre>
type="submit">
search"></i>
           <i class="glyphicon glyphicon-</pre>
       </button>
     </div>
  </div>
</form> <br> <br>>
```

```
<div style="width: 600px;">
                          <!-- Left-aligned -->
                          <div class="media">
                            <div class="media-left">
                               <img
src="images/img_avatar1.png"class="media-object"
style="width:60px">
                            </div>
                            <div class="media-body">
                               <h4 class="media-heading">Name
Mahadevan</h4>
          <h5 class="media-heading"> Qualification : B.E
(Computer Science Engineering ) </h4>
          <button type="submit" class="btn btn-primary</pre>
btn-success">Know More </button> <br> <hr>
                            </div>
                 </div>
```

```
</div> <br>
<div style="width: 600px;">
                          <!-- Left-aligned -->
                          <div class="media">
                            <div class="media-left">
                               <img
src="images/img_avatar1.png"class="media-object"
style="width:60px">
                            </div>
                            <div class="media-body">
                               <h4 class="media-heading">Name
Manikandan</h4>
          <h5 class="media-heading"> Qualification : B.E
(Computer Science Engineering ) </h4>
          <button type="submit" class="btn btn-primary</pre>
btn-success">Know More </button> <br> <hr>
                       </div>
                          </div>
                </div> <br>
```

<div style="width: 600px;">

```
<!-- Left-aligned -->
                             <div class="media">
                               <div class="media-left">
                                  <ima
  src="images/img_avatar1.png"class="media-object"
  style="width:60px">
                               </div>
                               <div class="media-body">
                                  <h4 class="media-heading">Name
  Kavi</h4>
         <h5 class="media-heading"> Qualification : B.E
   (Computer Science Engineering ) </h4>
             <button type="submit" class="btn btn-primary</pre>
  btn-success">Know More </button> <br> <hr>
                     </div>
                             </div>
                   </div> <br>
<div style="width: 600px;">
                             <!-- Left-aligned -->
                            <div class="media">
                               <div class="media-left">
```

```
<img
```

```
src="images/img_avatar1.png"class="media-object"
style="width:60px">
```

</div>

```
<script>
       $ (document) .ready (function() {
         $("#myInput").on("keyup", function()
         { var value =
         $(this).val().toLowerCase();
         $("#myDIV *").filter(function() {
     $(this).toggle($(this).text().toLowerCase().indexOf(value) >
     -1)
         });
         });
       });
       </script>
     </body>
</html>
```

GITHUB & PROJECT DEMO LINK:

All the tasks of developing the application were uploadedon the github. The github has been uploaded below.

Github: https://github.com/IBM-EPBL/IBM-Project-8365-1658916304

Demo Link:

 $\frac{https://drive.google.com/file/d/1NU80xiRQmtWhEjGMgTHAngRslJUGkDl6/view?usp=drivesdk}{}$