

# Skill/Job Recomender Application

Submitted by,

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## 1. INTRODUCTION

### 1.1 Project Overview

Recommender systems usually make use of either or both collaborative filtering and content-based filtering (also known as the personality-based approach), as well as other systems such as knowledge-based systems. Collaborative filtering approaches build a model from a user's past behavior (items previously purchased or selected and/or numerical ratings given to those items) as well as similar decisions made by other users. This model is then used to predict items (or ratings for items) that the user may have an interest in. Content-based filtering approaches utilize a series of discrete, pre-tagged characteristics of an item in order to recommend additional items with similar properties. Each type of system has its strengths and weaknesses. Recommender systems are a useful alternative to search algorithm since they help users discover items they might not have found otherwise. Of note, recommender systems are often implemented using search engines indexing non-traditional data. Recommender systems have been the focus of several granted patents.

### 1.2 Purpose

The recommender system technology aims to **help users in finding items that match their personnel interests**; it has a successful usage in e-commerce applications to deal with problems related to information overload efficiently. Recommender system has the ability to **predict whether a particular user would prefer an item or not based on the user's profile**. Recommender systems are beneficial to both service providers and users. Therefore, the need to use efficient and accurate recommendation techniques within a system that will provide relevant and dependable recommendations for users cannot be over-emphasized. The collaborative filtering does not take into account the type of items, nor their attributes. It takes exclusively into account the expressed opinion about the other items in order to make recommendations. Meanwhile, content-based filtering uses the knowledge it has of the items and their attributes to make recommendations.

## 2. LITERATURE SURVEY

### 2.1 Existing problem

The web recommender System suffers from many challenges such as Lack of Data, Changing Data, Changing User Preferences, Unpredictable Items, Scalability, Privacy protection. Some of them are: Cold-start, Privacy, Over-specialization, Scalability, Sparsity, Freshness etc. Cold-start Cold start problem can be classified into two categories, cold start of new items and cold start of new users. Cold start problem for an item occurs when we don't have enough previous rating related to that item. Also, it is a bit difficult to recommend items to new users as the system don't have any information related to his past purchases or

it might be possible that he has not rated any item yet so his taste is unknown to the system.

**Scalability** As the numbers of users and items grows the system needs more resources in order to give the most accurate recommendations to the users. Most of resources are used in the purpose of determining users of similar tastes, and items with similar attributes. It is one of the problems found in collaborative filtering approach.

**Sparsity** Suppose, you have an online shop that has huge amount users and items. If a user purchased few items from the shop and has rated any of them. Then, it will lead to the problem of Sparsity. Also, we can say that Sparsity is the problem of lack of knowledge.

**Privacy** is also a big issue in context of demographic recommender systems. In order to give the most accurate recommendation to the user, the system must acquire the most appropriate information of user, including demographic data (age, sex, email-id, hobbies etc.), and data about the location of a particular user which may breach the privacy of the user.

**Over-Specialization** This is one of the most common problems faced by the content-based recommendation system. A good recommender system must suggest diverse items which content-based system lacks. It gives nothing “surprised”. It hinders the users from discovering something new and different. Users are recommended items they are already familiar with.

**Freshness(Predictability):** One more problem generally faced by recommender systems these days is that of predictability. Even if the items recommended to the user are diverse, it might be familiar to the user. For example, a system recommends best sellers only. The recommendations in this case are indeed diverse but the user may already know or be familiar with the recommended st

## **2.2 References**

[1] Collaborative job prediction based on Naïve Bayes Classifier using python platform  
 Authors: Savita Choudhary Siddanth Koul, Shridhar Mishra, Anunay Thakur, Rishabh Jain  
 Published in: 2016 International Conference on Computation System and Information Technology for Sustainable Solutions (CSITSS)  
 The reason of this paper is to put in force a advice device for job portals based on collaborative filtering techniques. The machine is designed to recommend jobs to the consumer based on his profile and by means of calculating a similarity index between two skill units the use of Euclidean distance and then rating them the use of their naive Bayes algorithm. Python was once used to implement the suggestion system.

[2] CaPaR: A Career Path Recommendation Framework Authors: Magdalini Eirinaki, Bharat Patel. Varun Kakuste  
 Published in: 2017 IEEE Third International Conference on Big Data Computing Service and Applications (BigDataService)  
 Existing job suggestion structures only reflect on consideration on the user's subject of pastime and omit the user's profile and skills, which should result in extra relevant career guidelines for users. CaPaR, a Career Path Recommendation framework, is proposed in this paper to address such shortcomings. The gadget scans the user's profile and resume, identifies the candidate's key skills, and generates

customized job recommendations using textual content mining and collaborative filtering techniques. Furthermore, the device suggests to student's extra competencies needed for related job openings, as nicely as learning assets for each skill. As a result, the gadget not only permits its customers to explore big quantities of information, but additionally to enlarge their portfolio and resume in order to enhance their careers.

[3] Generating Unified Candidate Skill Graph for Career Path Recommendation Authors: Akshay Gughani, Karthikeyan Ponnalagu and Vinay Kumar Reddy Kasireddy Published in: 2018 IEEE International Conference on Data Mining Workshops (ICDMW) Given the quantity of profession role statistics of individuals handy online, personalized profession route recommendation systems that should mine and advocate the most relevant profession paths for a consumer are on the rise. However, such advice systems usually are solely positive inside a single company the place there are standardized job roles. At an enterprise area level such as Information Technology or across such kind of one enterprise sectors (such as retail, insurance, health care), mining and recommending the most applicable career paths for a user is still an unsolved lookup challenge. Towards addressing this problem, this paper proposes a machine that leverages the concept of competencies to construct talent graphs that can shape the foundation for profession path recommendations. Skills are perceived to be greater amenable for profession path standardizations across the organizations. The proposed device ingests a user's profile (in a pdf, phrase format or different public and shared data sources) and leverages an Open IE pipeline to extract education and experiences. Subsequently, the extracted entities are mapped as precise capabilities that are expressed in the form of a novel unified skill graph. Such ability graphs which capture both spatial and temporal relationships are believed to aid in producing specific profession path recommendations. A comparison of this modern ability extraction mannequin with an industrial scale dataset yielded a precision and recall of 80.54% and 86.44% respectively

### **2.3 Problem Statement Definition**

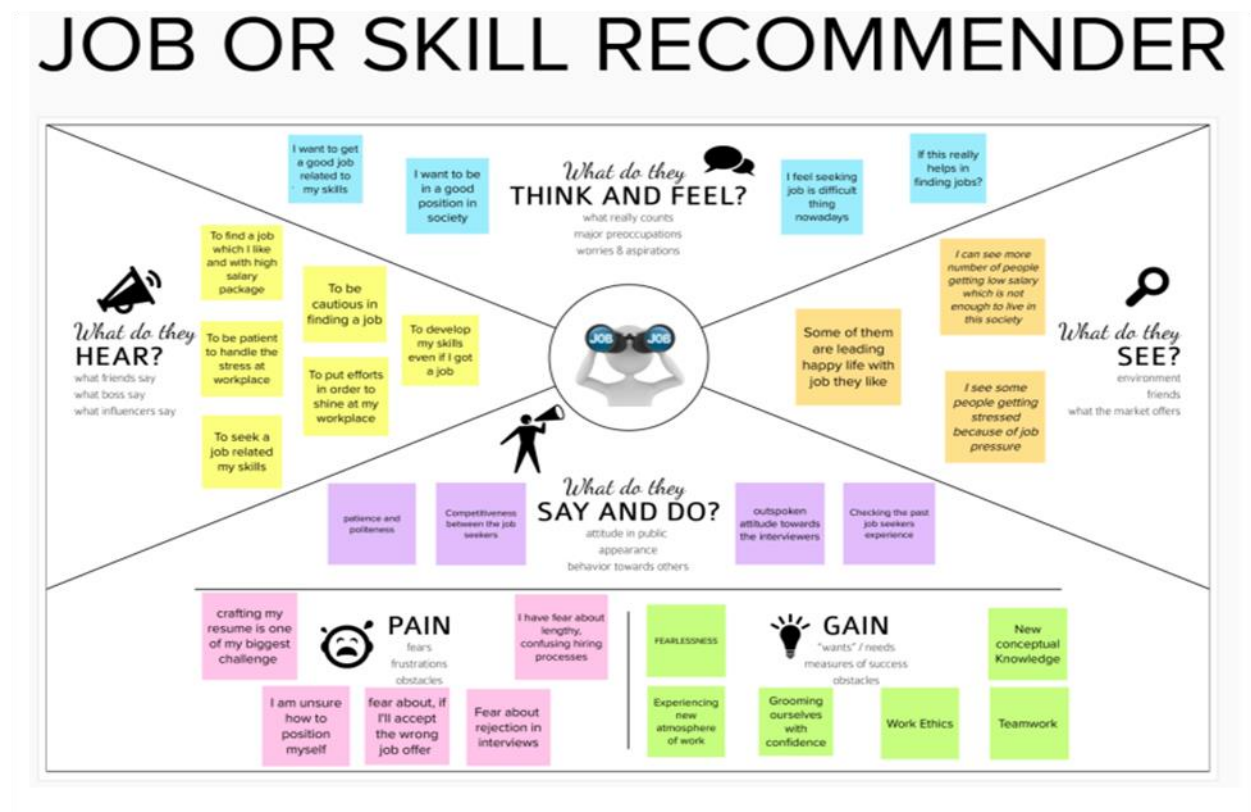
In the ultimate years, job recommender systems have emerged as famous for the reason that they correctly minimize data overload by using producing customized job suggestions. Although in the literature exists a variety of strategies and techniques used as part of job recommender systems, most of them fail to recommending job vacancies that healthy proper to the job seekers profiles. Thus, the contributions of this work are threefold , we: i)made publicly accessible a new dataset formed by a set of job seekers profiles and a set of job vacancies amassed from distinctive job search engine sites ii) put ahead the proposal of a framework for job suggestion based totally on expert competencies of job seekers iii) carried out an assessment to quantify empirically the advice competencies of two state of-the-art methods, thinking about special configurations, inside the proposed framework. Thus, we

current a familiar panorama of job suggestion project aiming to facilitate lookup and real-world utility sketch regarding this necessary issue.

### 3. IDEATION & PROPOSED SOLUTION

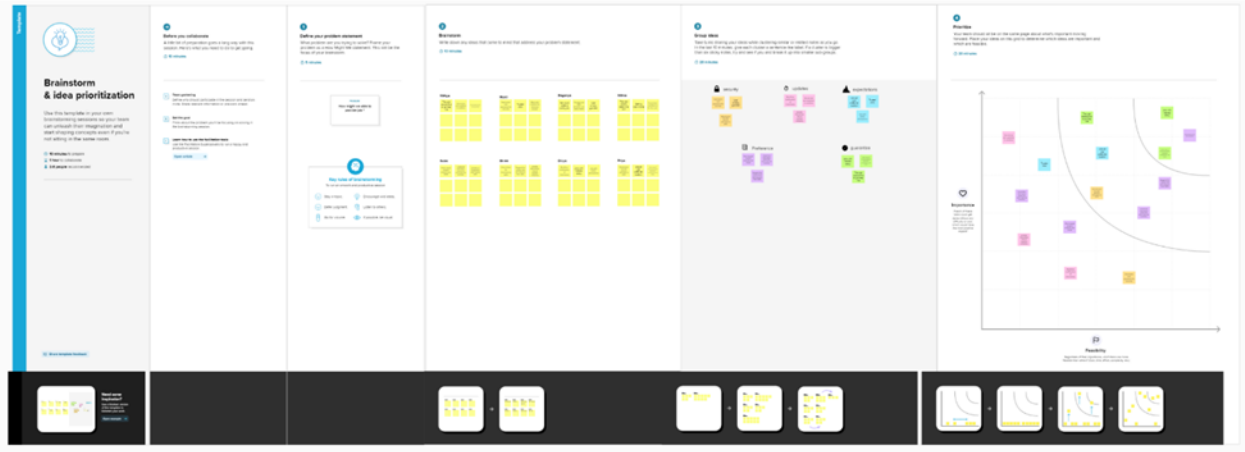
#### 3.1 Empathy Map Canvas

An empathy map is a collaborative tool teams can use to gain a deeper insight into their customers. Much like a user persona, an empathy map can represent a group of users, such as a customer segment. The empathy map was originally created by Dave Gray and has gained much popularity within the agile community.



#### 3.2 Ideation & Brainstorming

Ideation is the process of forming ideas from conception to implementation, most often in a business setting. Ideation is expressed via graphical, written, or verbal methods, and arises from past or present knowledge, influences, opinions, experiences, and personal convictions. Brainstorming is a group problem-solving method that involves the spontaneous contribution of creative ideas and solutions. This technique requires intensive, freewheeling discussion in which every member of the group is encouraged to think aloud and suggest as many ideas as possible based on their diverse knowledge.



### 3.3 Proposed Solution

Proposed Solution Template:

S.No.	Parameter	Description
•	Problem Statement (Problem to be solved)	Realtime information on job vacancies available in top companies with salary preferences.
•	Idea / Solution description	Updation of database with the company job openings through company sites.
•	Novelty / Uniqueness	Filtration of the user specified job could be done to get more precised result.
•	Social Impact / Customer Satisfaction	Many users will get Job based on their choice.
•	Business Model (Revenue Model)	Everybody would seek job at some point of time so this app will make reasonable revenue.
•	Scalability of the Solution	User requirements can be met through this application.

### 3.4 Problem Solution fit

Project Title: JOB OR SKILL RECOMMENDER			Project Design Phase-I - Solution Fit Template			Team ID: PNT2022TMD32918			
Define CS, fit into CC	<b>1. CUSTOMER SEGMENT(S)</b> <small>Who is your customer? i.e., working parents of 0-5 y.o. kids</small>		CS	<b>6. CUSTOMER CONSTRAINTS</b> <small>What constraints prevent your customers from taking action or limit their choices of solutions? i.e., spending power, budget, no cash, network connections, available devices</small>		CC	<b>5. AVAILABLE SOLUTIONS</b> <small>Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What price do come do these solutions have? i.e., pen and paper is an alternative to digital marketing</small>		AS
	Job seekers of 21 y.o or more			Network connection , available devices			Job seekers would tire themselves by searching jobs continuously due to anxiety. They should grow mutually with the people in the field of job they seek for		
Focus on J&P, fit into BE, understand RC	<b>2. JOBS-TO-BE-DONE / PROBLEMS</b> <small>Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.</small>		J&P	<b>9. PROBLEM ROOT CAUSE</b> <small>What is the root cause that this problem exists? What is the back story behind the need to do this job? i.e., customers have to do it because of the change in regulations.</small>		RC	<b>7. BEHAVIOUR</b> <small>What does your customer do to address the problem and get the job done? i.e., referred, find the right water pump installer, calculate usage and benefits, indirectly associated, customers spend free time on volunteering work (i.e. Greenpeace)</small>		BE
	User should be provided with realtime job updates of popular companies			Due to unemployment and the requirements of jobs are high now a days, Job seekers need a platform where they search and get the job they like			User need to find the job they aim for through websites of the company they like and the position they search for and the skills they have		
Focus on AS, fit into CC			Focus on AS, fit into CC			Focus on AS, fit into CC			Explore AS, differentiate

<b>3. TRIGGERS</b> <small>What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news.</small>  <b>Seeing their friends getting the jobs they like</b>	<b>10. YOUR SOLUTION</b> <small>If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality. If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour.</small>  <b>User can filter the job they search for and their requirements can be met according to their inputs in the system and User may able to reach the job offers soon due to the realtime updates on the current job offers</b>	<b>8. CHANNELS of BEHAVIOUR</b> <small>8.1 ONLINE What kind of actions do customers take online? Extract online channels from #7</small>  <small>8.2 OFFLINE What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.</small>  <b>8.1 ONLINE</b> <b>User need to surf internet about job offers</b>  <b>8.2 OFFLINE</b> <b>Job seeker need to move from place to place in search of jobs</b>
<b>4. EMOTIONS: BEFORE / AFTER</b> <small>How do customers feel when they face a problem or a job and afterwards? i.e. lost, insecure &gt; confident, in control - use it in your communication strategy &amp; design.</small>  <b>User would be stressed due to searching jobs and unsure &gt; positiveness , calm and composed</b>		

## 4. REQUIREMENT ANALYSIS

### 4.1 Functional requirement

Following are the functional requirements of the proposed solution

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through LinkedIn
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User Login	Login through Form Login through Gmail Login through LinkedIn
FR-4	User Profile	Updation of the user profile through the Login credentials
FR-5	User Search	Exploration of Jobs that users search for using the filters
FR-6	User Acceptance	Confirmation of the job

### 4.2 Non-Functional requirements

Following are the non-functional requirements of the proposed solution.

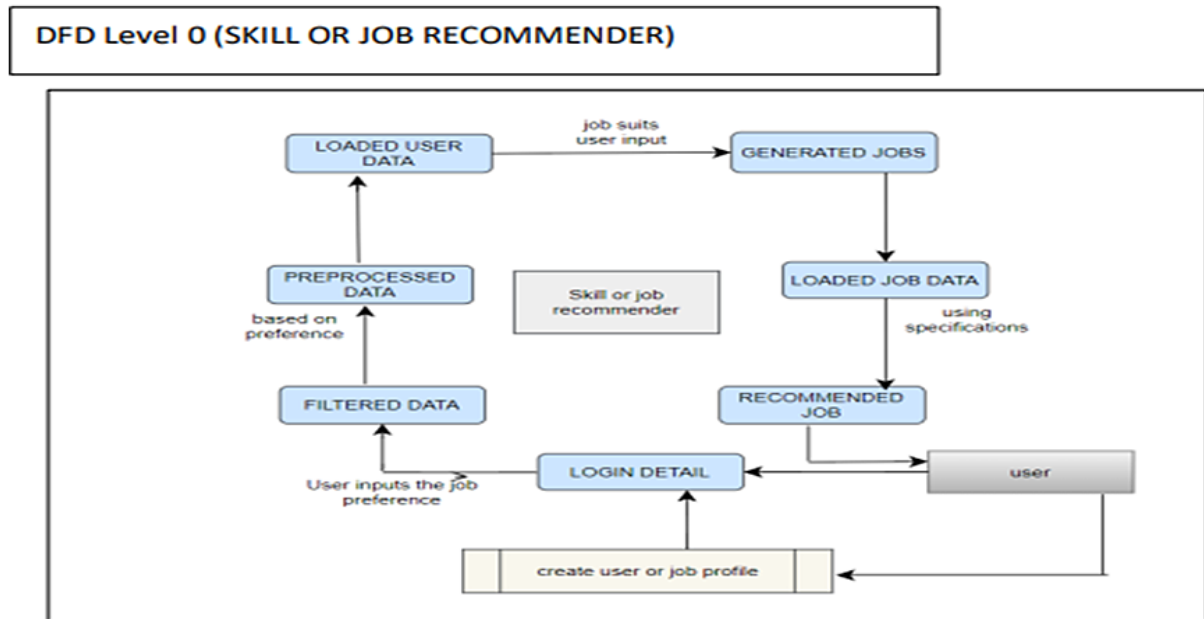
FR No.	Non-Functional Requirement	Description
NFR-1	Usability	This application can be used by the job seekers to login and search for the jobs
NFR-2	Security	This application is secure with the personalised Login credentials
NFR-3	Reliability	This application is trustworthy which provides good job offers and suggestions of skillset with real time notifications
NFR-4	Performance	The performance of the application is quicker responses to search of job seeker
NFR-5	Availability	This application provides job offers and skillset with user's preference
NFR-6	Scalability	The response time of the application is quite faster with user choice



## 5. PROJECT DESIGN

### 5.1 Data Flow Diagrams

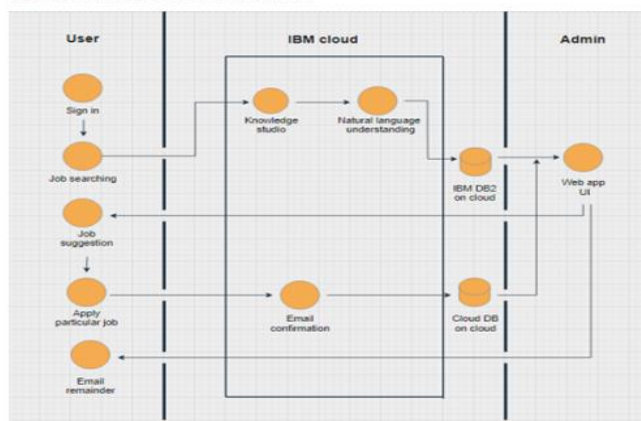
A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



### 5.2 Solution & Technical Architecture

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

**Title : Skill And Job Recommender**



**Guidelines:**

1. Include all the processes (As an application logic / Technology Block)
2. Provide infrastructural demarcation (Local / Cloud)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components / services
5. Indicate interface to machine learning models (if applicable)

**Table-1 : Components & Technologies:**

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Logic for a process in the application	Java / Python
3.	Application Logic-2	Logic for a process in the application	IBM Watson STT service
4.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
5.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	Purpose of External API used in the application	IBM Weather API, etc.
9.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry, Kubernetes, etc.

**Table-2: Application Characteristics:**

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Technology of Opensource framework
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Technology used
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Technology used
5.	Performance	Design consideration for the performance of the	Technology used

S.No	Characteristics	Description	Technology
		application (number of requests per sec, use of Cache, use of CDN's) etc.	



### 5.3 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
Job Seeker (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-6	As a user, I can access the dashboard for jobs to search	I can access the dashboard	High	Sprint-1
Job Seeker (Web user)	Login	USN-7	As a user, I can log into the application by entering email & password	I can log into the account I have created	High	Sprint-1
Administrator	Registration	USN-8	As a administrator, I can see the registration details	I can access the registration details	High	Sprint-1
	Login	USN-9	As a administrator, I can see the login details	I can access the login details	High	Sprint-1
	Dashboard	USN-10	As a administrator, I can update the dashboard	I can update the dashboard	High	Sprint-1

## 6. PROJECT PLANNING & SCHEDULING

### 6.1 Sprint Planning & Estimation

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	Mukil I Nithyashree R Subasri D R Dhivya V
Sprint-1		USN-2	As a user, I will receive confirmation email once I have registered for the application	2	High	Mukil I Nithyashree R Subasri D R Dhivya V
Sprint-2		USN-3	As a user, I can register for the application through Facebook	3	Low	Mukil I Nithyashree R Subasri D R Dhivya V
Sprint-1		USN-4	As a user, I can register for the application through Gmail	2	Medium	Mukil I Nithyashree R Subasri D R Dhivya V
Sprint-1	Login	USN-5	As a user, I can log into the application by entering email & password	2	High	Mukil I Nithyashree R Subasri D R Dhivya V
Sprint-2	Dashboard	USN-6	As a user, I can search for jobs through this application	3	Medium	Mukil I Nithyashree R

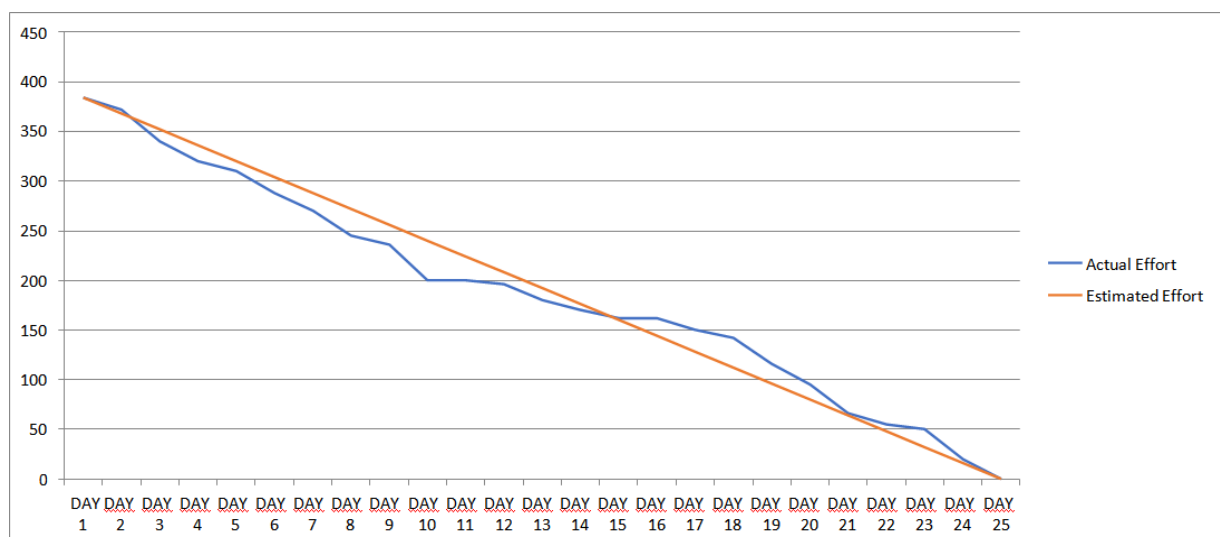
Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
						Subasri D R Dhivya V
Sprint-3	Dashboard	USN-7	As a user , I can upload the resume	4	High	Mukil I Nithyashree R Subasri D R Dhivya V
Sprint-3		USN-8	As a user , I can see the suggestions for the jobs	2	Medium	Mukil I Nithyashree R Subasri D R Dhivya V
Sprint-3		USN-9	As a user, I should be able to specify the domain	4	High	Mukil I Nithyashree R Subasri D R Dhivya V
Sprint-4	Database	USN-10	As a user, details should be saved in the DB	4	High	Mukil I Nithyashree R Subasri D R Dhivya V
Sprint-4	Chat Bot	USN-11	As a user, I should be able to chat with the application	3	Medium	Mukil I Nithyashree R Subasri D R Dhivya V

## 6.2 Sprint Delivery Schedule

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	8	6 Days	24 Oct 2022	29 Oct 2022	8	29 Oct 2022
Sprint-2	6	6 Days	31 Oct 2022	05 Nov 2022	6	05 Nov 2022
Sprint-3	10	6 Days	07 Nov 2022	12 Nov 2022	10	12 Nov 2022
Sprint-4	7	6 Days	14 Nov 2022	19 Nov 2022	7	19 Nov 2022

## 6.3 Reports from JIRA

A burn down chart is a graphical representation of work left to do versus time. It is often used in agile software development methodologies such as Scrum. However, burn down charts can be applied to any project containing measurable progress over time.



## 7. CODING & SOLUTIONING

### 7.1 Feature 1

#### 7.1.1 Apply html page

```
<!DOCTYPE html>
<html lang="en">
<head>
  <header>
    <h2>SKILL/JOB RECOMMENDER</h2></header>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>JOBPORTAL | APPLY</title>
  <!-- favicon -->
  <!-- <link rel="shortcut icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->
  <!-- <link rel="icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->
  <link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-
32x32.png">
  <!-- bootstrap css cdn -->
  <link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.css">
  <!-- css stylesheet -->
  <link rel="stylesheet" href="static/css/style.css">
  <link rel="stylesheet" href="style1.css">
  <!-- font styles cdn -->
  <link rel="preconnect" href="https://fonts.gstatic.com">
```

```

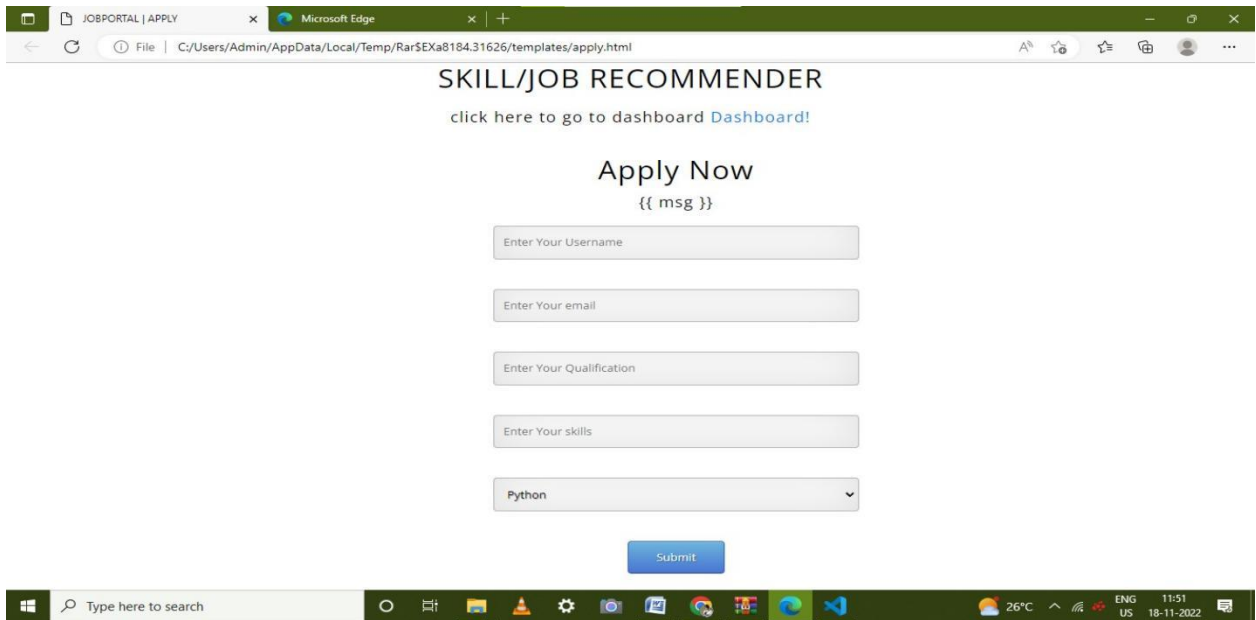
<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"
rel="stylesheet">
<link
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
<body>
<!-- bootstrap navbar -->
<div class="logo mt-3 text-center">
</div>
<!-- navbar ends -->
<!-- Login form -->
<div class="login text-center mt-5">
<h2>Apply Now</h2>
<div class="msg">{ { msg } }</div>
<form action="/apply" method="post" class="mt-3">
<!-- <input type="text" placeholder="fullname" id="fullname"> </br></br> -->
<input type="text" name="username" placeholder="Enter Your Username"
id="username" required></br></br>
<input type="email" name="email" placeholder="Enter Your email" id="email"
required></br></br>
<input type="text" name="qualification" placeholder="Enter Your Qualification"
id="qualification" required></br></br>
<input type="text" name="skills" placeholder="Enter Your skills" id="skills"
required></br></br>
<select name ="s">
<option value ="PYTHON"> Python</option>
<option value ="ML"> ML</option>
<option value ="AI"> AI</option>
</select>
</br></br>
<button type="submit" id="button" class="btn btn-primary"> Submit</button>

```

```

    </form>
</div>
<div class="note mt-3 text-center">
    <p> click here to go to dashboard <a href="dashboard">Dashboard! </a> </p>
</div>
</body>
</html>

```



### 7.1.2 Dashboard html page

```

<!DOCTYPE html>
<html lang="en">
<head>
    <header>
        <h2>SKILL/JOB RECOMMENDER</h2></header>
        <meta charset="UTF-8">
        <meta http-equiv="X-UA-Compatible" content="IE=edge">
        <meta name="viewport" content="width=device-width, initial-scale=1.0">
        <title>JOBPORTAL | HOME</title>
        <meta charset="UTF-8">
        <!-- favicon -->

```

```

<!-- <link rel="shortcut icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->
<!-- <link rel="icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->
<link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-
32x32.png">
<!-- bootstrap css cdn -->
<link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.css">
<!-- css stylesheet -->
<link rel="stylesheet" href="static/css/style.css">
<link rel="stylesheet" href="style1.css">
<!-- font styles cdn -->
<link rel="preconnect" href="https://fonts.gstatic.com">
<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"
rel="stylesheet">
<link
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
<body>
<!-- bootstrap navbar -->
<nav class="navbar sticky-top navbar-expand-lg navbar-light">
<div class="container-fluid">
<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-
target="#navbarSupportedContent" aria-controls="navbarSupportedContent" aria-
expanded="false" aria-label="Toggle navigation">
<span class="navbar-toggler-icon"></span>
</button>

```



```

    <div class="row donate-sponsor">
      <a type="button" class="btn btn-success mr-1" id="donate"
href="/logout">LOGOUT</a>
      <a type="button" class="btn btn-warning mr-1" id="sponsor"
href="register">REGISTER</a>
      <a type="button" class="btn btn-primary mr-1" id="sponsor" href="display">MY
JOBS</a>
    </div>
  </div>
</nav>
<!-- navbar ends -->
<!-- what we focus on -->
<section class="our-focus">
  <div class="container">
    <h2 class="text-center mt-3">Available Jobs</h2>
    <div class="row ml-3 mt-3">
      <div class="col-lg-3 mr-5" id="focus-first">
        <div class="card" style="width: 19rem;">
          <!--  -->
          <div class="card-body">
            <h5 class="card-title">Python</h5>
            <p class="card-text">Skills for python
            </p>
            <a href="apply" class="btn btn-primary">Apply Now</a>
          </div>
        </div>
      </div>
      <div class="col-lg-3 mr-5" id="focus-second">
        <div class="card" style="width: 20rem;">
          <!--  -->
          <div class="card-body">
            <h5 class="card-title">Data Scientist</h5>

```

JOBPORAL | APPLY

JOBPORAL | HOME

File | C:/Users/Admin/AppData/Local/Temp/Rar\$EXa8184.3700/templates/dashboard.html

# SKILL/JOB RECOMMENDER

LOGOUT REGISTER MY JOBS

## Available Jobs

Python  
Skills for python

Apply Now

Data Scientist  
Skills for datascientist

Apply Now

HR Manager  
skills for hr manager

Apply Now

Type here to search

26°C

ENG 11:58 18-11-2022

### 7.1.3 Display html page

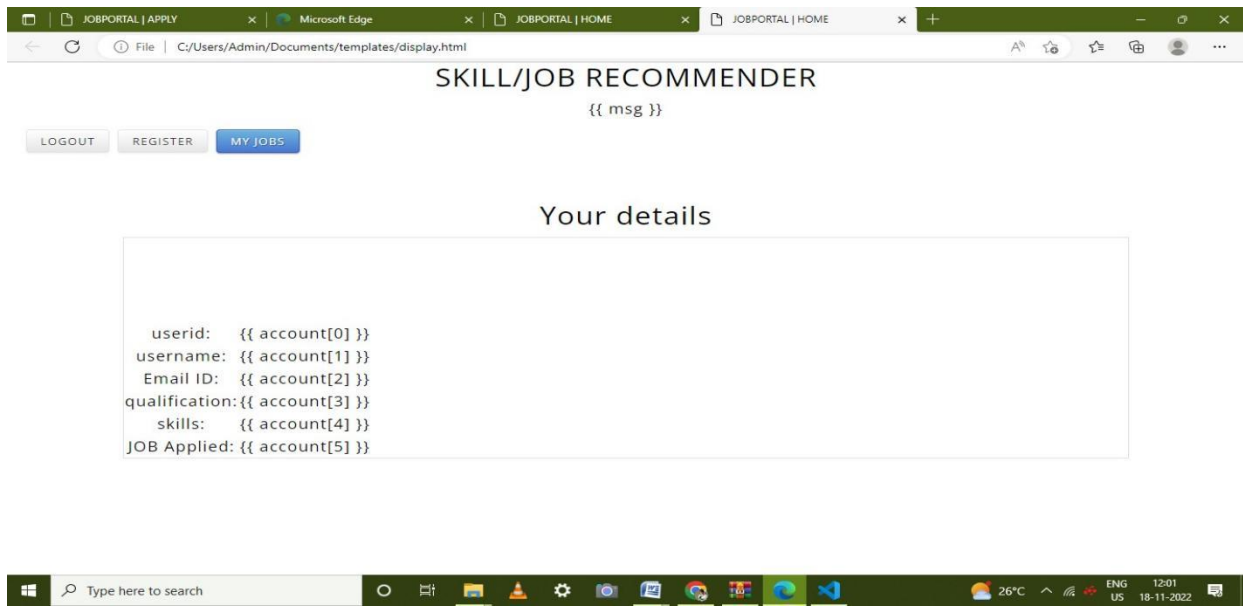
```
<!DOCTYPE html>
<html lang="en">
<head>
  <header>
    <h2>SKILL/JOB RECOMMENDER</h2></header>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>JOBPORTAL | HOME</title>
    <div class="msg">{{ msg }}</div>
    <meta charset="UTF-8">
    <!-- favicon -->
    <!-- <link rel="shortcut icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->
    <!-- <link rel="icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->
    <link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-
32x32.png">
    <!-- bootstrap css cdn -->
    <link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.css">
    <!-- css stylesheet -->
    <link rel="stylesheet" href="static/css/style.css">
    <link rel="stylesheet" href="style1.css">
    <!-- font styles cdn -->
    <link rel="preconnect" href="https://fonts.gstatic.com">
    <link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"
rel="stylesheet">
```

```

<link
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
<body>
  <!-- bootstrap navbar -->
  <nav class="navbar sticky-top navbar-expand-lg navbar-light">
    <div class="container-fluid">
      <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-
target="#navbarSupportedContent" aria-controls="navbarSupportedContent" aria-
expanded="false" aria-label="Toggle navigation">
        <span class="navbar-toggler-icon"></span>
      </button>
      <div class="row donate-sponsor">
        <a type="button" class="btn btn-success mr-1" id="donate"
href="/logout">LOGOUT</a>
        <a type="button" class="btn btn-warning mr-1" id="sponsor"
href="register">REGISTER</a>
        <a type="button" class="btn btn-primary mr-1" id="sponsor" href="display">MY
JOBS</a>
      </div>
    </div>
  </nav>
  <!-- navbar ends -->
  <!-- what we focus on -->
  <section class="our-focus">
    <div class="container">
      <h2 class="text-center mt-3">Your details</h2>
      <div class="border">
        <table class="worddark"></table>
        <tr>
          <td>userid:</td>

```

```
<td>{{ account[0] }}</td>
</tr>
<tr>
<td>username:</td>
<td>{{ account[1] }}</td>
</tr>
<tr>
<td>Email ID:</td>
<td>{{ account[2] }}</td>
</tr>
<tr>
<td>qualification:</td>
<td>{{ account[3] }}</td>
</tr>
<tr>
<td>skills:</td>
<td>{{ account[4] }}</td>
</tr>
<tr>
<td>JOB Applied:</td>
<td>{{ account[5] }}</td>
</tr>
</table>
</section>
</body>
</html>
```



#### 7.1.4 Home html page

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
<header>
```

```
<h2>SKILL/JOB RECOMMENDER</h2></header>
```

```
<meta charset="UTF-8">
```

```
<meta http-equiv="X-UA-Compatible" content="IE=edge">
```

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
<title>JOBPORTAL | HOME</title>
```

```
<meta charset="UTF-8">
```

```
<!-- favicon -->
```

```
<!-- <link rel="shortcut icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->
```

```
<!-- <link rel="icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->
```

```
<link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-32x32.png">
```

```
<!-- bootstrap css cdn -->
```

```
<link rel="stylesheet"
```

```
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
```



```
integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.css">
    <!-- css stylesheet -->
    <link rel="stylesheet" href="static/css/style.css">
    <link rel="stylesheet" href="style1.css">
    <!-- font styles cdn -->
    <link rel="preconnect" href="https://fonts.gstatic.com">
    <link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"
rel="stylesheet">
    <link
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
<body>
    <!-- bootstrap navbar -->
    <nav class="navbar sticky-top navbar-expand-lg navbar-dark">
        <div class="container-fluid">
            <div class="row donate-sponsor">
                <a type="button" class="btn btn-success mr-1" id="donate"
href="login">LOGIN</a>
                <a type="button" class="btn btn-warning mr-1" id="sponsor"
href="register">REGISTER</a>
                <a type="button" class="btn btn-primary mr-1" id="sponsor"
href="contact.html">CONTACT US</a>
            </div>
        </div>
    </nav>
    <!-- navbar ends -->
    <!-- what we focus on -->
```

```

<section class="our-focus">
  <div class="container">
    <h2 class="text-center mt-3">Aboutus</h2>
    <div class="row ml-3 mt-3">
      <div class="col-lg-3 mr-5" id="focus-first">
        <div class="card" style="width: 19rem;">
          <!--  -->
          <div class="card-body">
            <h5 class="card-title">Mission</h5>
            <p class="card-text">This is an edTech organization with a vision to bridge the
gap between academia & industry. Our outcome-based experiential learning programs on
emerging technologies (Internet of Things, Machine Learning, Data Science, Artificial
Intelligence, Robotics) are building skilled entry - level engineers, for the corporate world.
          </p>
        </div>
      </div>
      <div class="col-lg-3 mr-5" id="focus-second">
        <div class="card" style="width: 20rem;">
          <!--  -->
          <div class="card-body">
            <h5 class="card-title">Vision</h5>
            <p class="card-text">Our main objective is to bridge the existing gaps between
prevailing industry standards and what the academics offer to the graduates while passing out
of university. This offers suitable skill deployment and training to the young talent before on
boarding their first job.

```

Our skill development programs are designed considering the present expectations in the industry. </p>

```

  </div>
</div>
</div>

```

```
<div class="col-lg-3 ml-5" id="focus-third">
  <div class="card" style="width: 20rem;">
    <!-- 
    <div class="card-body">
      <h5 class="card-title">Objective</h5>
      <p class="card-text">Well directed career guidance programs for educational
institutions
```

Appropriate certification courses that suit the industry need

Train the trainers; expanded awareness about the current industry standards

Liaise with corporates to offer niche internships

Establish technology development centers in colleges

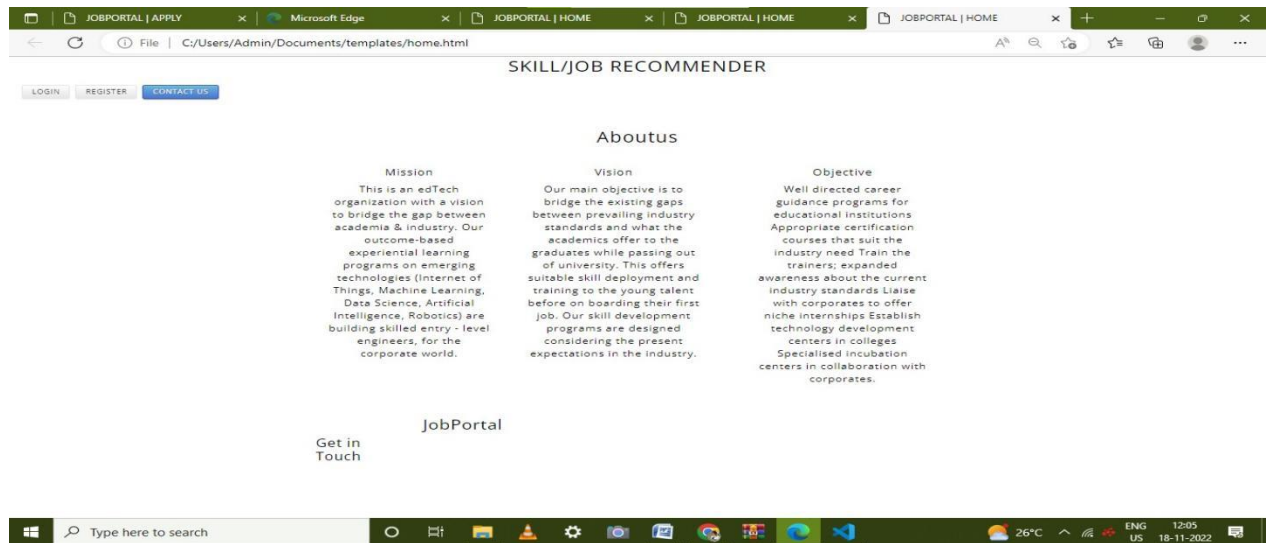
Specialised incubation centers in collaboration with corporates.</p>

```
</div>
</div>
</div>
</div>
</div>
</section>
<!-- focus section ends -->
<!-- footer starts -->
<!-- Site footer -->
<footer class="site-footer">
  <div class="container mt-5">
    <div class="row">
      <div class="col-sm-12 col-md-6">
        <h3>JobPortal</h3>
      <div class="col-xs-6 col-md-3">
        <h4>Get in Touch</h4>
        <ul class="footer-links">
          <li><a href="mailto:test@gmail.com">jobportal@gmail.com</a></li>
          <li><a href="">+91 8977787657</a></li>
        </ul>
```

```

</div>
</div>
<hr>
</div>
</div>
</footer>
</body>
</html>

```



### 7.1.5 Login html page

```

<!DOCTYPE html>
<html lang="en">
<head>
  <header>
    <h2>SKILL/JOB RECOMMENDER</h2></header>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>JOBPORTAL | LOGIN</title>
    <link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-32x32.png">

```

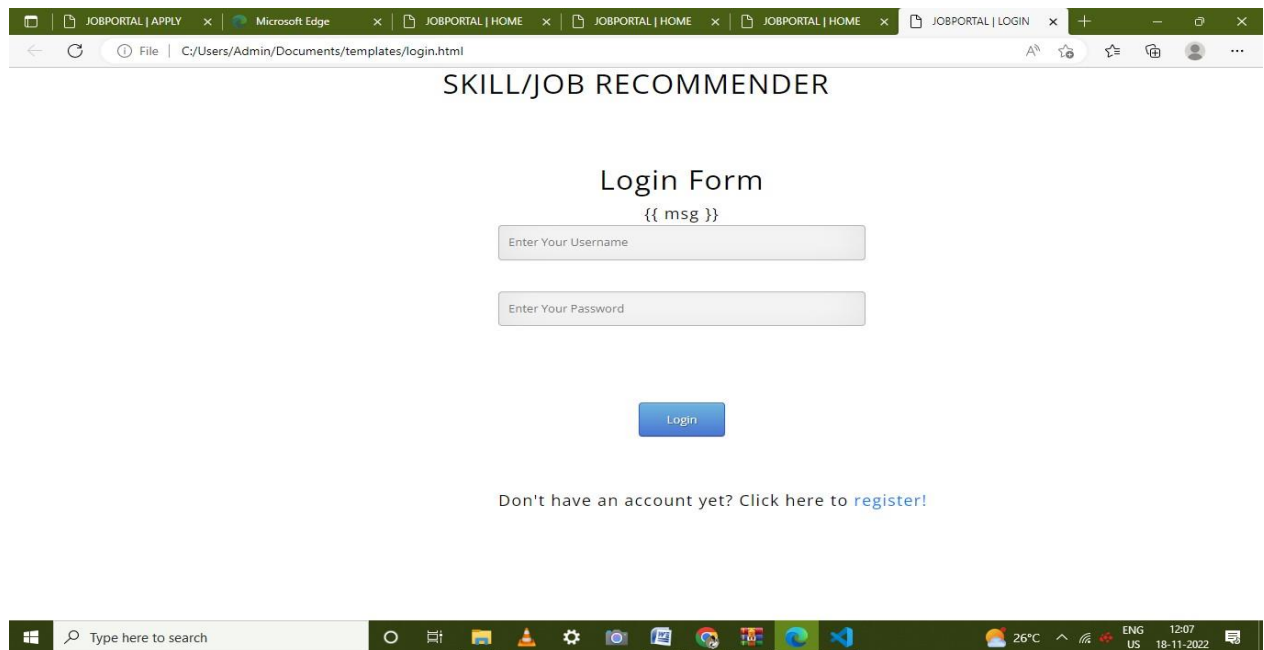
```

<link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.css">
<link rel="stylesheet" href="static/css/style.css">
<link rel="stylesheet" href="style1.css">
<link rel="preconnect" href="https://fonts.gstatic.com">
<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"
rel="stylesheet">
<link
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
<body>
<div class="login text-center mt-5">
<h2> Login Form </h2>
<form action="/login" method="post">
<div class="msg">{ { msg } }</div>
<input type="text" name="username" placeholder="Enter Your Username"
id="username" required></br></br>
<input type="password" name="password" placeholder="Enter Your Password"
id="password" required></br></br>
</br> </br>
<button type="submit" id="button" class="btn btn-primary"> Login </button>
</form>
</div>
<div class="another"> <!--Register form -->
<p> Don't have an account yet? Click here to <a href="register">register! </a> </p>
</div>

```

</body>

</html>



### 7.1.6 Register html page

<!DOCTYPE html>

<html lang="en">

<head>

<header>

<h2>SKILL/JOB RECOMMENDER</h2></header>

<meta charset="UTF-8">

<meta http-equiv="X-UA-Compatible" content="IE=edge">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>JOBPORTAL | LOGIN</title>

<!-- favicon -->

<!-- <link rel="shortcut icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->

<!-- <link rel="icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->

<link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-32x32.png">

<!-- bootstrap css cdn -->



```

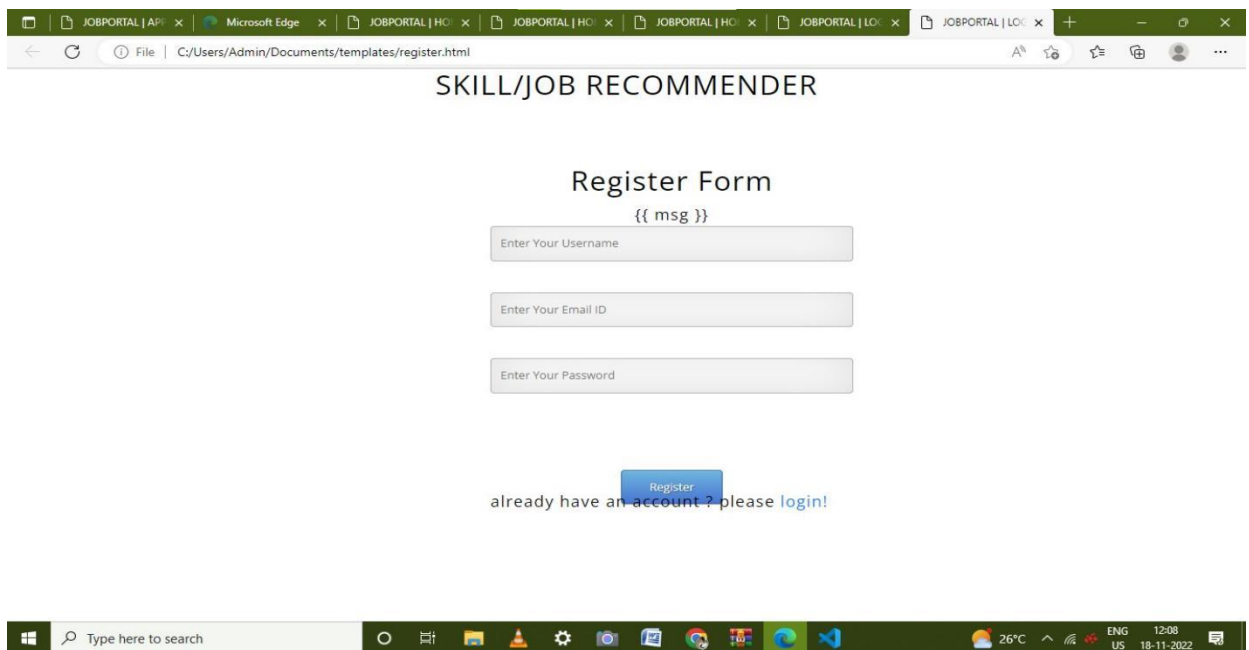
    <link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.css">
    <!-- css stylesheet -->
    <link rel="stylesheet" href="static/css/style.css">
    <link rel="stylesheet" href="style1.css">
    <!-- font styles cdn -->
    <link rel="preconnect" href="https://fonts.gstatic.com">
    <link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"
rel="stylesheet">
    <link
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
<body>
    <!-- bootstrap navbar -->
    <!-- navbar ends -->
    <!-- Login form -->
    <div class="login text-center mt-5">
        <h2> Register Form </h2>
        <form action="/register" method="post">
            <div class="msg">{ { msg } }</div>
            <!-- <input type="text" placeholder="fullname" id="fullname"> <br><br> -->
            <input type="text" name="username" placeholder="Enter Your Username"
id="username" required></br></br>
            <input type="email" name="email" placeholder="Enter Your Email ID" id="email"
required></br></br>
            <input type="password" name="password" placeholder="Enter Your Password"

```

```

id="password" required></br></br>
    </br>
    </br>
    <button type="submit" id="button" class="btn btn-primary"> Register </button>
</form>
</div>
<div class="another"> <!--Register form -->
<p> already have an account ? please <a href="/login">login! </a> </p>
</div>
</body>
</html>

```



### 7.1.7 Style sheet css page

```

/* // Small devices (landscape phones, 576px and up) */
@media (min-width: 576px) {
}
/* // Medium devices (tablets, 768px and up) */
@media (min-width: 768px) {

```

```

}
/* // Large devices (desktops, 992px and up) */
@media (min-width: 992px) {
    .header{
        padding-top:15px;
        padding-bottom:15px;
        background-color: #979ADE;
    }
    .navbar-brand{
        padding-left: 5px;
    }
    .navbar-nav {
        margin-left: 30px;
    }
    .nav-item {
        padding-left:5px;
    }
    .donate-sponsor{
        margin-right:10px;
    }
    #donate,#sponsor{
        margin:5px;
        padding: 5px 15px 5px 15px;
    }
    .homepage-header{
        background: url('../img/group.JPG');
        background-size: cover;
        background-position: center top;
        padding: 0;
        position: relative;
        width: 100%;
        overflow: hidden;
    }

```

```
display: -webkit-flex;
display: -ms-flexbox;
display: flex;
height: 85vh;
}
/* our focus */
.our-focus .container {
    margin-top: 3rem !important;
}
.our-focus .row {
    margin-top: 1.5rem !important;
}
.our-focus .card {
    border: none !important;
}
.our-focus #focus-first {
    margin-right: 80px;
}
.our-focus #focus-second {
    margin-right: 90px;
}
/* footer */
.row-initiative {
    margin-top: 10px
}
.site-footer {
    margin-top: 30px;
    line-height: 24px;
}
.another {
    position: absolute;
    top: 80%;
```

```

    left: 50%;
    margin: -25px 0 0 -150px;
}
.footer-links {
    padding-left: 0;
    list-style: none;
}
.footer-links li {
    display: block;
}
.footer-links.inline li {
    display: inline-block;
}
.footer-links li a {
    color: black;
}
.footer-logo img {
    width: 100px;
}
input {
    padding: 10px 20px;
}
}
/* // X-Large devices (large desktops, 1200px and up) */
@media (min-width: 1200px) {
    .navbar-brand {
        padding-left: 10px;
    }
}
/* // XX-Large devices (larger desktops, 1400px and up) */
@media (min-width: 1400px) {
    .navbar-brand {

```

```
padding-left: 15px;
}
}
```

### 7.1.8 Style sheet1 css page

```
@import url(https://fonts.googleapis.com/css?family=Open+Sans);
.btn {
display: inline-block;
*display: inline;
*zoom: 1;
padding: 10px 30px 10px;
margin-bottom: 0;
font-size: 13px;
line-height: 18px;
color: #333333;
text-align: center;
text-shadow: 0 1px 1px rgba(255, 255, 255, 0.75);
vertical-align: middle;
background-color: #f5f5f5;
background-image: -moz-linear-gradient(top, #ffffff, #e6e6e6);
background-image: -ms-linear-gradient(top, #ffffff, #e6e6e6);
background-image: -webkit-gradient(linear, 0 0, 0 100%, from(#ffffff), to(#e6e6e6));
background-image: -webkit-linear-gradient(top, #ffffff, #e6e6e6);
background-image: -o-linear-gradient(top, #ffffff, #e6e6e6);
background-image: linear-gradient(top, #ffffff, #e6e6e6);
background-repeat: repeat-x;
filter: progid:dximagetransform.microsoft.gradient(startColorstr=#ffffff,
endColorstr=#e6e6e6, GradientType=0);
border-color: #e6e6e6 #e6e6e6 #e6e6e6;
border-color: rgba(0, 0, 0, 0.1) rgba(0, 0, 0, 0.1) rgba(0, 0, 0, 0.25);
border: 1px solid #e6e6e6;
-webkit-border-radius: 4px;
```



```

-moz-border-radius: 4px;
border-radius: 4px;
-webkit-box-shadow: inset 0 1px 0 rgba(255, 255, 255, 0.2), 0 1px 2px rgba(0, 0, 0, 0.05);
-moz-box-shadow: inset 0 1px 0 rgba(255, 255, 255, 0.2), 0 1px 2px rgba(0, 0, 0, 0.05);
box-shadow: inset 0 1px 0 rgba(255, 255, 255, 0.2), 0 1px 2px rgba(0, 0, 0, 0.05);
cursor: pointer; *margin-left: .3em;
}

.btn:hover, .btn:active, .btn.active, .btn.disabled, .btn[disabled] { background-color: #e6e6e6;
}

.btn-large {
padding: 9px 14px;
font-size: 15px;
line-height: normal;
-webkit-border-radius: 5px;
-moz-border-radius: 5px;
border-radius: 5px;
}

.btn:hover {
color: #333333;
text-decoration: none;
background-color: #e6e6e6;
background-position: 0 -15px;
-webkit-transition: background-position 0.1s linear;
-moz-transition: background-position 0.1s linear;
-ms-transition: background-position 0.1s linear;
-o-transition: background-position 0.1s linear;
transition: background-position 0.1s linear;
}

.btn-primary, .btn-primary:hover {
text-shadow: 0 -1px 0 rgba(0, 0, 0, 0.25);
color: #ffffff;
}

```

```

.btn-primary.active { color: rgba(255, 255, 255, 0.75);
.btn-primary {
    background-color: #4a77d4;
    background-image: -moz-linear-gradient(top, #6eb6de, #4a77d4);
    background-image: -ms-linear-gradient(top, #6eb6de, #4a77d4);
    background-image: -webkit-gradient(linear, 0 0, 0 100%, from(#6eb6de), to(#4a77d4));
    background-image: -webkit-linear-gradient(top, #6eb6de, #4a77d4);
    background-image: -o-linear-gradient(top, #6eb6de, #4a77d4);
    background-image: linear-gradient(top, #6eb6de, #4a77d4);
    background-repeat: repeat-x;
    filter: progid:dximagetransform.microsoft.gradient(startColorstr=#6eb6de,
endColorstr=#4a77d4, GradientType=0);
    border: 1px solid #3762bc;
    text-shadow: 1px 1px 1px rgba(0,0,0,0.4);
    box-shadow: inset 0 1px 0 rgba(255, 255, 255, 0.2), 0 1px 2px rgba(0, 0, 0, 0.5);
}
.btn-primary:hover, .btn-primary:active, .btn-primary.active, .btn-primary.disabled, .btn-
primary[disabled] {
    filter: none;
    background-color: #4a77d4;
}
.btn-block { width: 100%; display:block; }
* { -webkit-box-sizing:border-box; -moz-box-sizing:border-box; -ms-box-sizing:border-box;
-o-box-sizing:border-box; box-sizing:border-box; }
html { width: 100%; height:100%; overflow:hidden; }
body {
    width: 100%;
    height:100%;
    font-family: 'Open Sans', sans-serif;
    background: #ffffff;
    color: #000000;
    font-size: 18px;

```

```
    text-align:center;
    letter-spacing:1.2px;
}
.header {
    top:0;
    margin:0px;
    left: 0px;
    right: 0px;
    position: fixed;
    background: #4a77d4;
    color: #979ADE;
    box-shadow: 0px 8px 4px grey;
    overflow: hidden;
    padding: 15px;
    font-size: 1.5vw;
    width: 100%;
    text-align: center;
}
.login {
    position: absolute;
    top: 10%;
    left: 50%;
    margin: -25px 0 0 -150px;
    width:400px;
    height:400px;
}
.register {
    position: absolute;
    top: 10%;
    left: 50%;
    margin: -25px 0 0 -150px;
    width:400px;
```

```
    height:400px;
}
.note mt-3 text-center div {
    position: absolute;
    top: 60%;
    left: 50%;
    margin: -25px 0 0 -150px;
    width:400px;
    height:400px;
}
.header div { color: #fff; text-shadow: 0 0 10px rgba(0,0,0,0.3); letter-spacing:1px; text-align:center; float:left; padding-left:150px;}
ul {
    list-style-type: none;
    margin: 0;
    padding: 0;
    padding-right:150px;
    overflow: hidden;
}
li {
    float: right;
}
li a {
    display: block;
    color: white;
    text-align: center;
    padding: 0px 15px;
    text-decoration: none;
}
input {
    width: 100%;
    margin-bottom: 10px;
```

```
background: rgba(255,255,255,255);
border: none;
outline: none;
padding: 10px;
font-size: 13px;
color: black;
text-shadow: black;
border: 1px solid rgba(0,0,0,0.3);
border-radius: 4px;
box-shadow: inset 0 -5px 45px rgba(100,100,100,0.2), 0 1px 1px rgba(255,255,255,0.2);
-webkit-transition: box-shadow .5s ease;
-moz-transition: box-shadow .5s ease;
-o-transition: box-shadow .5s ease;
-ms-transition: box-shadow .5s ease;
transition: box-shadow .5s ease;
}
input:focus { box-shadow: inset 0 -5px 45px rgba(100,100,100,0.4), 0 1px 1px
rgba(255,255,255,0.2); }
textarea {
width: 100%;
margin-bottom: 10px;
background: rgba(255,255,255,255);
border: none;
outline: none;
padding: 10px;
font-size: 13px;
color: black;
text-shadow: black;
border: 1px solid rgba(0,0,0,0.3);
border-radius: 4px;
box-shadow: inset 0 -5px 45px rgba(100,100,100,0.2), 0 1px 1px rgba(255,255,255,0.2);
-webkit-transition: box-shadow .5s ease;
```

```
-moz-transition: box-shadow .5s ease;
-o-transition: box-shadow .5s ease;
-ms-transition: box-shadow .5s ease;
transition: box-shadow .5s ease;
}
textarea:focus { box-shadow: inset 0 -5px 45px rgba(100,100,100,0.4), 0 1px 1px
rgba(255,255,255,0.2); }
select {
    width: 100%;
    margin-bottom: 10px;
    background: rgba(255,255,255,255);
    border: none;
    outline: none;
    padding: 10px;
    font-size: 13px;
    color: #000000;
    text-shadow: 1px 1px 1px rgba(0,0,0,0.3);
    border: 1px solid rgba(0,0,0,0.3);
    border-radius: 4px;
    box-shadow: inset 0 -5px 45px rgba(100,100,100,0.2), 0 1px 1px rgba(255,255,255,0.2);
    -webkit-transition: box-shadow .5s ease;
    -moz-transition: box-shadow .5s ease;
    -o-transition: box-shadow .5s ease;
    -ms-transition: box-shadow .5s ease;
    transition: box-shadow .5s ease;
}
@import url(https://fonts.googleapis.com/css?family=Open+Sans);
.btn {
    display: inline-block;
    *display: inline;
    *zoom: 1;
    padding: 10px 30px 10px;
```

```

margin-bottom: 0;
font-size: 13px;
line-height: 18px;
color: #333333;
text-align: center;
text-shadow: 0 1px 1px rgba(255, 255, 255, 0.75);
vertical-align: middle;
background-color: #f5f5f5;
background-image: -moz-linear-gradient(top, #ffffff, #e6e6e6);
background-image: -ms-linear-gradient(top, #ffffff, #e6e6e6);
background-image: -webkit-gradient(linear, 0 0, 0 100%, from(#ffffff), to(#e6e6e6));
background-image: -webkit-linear-gradient(top, #ffffff, #e6e6e6);
background-image: -o-linear-gradient(top, #ffffff, #e6e6e6);
background-image: linear-gradient(top, #ffffff, #e6e6e6);
background-repeat: repeat-x;
filter: progid:dximagetransform.microsoft.gradient(startColorstr=#ffffff,
endColorstr=#e6e6e6, GradientType=0);
border-color: #e6e6e6 #e6e6e6 #e6e6e6;
border-color: rgba(0, 0, 0, 0.1) rgba(0, 0, 0, 0.1) rgba(0, 0, 0, 0.25);
border: 1px solid #e6e6e6;
-webkit-border-radius: 4px;
-moz-border-radius: 4px;
border-radius: 4px;
-webkit-box-shadow: inset 0 1px 0 rgba(255, 255, 255, 0.2), 0 1px 2px rgba(0, 0, 0, 0.05);
-moz-box-shadow: inset 0 1px 0 rgba(255, 255, 255, 0.2), 0 1px 2px rgba(0, 0, 0, 0.05);
box-shadow: inset 0 1px 0 rgba(255, 255, 255, 0.2), 0 1px 2px rgba(0, 0, 0, 0.05);
cursor: pointer; *margin-left: .3em;
}
.btn:hover, .btn.active, .btn.active, .btn.disabled, .btn[disabled] { background-color: #e6e6e6;
}
.btn-large {
padding: 9px 14px;

```

```
font-size: 15px;
line-height: normal;
-webkit-border-radius: 5px;
-moz-border-radius: 5px;
border-radius: 5px;
}
.btn:hover {
color: #333333;
text-decoration: none;
background-color: #e6e6e6;
background-position: 0 -15px;
-webkit-transition: background-position 0.1s linear;
-moz-transition: background-position 0.1s linear;
-ms-transition: background-position 0.1s linear;
-o-transition: background-position 0.1s linear;
transition: background-position 0.1s linear;
}
.btn-primary, .btn-primary:hover {
text-shadow: 0 -1px 0 rgba(0, 0, 0, 0.25);
color: #ffffff;
}
.btn-primary.active { color: rgba(255, 255, 255, 0.75); }
.btn-primary {
background-color: #4a77d4;
background-image: -moz-linear-gradient(top, #6eb6de, #4a77d4);
background-image: -ms-linear-gradient(top, #6eb6de, #4a77d4);
background-image: -webkit-gradient(linear, 0 0, 0 100%, from(#6eb6de), to(#4a77d4));
background-image: -webkit-linear-gradient(top, #6eb6de, #4a77d4);
background-image: -o-linear-gradient(top, #6eb6de, #4a77d4);
background-image: linear-gradient(top, #6eb6de, #4a77d4);
background-repeat: repeat-x;
filter: progid:dximagetransform.microsoft.gradient(startColorstr=#6eb6de,
```



```

endColorstr=#4a77d4, GradientType=0);
border: 1px solid #3762bc;
text-shadow: 1px 1px 1px rgba(0,0,0,0.4);
box-shadow: inset 0 1px 0 rgba(255, 255, 255, 0.2), 0 1px 2px rgba(0, 0, 0, 0.5);
}
.btn-primary:hover, .btn-primary:active, .btn-primary.active, .btn-primary.disabled, .btn-
primary[disabled] {
filter: none;
background-color: #4a77d4;
}
.btn-block { width: 100%; display:block; }
* { -webkit-box-sizing:border-box; -moz-box-sizing:border-box; -ms-box-sizing:border-box;
-o-box-sizing:border-box; box-sizing:border-box; }
html { width: 100%; height:100%; overflow:hidden; }
body {
width: 100%;
height:100%;
font-family: 'Open Sans', sans-serif;
background: #ffffff;
color: #000000;
font-size: 18px;
text-align:center;
letter-spacing:1.2px;
}
.header {
top:0;
margin:0px;
left: 0px;
right: 0px;
position: fixed;
background: #4a77d4;
color: #979ADE;

```

```
        box-shadow: 0px 8px 4px grey;
        overflow: hidden;
        padding: 15px;
        font-size: 1.5vw;
        width: 100%;
        text-align: center;
    }
.login {
    position: absolute;
    top: 10%;
    left: 50%;
    margin: -25px 0 0 -150px;
    width: 400px;
    height: 400px;
}
.register {
    position: absolute;
    top: 10%;
    left: 50%;
    margin: -25px 0 0 -150px;
    width: 400px;
    height: 400px;
}
.note mt-3 text-center div {
    position: absolute;
    top: 60%;
    left: 50%;
    margin: -25px 0 0 -150px;
    width: 400px;
    height: 400px;
}
.header div { color: #fff; text-shadow: 0 0 10px rgba(0,0,0,0.3); letter-spacing: 1px; text-
```

```
align:center; float:left; padding-left:150px;}
ul {
  list-style-type: none;
  margin: 0;
  padding: 0;
  padding-right:150px;
  overflow: hidden;
}
li {
  float: right;
}
li a {
  display: block;
  color: white;
  text-align: center;
  padding: 0px 15px;
  text-decoration: none;
}
input {
  width: 100%;
  margin-bottom: 10px;
  background: rgba(255,255,255,255);
  border: none;
  outline: none;
  padding: 10px;
  font-size: 13px;
  color: black;
  text-shadow: black;
  border: 1px solid rgba(0,0,0,0.3);
  border-radius: 4px;
  box-shadow: inset 0 -5px 45px rgba(100,100,100,0.2), 0 1px 1px rgba(255,255,255,0.2);
  -webkit-transition: box-shadow .5s ease;
```

```
-moz-transition: box-shadow .5s ease;
-o-transition: box-shadow .5s ease;
-ms-transition: box-shadow .5s ease;
transition: box-shadow .5s ease;
}
input:focus { box-shadow: inset 0 -5px 45px rgba(100,100,100,0.4), 0 1px 1px
rgba(255,255,255,0.2); }
textarea {
    width: 100%;
    margin-bottom: 10px;
    background: rgba(255,255,255,255);
    border: none;
    outline: none;
    padding: 10px;
    font-size: 13px;
    color: black;
    text-shadow: black;
    border: 1px solid rgba(0,0,0,0.3);
    border-radius: 4px;
    box-shadow: inset 0 -5px 45px rgba(100,100,100,0.2), 0 1px 1px rgba(255,255,255,0.2);
    -webkit-transition: box-shadow .5s ease;
    -moz-transition: box-shadow .5s ease;
    -o-transition: box-shadow .5s ease;
    -ms-transition: box-shadow .5s ease;
    transition: box-shadow .5s ease;
}
textarea:focus { box-shadow: inset 0 -5px 45px rgba(100,100,100,0.4), 0 1px 1px
rgba(255,255,255,0.2); }
select {
    width: 100%;
    margin-bottom: 10px;
    background: rgba(255,255,255,255);
```

```

border: none;
outline: none;
padding: 10px;
font-size: 13px;
color: #000000;
text-shadow: 1px 1px 1px rgba(0,0,0,0.3);
border: 1px solid rgba(0,0,0,0.3);
border-radius: 4px;
box-shadow: inset 0 -5px 45px rgba(100,100,100,0.2), 0 1px 1px rgba(255,255,255,0.2);
-webkit-transition: box-shadow .5s ease;
-moz-transition: box-shadow .5s ease;
-o-transition: box-shadow .5s ease;
-ms-transition: box-shadow .5s ease;
transition: box-shadow .5s ease;
}

```

## 7.2 Feature 2

### 7.2.1 App.py

```

from flask import Flask, render_template, request, redirect, url_for, session
import ibm_db
import re
app = Flask(_name_)
app.secret_key = 'a'
conn = ibm_db.connect("DATABASE=bludb;HOSTNAME=3883e7e4-18f5-4afe-be8c-
fa31c41761d2.bs2io90l08kqb1od8lcg.databases.appdomain.cloud;PORT=31498;SECURITY
=SSL;SSLServerCertificate=DigiCertGlobalRootCA.crt;UID=sch83401;PWD=j7QZUHGA
tUGbPhns",",")

@app.route('/')
def homer():
    return render_template('home.html')

@app.route('/login',methods =['GET', 'POST'])
def login():

```

```

global userid
msg = "
if request.method == 'POST' :
    username = request.form['username']
    password = request.form['password']
    sql = "SELECT * FROM users WHERE username =? AND password=?"
    stmt = ibm_db.prepare(conn, sql)
    ibm_db.bind_param(stmt,1,username)
    ibm_db.bind_param(stmt,2,password)
    ibm_db.execute(stmt)
    account = ibm_db.fetch_assoc(stmt)
    print (account)
    if account:
        session['loggedin'] = True
        session['id'] = account['USERNAME']
        userid= account['USERNAME']
        session['username'] = account['USERNAME']
        msg = 'Logged in successfully !'
        msg = 'Logged in successfully !'
        return render_template('dashboard.html', msg = msg)
    else:
        msg = 'Incorrect username / password !'
return render_template('login.html', msg = msg)

```

```

@app.route('/register', methods =['GET', 'POST'])

```

```

def registet():

```

```

    msg = "
    if request.method == 'POST' :
        username = request.form['username']
        email = request.form['email']
        password = request.form['password']
        sql = "SELECT * FROM job WHERE username =?"
        stmt = ibm_db.prepare(conn, sql)
        ibm_db.bind_param(stmt,1,username)
        ibm_db.execute(stmt)
        account = ibm_db.fetch_assoc(stmt)
        print(account)

```

```

if account:
    msg = 'Account already exists !'
elif not re.match(r'^@]+@[^@]+\.[^@]+', email):
    msg = 'Invalid email address !'
elif not re.match(r'[A-Za-z0-9]+', username):
    msg = 'name must contain only characters and numbers !'
else:
    insert_sql = "INSERT INTO users VALUES (?, ?, ?)"
    prep_stmt = ibm_db.prepare(conn, insert_sql)
    ibm_db.bind_param(prepare_stmt, 1, username)
    ibm_db.bind_param(prepare_stmt, 2, email)
    ibm_db.bind_param(prepare_stmt, 3, password)
    ibm_db.execute(prepare_stmt)
    msg = 'You have successfully registered !'
elif request.method == 'POST':
    msg = 'Please fill out the form !'
return render_template('register.html', msg = msg)

```

```
@app.route('/dashboard')
```

```
def dash():
```

```
    return render_template('dashboard.html')
```

```
@app.route('/apply', methods=['GET', 'POST'])
```

```
def apply():
```

```
    msg = "
```

```
    if request.method == 'POST' :
```

```
        username = request.form['username']
```

```
        email = request.form['email']
```

```
        qualification= request.form['qualification']
```

```
        skills = request.form['skills']
```

```
        jobs = request.form['s']
```

```
        sql = "SELECT * FROM users WHERE username =?"
```

```
        stmt = ibm_db.prepare(conn, sql)
```

```
        ibm_db.bind_param(stmt,1,username)
```

```
        ibm_db.execute(stmt)
```

```
        account = ibm_db.fetch_assoc(stmt)
```

```
        print(account)
```

```

    if account:
        msg = 'there is only 1 job position! for you'
        return render_template('apply.html', msg = msg)
    insert_sql = "INSERT INTO job VALUES (?, ?, ?, ?, ?)"
    prep_stmt = ibm_db.prepare(conn, insert_sql)
    ibm_db.bind_param(prepare_stmt, 1, username)
    ibm_db.bind_param(prepare_stmt, 2, email)
    ibm_db.bind_param(prepare_stmt, 3, qualification)
    ibm_db.bind_param(prepare_stmt, 4, skills)
    ibm_db.bind_param(prepare_stmt, 5, jobs)
    ibm_db.execute(prepare_stmt)
    elif request.method == 'POST':
        msg = 'Please fill out the form !'
        return render_template('apply.html', msg = msg)

@app.route('/display')
def display():
    print(session["username"],session['id'])
    cursor = mysql.connection.cursor()
    cursor.execute('SELECT * FROM job WHERE userid = % s', (session['id'],))
    account = cursor.fetchone()
    print("accountdisplay",account)
    return render_template('display.html',account = account)

@app.route('/logout')
def logout():
    session.pop('loggedin', None)
    session.pop('id', None)
    session.pop('username', None)
    return render_template('home.html')

if __name__ == '__main__':
    app.run(host='0.0.0.0',port=8080)

```



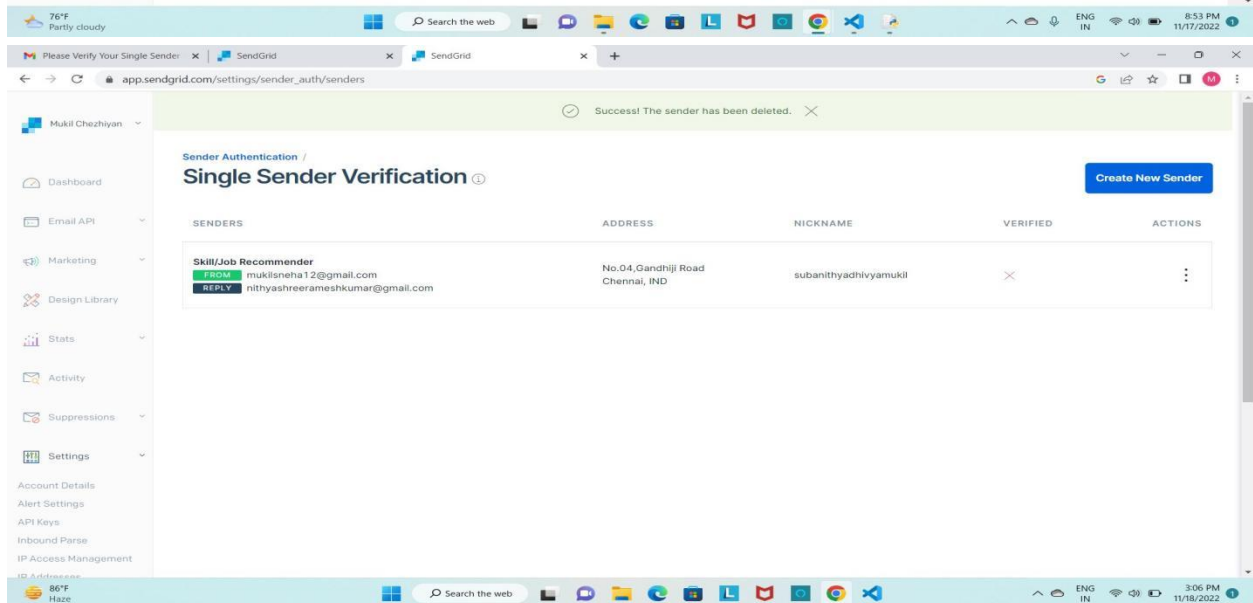
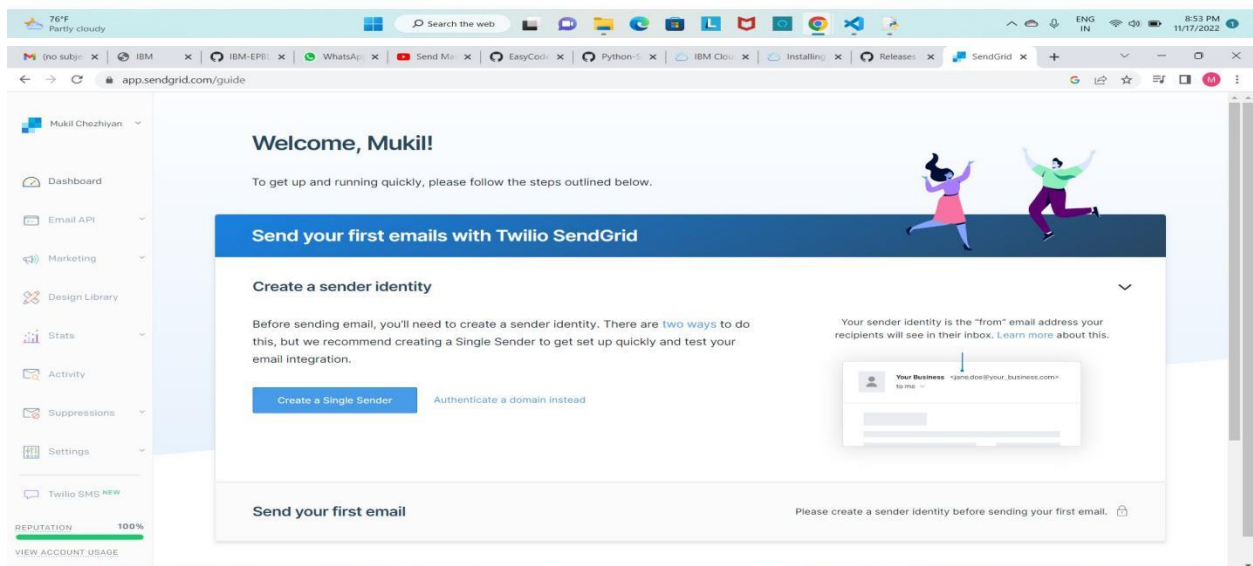
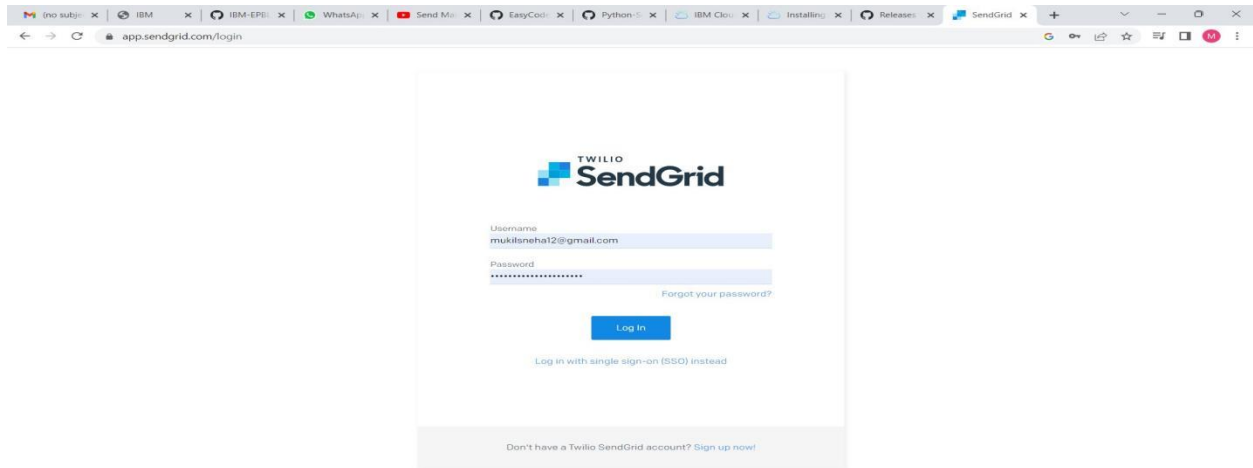
### 7.2.2 Intergrating sendgrid with python code

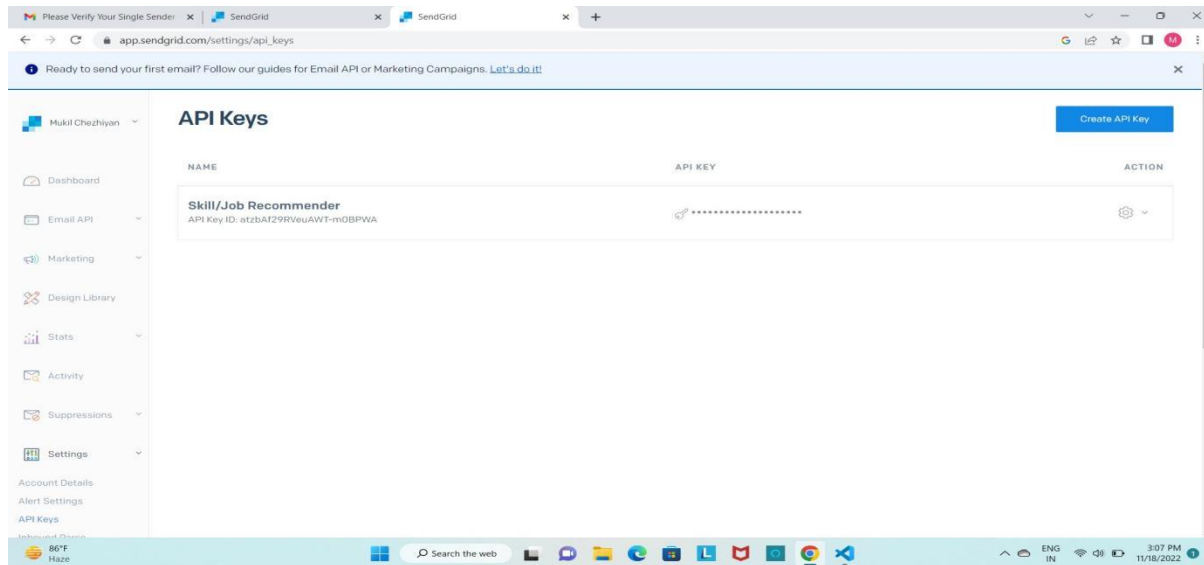
```
import smtplib
import sendgrid
import os
from sendgrid.helpers.mail import Mail, Email, To, Content
SUBJECT = "Interview Call"
s = smtplib.SMTP('smtp.gmail.com', 587)

def sendmail(TEXT,email):
    print("sorry we cant process your candidature")
    s = smtplib.SMTP('smtp.gmail.com', 587)
    s.starttls()
    s.login("mukilsneha12@gmail.com", "mukilsendgridaccount")
    message = 'Subject: {} \n\n {}'.format(SUBJECT, TEXT)
    s.sendmail("mukilsneha12@gmail.com", email, message)
    s.quit()

def sendgridmail(user,TEXT):
    sg = sendgrid.SendGridAPIClient('SG.atzbAf29RVeuAWT-
m0BPWA.7tTSm61FY47S9pXiFSt-h-feo6Oi_DhAFPIIdg92mn0')
    from_email = Email("mukilsneha12@gmail.com") # Change to your verified sender
    to_email = To(user) # Change to your recipient
    subject = "You have received a call for"
    content = Content("Check more for further details",TEXT)
    mail = Mail(from_email, to_email, subject, content)

    # Get a JSON-ready representation of the Mail object
    mail_json = mail.get()
    # Send an HTTP POST request to /mail/send
    response = sg.client.mail.send.post(request_body=mail_json)
    print(response.status_code)
    print(response.headers)
```

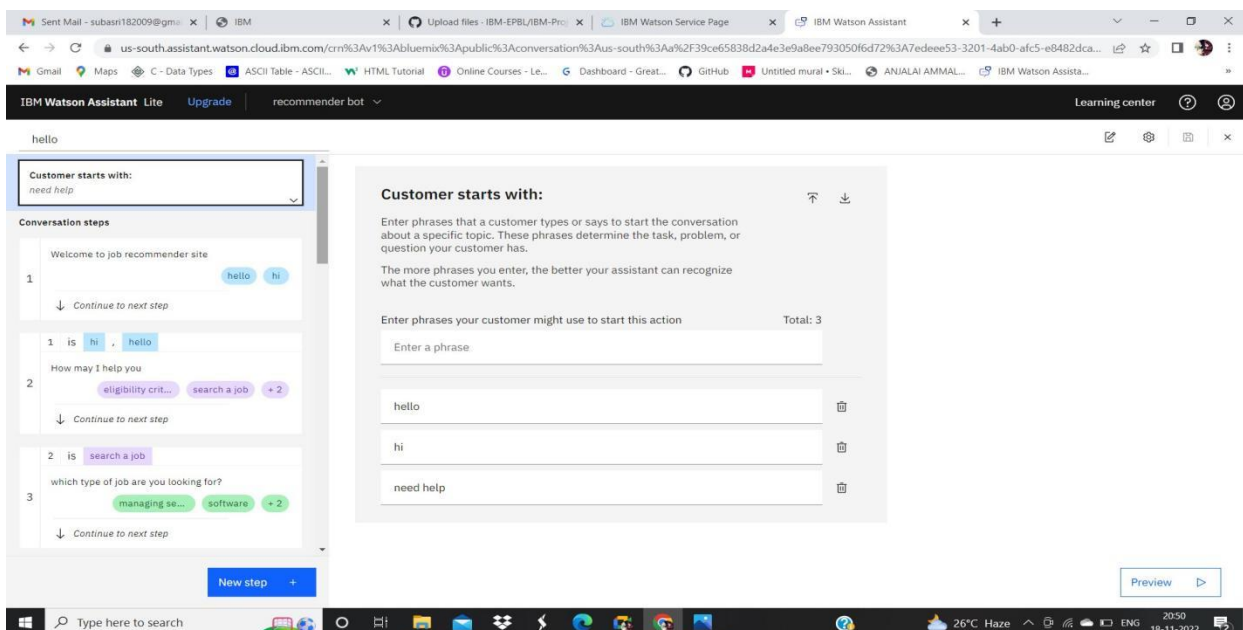




## 7.2.3 ChatBot

Chatboturl:

<https://web-chat.global.assistant.watson.appdomain.cloud/preview.html?backgroundImageURL=https%3A%2F%2Fus-south.assistant.watson.cloud.ibm.com%2Fpublic%2Fimages%2Fupx-7edeee53-3201-4ab0-afc5-e8482dcaab3f%3A%3Ab279a216-7162-411f-9210-ee1ce0532bd9&integrationID=b9577b7a-aa8a-4fb6-bc1e-d760ebbf295&region=us-south&serviceInstanceID=7edeee53-3201-4ab0-afc5-e8482dcaab3f>



IBM Watson Assistant interface showing a conversation flow and a list of phrases to start a conversation.

**hello**

8 is **no**  
sorry for the inconvenience we will correct it next time  
10  
↓ Continue to next step  
2 is **eligibility criteria for jobs**  
qualification details are described below the job details  
11  
↓ Continue to next step  
11 is **okay** - **thank you**  
12  
↓ Continue to next step  
2 is **check availability**  
what details are you looking for?

**Customer starts with:**

Enter phrases that a customer types or says to start the conversation about a specific topic. These phrases determine the task, problem, or question your customer has. The more phrases you enter, the better your assistant can recognize what the customer wants.

Enter phrases your customer might use to start this action Total: 3

Enter a phrase

hello  
hi  
need help

[New step](#) [Preview](#)

IBM Watson Assistant interface showing a preview of the assistant's response to a user input.

**Preview assistant**

[Copy link to share](#) [Change background](#) [Customize web chat](#)

**recommender assistant**

hello

How may I help you

[search a job](#) [check availability](#) [eligibility criteria for jobs](#) [feedback](#)

Type something...

Built with IBM Watson®

IBM Watson Assistant interface showing a preview of the assistant's response to a user input.

**Preview assistant**

[Copy link to share](#) [Change background](#) [Customize web chat](#)

**recommender assistant**

[search a job](#) [check availability](#) [eligibility criteria for jobs](#) [feedback](#)

[search a job](#)

which type of job are you looking for?

[hardware](#) [software](#) [managing sector](#) [others](#)

Type something...

Built with IBM Watson®

## 7.2.4 Deploy in kubernetes cluster

```
Command Prompt
api-resources Print the supported API resources on the server
api-versions Print the supported API versions on the server, in the form of "group/version"
config Modify kubeconfig files
plugin Provides utilities for interacting with plugins
version Print the client and server version information

Usage:
  kubectl [flags] [options]

Use "kubectl command --help" for more information about a given command.
Use "kubectl options" for a list of global command-line options (applies to all commands).

C:\Users\SUBASRI>ibmcloud plugin install kubernetes-service
Looking up 'kubernetes-service' from repository 'IBM Cloud'...
Plug-in 'container-service[kubernetes-service/ks] 1.0.459' found in repository 'IBM Cloud'
Plug-in 'container-service[kubernetes-service/ks] 1.0.459' was already installed. Do you want to re-install it or not? [y/N] > y
Attempting to download the binary file...
 26.86 MiB / 26.86 MiB [=====] 100.00% 21s
28168192 bytes downloaded
Installing binary...
Plug-in 'container-service 1.0.459' was successfully installed into C:\Users\SUBASRI\bluewin\plugins\container-service. Use 'ibmcloud plugin show container-service' to show its details.

C:\Users\SUBASRI>cd C:\job-portal-main
C:\job-portal-main>kubectl apply -f deployment.yaml
deployment.apps/job-portal-main configured

C:\job-portal-main>kubectl apply -f service.yaml
service/job-portal-main configured

C:\job-portal-main>kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
flask-node-deployment-7f5dc9d8cd-57vld 0/1     ErrImagePull  0           5h57m
job-portal-main-668fccc7c86-kj5m       1/1     Terminating  0           167m
job-portal-main-677b754f79-jc8g2       1/1     Running      0           26s

C:\job-portal-main>kubectl get service
NAME            TYPE        CLUSTER-IP    EXTERNAL-IP    PORT(S)    AGE
flask-node-deployment  ClusterIP   10.103.200.80  <none>         5000/TCP   5h57m
job-portal-main      ClusterIP   10.107.155.3   <localhost>    5000/TCP   5h15m
kubernetes          ClusterIP   10.96.0.1      <none>         443/TCP    10h

C:\job-portal-main>
```

## SKILL/JOB RECOMMENDER

[LOGIN](#) [REGISTER](#) [CONTACT US](#)

### Aboutus

#### Mission

This is an edTech organization with a vision to bridge the gap between academia & industry. Our outcome-based experiential learning programs on emerging technologies (Internet of Things, Machine Learning, Data Science, Artificial Intelligence, Robotics) are building skilled entry - level engineers, for the corporate world.

#### Vision

Our main objective is to bridge the existing gaps between prevailing industry standards and what the academics offer to the graduates while passing out of university. This offers suitable skill deployment and training to the young talent before on boarding their first job. Our skill development programs are designed considering the present expectations in the industry.

#### Objective

Well directed career guidance programs for educational institutions  
Appropriate certification courses that suit the industry need  
Train the trainers; expanded awareness about the current industry standards  
Liaise with corporates to offer niche internships  
Establish technology development centers in colleges  
Specialised incubation centers in collaboration with corporates.



## 7.3 Database Schema

The screenshot shows the IBM Db2 on Cloud web interface. The top navigation bar includes tabs for Load Data, Load History, Tables, Views, Indexes, Aliases, MQTs, Sequences, and Application objects. The main content area is divided into two panels: Schemas and Tables. The Schemas panel shows a table with columns Name, Type, and Tables. The Tables panel shows a table with columns Name, Schema, and Properties. The bottom status bar indicates the temperature is 76°F and the weather is Partly cloudy.

Name	Type	Tables
HKD04084	User	2

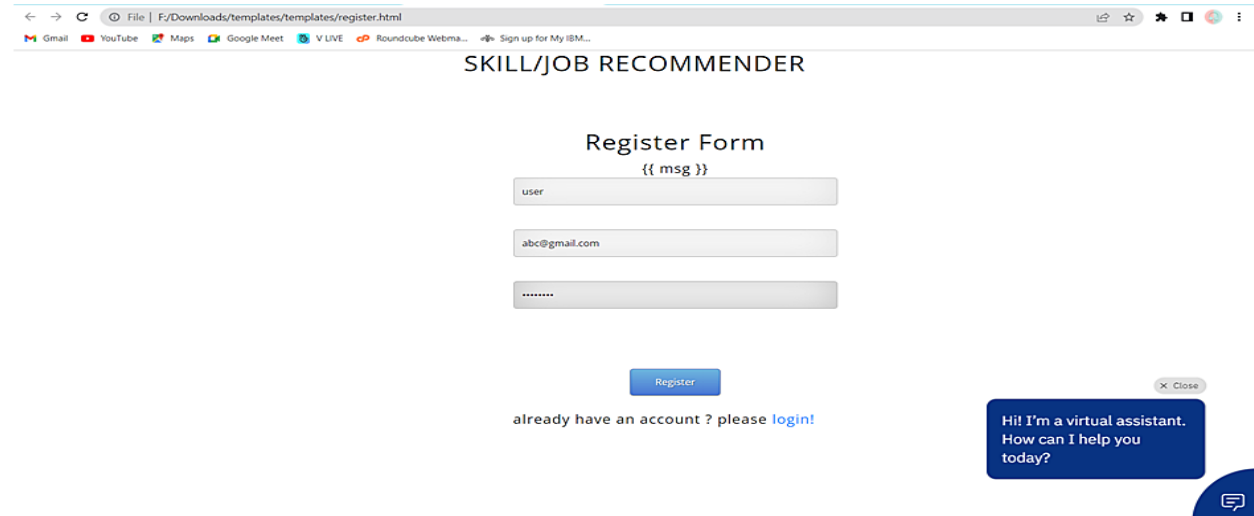
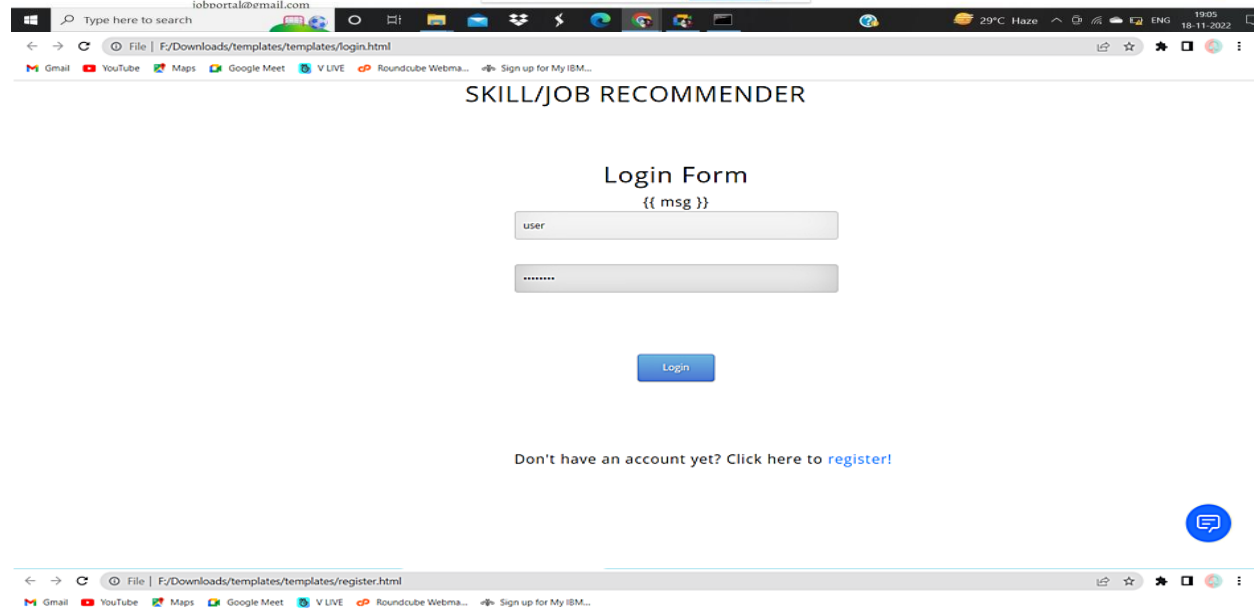
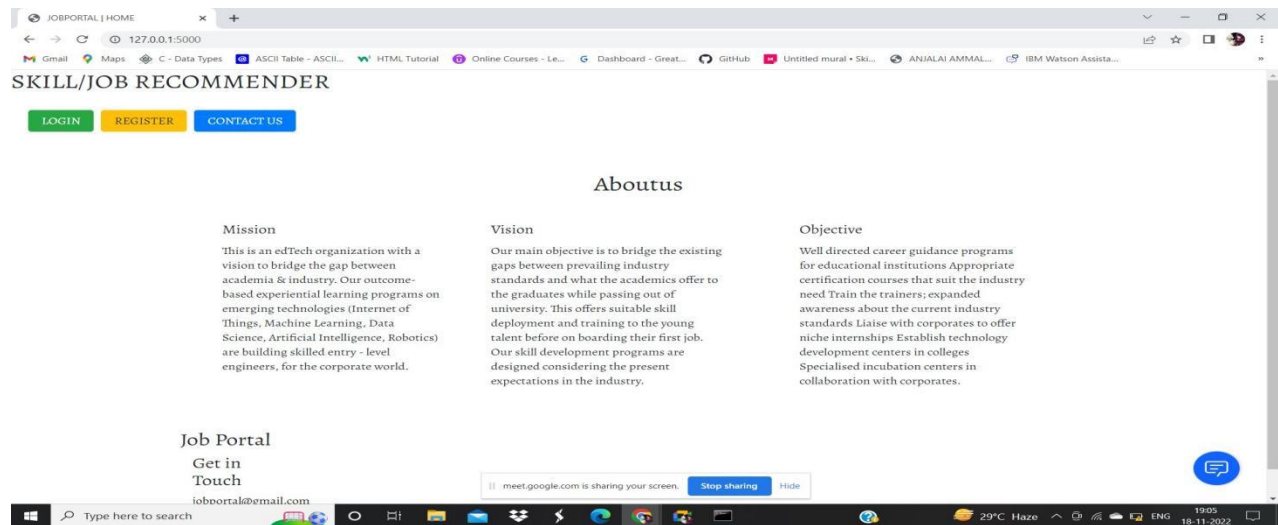
Name	Schema	Properties
JOB	HKD04084	...
USERS	HKD04084	...

## 8. TESTING

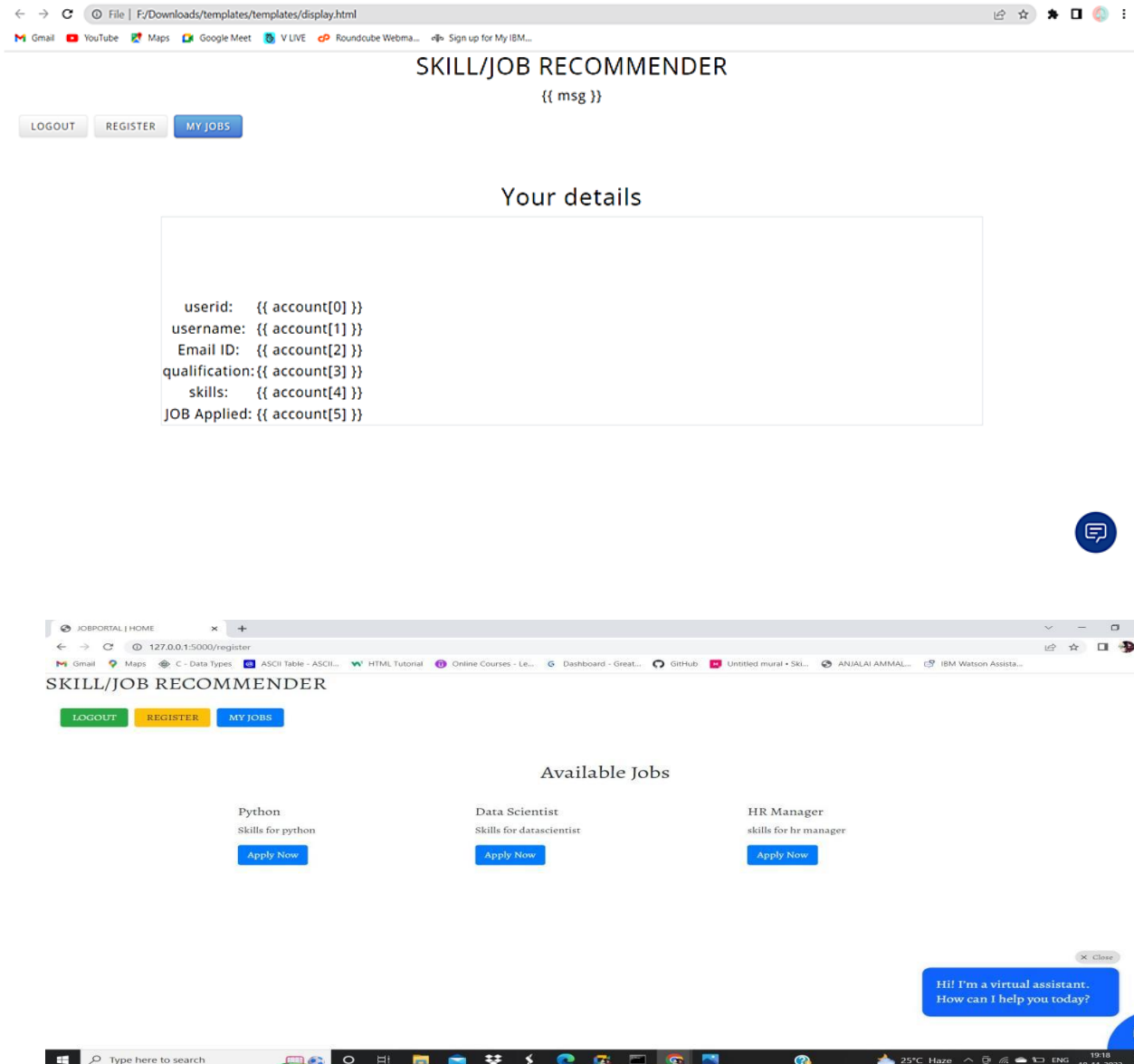
### 8.1 Test Cases

The screenshot shows a command prompt window running a Python application. The output indicates that the application is serving a Flask app 'app' and is running on http://127.0.0.1:5000. Below the command prompt, the IBM Db2 on Cloud interface is shown, displaying the schema for the HKD04084.USERS table. The table has columns USERNAME, EMAIL, and PASSWORD. The data is as follows:

USERNAME	EMAIL	PASSWORD
ashi	ashi@gmail.com	123456
dhivya	dhivya123@gmail.com	dhivya1234
mukil	mukil123@gmail.com	mukilmukil
subasri	subasri@gmail.com	subasri
user	user@gmail.com	useruser







## 8.2 User Acceptance Testing

### 1. Purpose of Document

The purpose of this document is to briefly explain the test coverage and open issues of the Skill/Job Recommender project at the time of the release to User Acceptance Testing (UAT).

### 2. Defect Analysis

This report shows the number of resolved or closed bugs at each severity level, and how they were resolved



Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	8	4	2	3	17
Duplicate	1	0	3	0	4
External	2	2	0	1	5
Fixed	10	2	4	20	36
Not Reproduced	0	0	1	0	1
Skipped	0	0	1	1	2
Won't Fix	0	5	2	1	8
Totals	21	13	13	26	73

### 3. Test Case Analysis

This report shows the number of test cases that have passed, failed, and untested

Section	Total Cases	Not Tested	Fail	Pass
Print Engine	7	0	0	7
Client Application	51	0	0	51
Security	2	0	0	2
Outsource Shipping	3	0	0	3
Exception Reporting	9	0	0	9
Final Report Output	4	0	0	4
Version Control	2	0	0	2

Component	Test Scenario	Pre-Requisite	Steps To Execute	Test Data	Expected Result	Actual Result	Status	Comments
Home Page	Verify : user is able to create the account	Laptop,IBM cloud account	1.Enter URL and click go 2.Click on Register button 3.Enter the user details and click login	<a href="https://drive.google.com/file/d/1Hb5zzeMmIXYhA035crljyb1-17aAAutwt/view?usp=sharing">https://drive.google.com/file/d/1Hb5zzeMmIXYhA035crljyb1-17aAAutwt/view?usp=sharing</a>	Login/Signup next window will display	Working as expected	Pass	steps are clear to followed
Home Page	Verify the UI elements and sign in	Laptop,IBM cloud account	1.Enter URL and click go 2.Click on login button 3.Verify with below UI elements: a.username text box b.password text box c.Login button d.Don't have an account yet?	<a href="https://drive.google.com/file/d/1K3Q1a1-uzhNftrHtUC6wHXKNa51bQ8SH/view?usp=sharing">https://drive.google.com/file/d/1K3Q1a1-uzhNftrHtUC6wHXKNa51bQ8SH/view?usp=sharing</a>	Application should show below UI elements: a.email text box b.password text box c.Login button with orange colour d.Don't have an account yet?Click here to register	Working as expected	Pass	Steps are clear to follow
Home page	Verify user is able to log into application with Valid credentials	Laptop,IBM cloud account	1.Enter URL and click go 2.Click on login button 3.Enter Valid username/email in username text box 4.Enter valid password in password text box 5.Click on login button	Username: user1 password: testinguser1	User should navigate to user account homepage	Working as expected	Pass	Steps are clear to follow

Component	Test Scenario	Pre-Requisite	Steps To Execute	Test Data	Expected Result	Actual Result	Status	Comments
Login page	Verify user is able to log into application with Invalid credentials	Laptop,IBM cloud account	1.Enter URL and click go 2.Click on login button 3.Enter Invalid username in username text box 4.Enter valid password in password text box 5.Click on login button	Username: user password: testinguser1	Application should not navigate to homepage	Working as expected	Pass	Steps are clear to follow
Login page	Verify user is able to log into application with Invalid credentials	Laptop,IBM cloud account	1.Enter URL and click go 2.Click on login button 3.Enter Valid username in username text box 4.Enter Invalid password in password text box 5.Click on login button	Username: user1 password: testing	Application should not navigate to homepage	Working as expected	Pass	Steps are clear to follow
Login page,register page	Verify user details can be stored in the cloud database	Laptop,IBM cloud account,IBM Db2	1.Enter URL and click go 2.log in to IBM cloud account 3.Enter into IBM Db2 4.check the details if it is updated by the user	<a href="https://drive.google.com/file/d/1XZYbv7oM9RlUAu58-GDQ8YLSGu204xkr/view?usp=sharing">https://drive.google.com/file/d/1XZYbv7oM9RlUAu58-GDQ8YLSGu204xkr/view?usp=sharing</a>	Application should navigate to homepage	Working as expected	Pass	Steps are clear to follow

## 9. RESULTS

### 9.1 Performance Metrics

<b>NFR-1</b>	<b>Usability</b>	This application can be used by the job seekers to login and search for the jobs
<b>NFR-2</b>	<b>Security</b>	This application is secure with the personalised Login credentials
<b>NFR-3</b>	<b>Reliability</b>	This application is trustworthy which provides good job offers and suggestions of skillset with real time notifications
<b>NFR-4</b>	<b>Performance</b>	The performance of the application is quicker responses to search of job seeker
<b>NFR-5</b>	<b>Availability</b>	This application provides job offers and skillset with user's preference
<b>NFR-6</b>	<b>Scalability</b>	The response time of the application is quite faster with user choice

			NFT - Risk Assessment						
S.No	Project Name	Scope/feature	Functional Changes	Hardware Changes	Software Changes	Impact of Downtime	Load/Volume Changes	Risk Score	Justification
1	Skill/job recommend	New	Moderate	No Changes	Low	None	>5 to 10%	GREEN	User can able to interact with application through Chatbot(Watson assistant)
2	Skill/job recommend	New	High	No Changes	Moderate	None	>10 to 30%	ORANGE	User can send queries through email via sendgrid
			NFT - Detailed Test Plan						
			S.No	Project Overview	NFT Test approach		Assumptions/Dependencies/Ri	Approvals/SignOff	
			1 skill/job recommender						
			End Of Test Report						
S.No	Project Overview	NFT Test approach	NFR - Met	Test Outcome	GO/NO-GO decision	Recommendations	Identified Defects (Detected/Closed/Open)	Approvals/SignOff	

## 10. ADVANTAGES & DISADVANTAGES

### 10.1 Advantages

- ◇ Adaptive system
- ◇ Use many attributes
- ◇ Use ontology to categorize jobs and as a knowledge base to define features
- ◇ Various information retrieval techniques are used
- ◇ Effective matching methods

### 10.2 Disadvantages

- ◇ Key word search method
- ◇ One way recommendation
- ◇ Knowledge acquisition and knowledge engineering problems
- ◇ No relational aspects are included

## 11. CONCLUSION

We have seen from our literature review and from the challenges that faced the holistic e-recruiting platforms, an increased need for enhancing the quality of candidates / job matching. The recommender system technologies accomplished significant success in a broad range of applications and potentially a powerful searching and recommending techniques.

## **12. FUTURE SCOPE**

In conclusion, Next level's approach is novel and offers several advantages over prior job/skill recommendation systems. This approach turns a simple skill/job recommender into a discovery tool for both relevant skill and jobs. It empowers the users to make informed decisions about their job related plans and to discover exactly what is expected from them to get the job of their dreams.

## **13. APPENDIX**

### **1. INTRODUCTION**

1.1 Project Overview

1.2 Purpose

### **2. LITERATURE SURVEY**

2.1 Existing problem

2.2 References

2.3 Problem Statement Definition

### **3. IDEATION & PROPOSED SOLUTION**

3.1 Empathy Map Canvas

3.2 Ideation & Brainstorming

3.3 Proposed Solution

3.4 Problem Solution fit

### **4. REQUIREMENT ANALYSIS**

4.1 Functional requirement

4.2 Non-Functional requirements

### **5. PROJECT DESIGN**

5.1 Data Flow Diagrams

5.2 Solution & Technical Architecture

5.3 User Stories

### **6. PROJECT PLANNING & SCHEDULING**

6.1 Sprint Planning & Estimation

6.2 Sprint Delivery Schedule

6.3 Reports from JIRA

## **7. CODING & SOLUTIONING (Explain the features added in the project along with code)**

7.1 Feature 1

7.1.1 Apply html page

7.1.2 Dashboard html page

7.1.3 Display html page

7.1.4 Home html page

7.1.5 Login html page

7.1.6 Register html page

7.1.7 Style sheet

7.1.8 Style sheet 1

7.2 Feature 2

7.2.1 App.py

7.2.2 Intergrating sendgrid with python code

7.2.3 ChatBot

7.2.4 Deploy in kubernetes cluster

7.3 Database Schema (if Applicable)

## **8. TESTING**

8.1 Test Cases

8.2 User Acceptance Testing

## **9. RESULTS**

9.1 Performance Metrics

## **10. ADVANTAGES & DISADVANTAGES**

10.1 Advantages

10.2 Disadvantages

## **11. CONCLUSION**

## **12. FUTURE SCOPE**

## **13. APPENDIX**

Source Code

GitHub & Project Demo Link

**Source Code**

## **apply.html**

```
<!DOCTYPE html>
<html lang="en">
<head>
<header>
<h2>SKILL/JOB RECOMMENDER</h2></header>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>JOBPORTAL | APPLY</title>
<!-- favicon -->
<!--<link rel="shortcut icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->
<!--<link rel="icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->
<link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-32x32.png">
<!-- bootstrap csscdn -->
<link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.css">
<!--css stylesheet -->
<link rel="stylesheet" href="static/css/style.css">
<link rel="stylesheet" href="style1.css">
<!-- font styles cdn -->
<link rel="preconnect" href="https://fonts.gstatic.com">
<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"
rel="stylesheet">
<link href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
```

```
<body>
<!-- bootstrap navbar -->
<div class="logo mt-3 text-center">
</div>
<!-- navbar ends -->
<!-- Login form -->
<div class="login text-center mt-5">
<h2>Apply Now</h2>
<div class="msg">{{ msg }}</div>
<form action="/apply" method="post" class="mt-3">
<!--<input type="text" placeholder="fullname" id="fullname"></br></br> -->
<input type="text" name="username" placeholder="Enter Your Username" id="username"
required></br></br>
<input type="email" name="email" placeholder="Enter Your email" id="email"
required></br></br>
<input type="text" name="qualification" placeholder="Enter Your Qualification"
id="qualification" required></br></br>
<input type="text" name="skills" placeholder="Enter Your skills" id="skills"
required></br></br>
<select name="s">
<option value="PYTHON"> Python</option>
<option value="ML"> ML</option>
<option value="AI"> AI</option>
</select>
</br></br>
<button type="submit" id="button" class="btn btn-primary"> Submit</button>
</form>
</div>
<div class="note mt-3 text-center">
<p> click here to go to dashboard <a href="dashboard">Dashboard! </a></p>
</div>
</body>
```

</html>

## dashboard.html

<!DOCTYPE html>

<html lang="en">

<head>

<header>

<h2>SKILL/JOB RECOMMENDER</h2></header>

<meta charset="UTF-8">

<meta http-equiv="X-UA-Compatible" content="IE=edge">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>JOBPORTAL | HOME</title>

<meta charset="UTF-8">

<!-- favicon -->

<!--<link rel="shortcut icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->

<!--<link rel="icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->

<link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-32x32.png">

<!-- bootstrap csscdn -->

<link rel="stylesheet"

href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"

integrity="sha384-

JcKb8q3iqJ6lgNV9Kgb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"

crossorigin="anonymous">

<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-

awesome/4.7.0/css/font-awesome.css">

<!--css stylesheet -->

<link rel="stylesheet" href="static/css/style.css">

<link rel="stylesheet" href="style1.css">

<!-- font styles cdn -->

<link rel="preconnect" href="https://fonts.gstatic.com">

<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"

rel="stylesheet">

<link href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"

```
rel="stylesheet">
</head>
<body>
<!-- bootstrap navbar -->
<nav class="navbar sticky-top navbar-expand-lg navbar-light">
<div class="container-fluid">
<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-
target="#navbarSupportedContent" aria-controls="navbarSupportedContent" aria-
expanded="false" aria-label="Toggle navigation">
<span class="navbar-toggler-icon"></span>
</button>
<div class="row donate-sponsor">
<a type="button" class="btn btn-success mr-1" id="donate" href="/logout">LOGOUT</a>
<a type="button" class="btn btn-warning mr-1" id="sponsor"
href="register">REGISTER</a>
<a type="button" class="btn btn-primary mr-1" id="sponsor" href="display">MY JOBS</a>
</div>
</div>
</nav>
<!-- navbar ends -->
<!-- what we focus on -->
<section class="our-focus">
<div class="container">
<h2 class="text-center mt-3">Available Jobs</h2>
<div class="row ml-3 mt-3">
<div class="col-lg-3 mr-5" id="focus-first">
<div class="card" style="width: 19rem;">
<!--<imgsrc="assets/img/home kids.jpg" class="card-img-top" alt="..." -->
<div class="card-body">
<h5 class="card-title">Python</h5>
<p class="card-text">Skills for python
</p>
```





```
<!DOCTYPE html>
<html lang="en">
<head>
<header>
<h2>SKILL/JOB RECOMMENDER</h2></header>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>JOBPORTAL | HOME</title>
<div class="msg">{ { msg } }</div>
<meta charset="UTF-8">
<!-- favicon -->
<!--<link rel="shortcut icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->
<!--<link rel="icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->
<link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-32x32.png">
<!-- bootstrap csscdn -->
<link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZONIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.css">
<!--css stylesheet -->
<link rel="stylesheet" href="static/css/style.css">
<link rel="stylesheet" href="style1.css">
<!-- font styles cdn -->
<link rel="preconnect" href="https://fonts.gstatic.com">
<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"
rel="stylesheet">
<link href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
```

```

</head>
<body>
<!-- bootstrap navbar -->
<nav class="navbar sticky-top navbar-expand-lg navbar-light">
<div class="container-fluid">
<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-
target="#navbarSupportedContent" aria-controls="navbarSupportedContent" aria-
expanded="false" aria-label="Toggle navigation">
<span class="navbar-toggler-icon"></span>
</button>
<div class="row donate-sponsor">
<a type="button" class="btn btn-success mr-1" id="donate" href="/logout">LOGOUT</a>
<a type="button" class="btn btn-warning mr-1" id="sponsor"
href="register">REGISTER</a>
<a type="button" class="btn btn-primary mr-1" id="sponsor" href="display">MY JOBS</a>
</div>
</div>
</nav>
<!-- navbar ends -->
<!-- what we focus on -->
<section class="our-focus">
<div class="container">
<h2 class="text-center mt-3">Your details</h2>
<div class="border">
<table class="wordddark"></br></br></br></br>
<tr>
<td>userid:</td>
<td>{{ account[0] }}</td>
</tr>
<tr>
<td>username:</td>
<td>{{ account[1] }}</td>

```

```

</tr>
<tr>
<td>Email ID:</td>
<td>{{ account[2] }}</td>
</tr>
<tr>
<td>qualification:</td>
<td>{{ account[3] }}</td>
</tr>
<tr>
<td>skills:</td>
<td>{{ account[4] }}</td>
</tr>
<tr>
<td>JOB Applied:</td>
<td>{{ account[5] }}</td>
</tr>
</table>
</section>
</body>
</html>

```

## home.html

```

<!DOCTYPE html>
<html lang="en">
<head>
<header>
<h2>SKILL/JOB RECOMMENDER</h2></header>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>JOBPORTAL | HOME</title>
<meta charset="UTF-8">

```

```
<!-- favicon -->
<!--<link rel="shortcut icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->
<!--<link rel="icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->
<link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-32x32.png">
<!-- bootstrap csscdn -->
<link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.css">
<!--css stylesheet -->
<link rel="stylesheet" href="static/css/style.css">
<link rel="stylesheet" href="style1.css">
<!-- font styles cdn -->
<link rel="preconnect" href="https://fonts.gstatic.com">
<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"
rel="stylesheet">
<link href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
<body>
<!-- bootstrap navbar -->
<nav class="navbar sticky-top navbar-expand-lg navbar-dark">
<div class="container-fluid">
<div class="row donate-sponsor">
<a type="button" class="btn btn-success mr-1" id="donate" href="login">LOGIN</a>
<a type="button" class="btn btn-warning mr-1" id="sponsor"
href="register">REGISTER</a>
<a type="button" class="btn btn-primary mr-1" id="sponsor"
href="contact.html">CONTACT US</a>
```

```
</div>
</div>
</nav>
<!-- navbar ends -->
<!-- what we focus on -->
<section class="our-focus">
<div class="container">
<h2 class="text-center mt-3">Aboutus</h2>
<div class="row ml-3 mt-3">
<div class="col-lg-3 mr-5" id="focus-first">
<div class="card" style="width: 19rem;">
<!--<imgsrc="assets/img/home kids.jpg" class="card-img-top" alt="..."> -->
<div class="card-body">
<h5 class="card-title">Mission</h5>
<p class="card-text">This is an edTech organization with a vision to bridge the gap between
academia & industry. Our outcome-based experiential learning programs on emerging
technologies (Internet of Things, Machine Learning, Data Science, Artificial Intelligence,
Robotics) are building skilled entry - level engineers, for the corporate world.
</p>
</div>
</div>
</div>
<div class="col-lg-3 mr-5" id="focus-second">
<div class="card" style="width: 20rem;">
<!--<imgsrc="assets/img/friendship day.JPG" class="card-img-top" alt="..."> -->
<div class="card-body">
<h5 class="card-title">Vision</h5>
<p class="card-text">Our main objective is to bridge the existing gaps between prevailing
industry standards and what the academics offer to the graduates while passing out of
university. This offers suitable skill deployment and training to the young talent before on
boarding their first job.
```

Our skill development programs are designed considering the present expectations in the industry. </p>

</div>

</div>

</div>

<div class="col-lg-3 ml-5" id="focus-third">

<div class="card" style="width: 20rem;">

<!--<imgsrc="assets/img/health camp.jpg" class="card-img-top" alt="..."> -->

<div class="card-body">

<h5 class="card-title">Objective</h5>

<p class="card-text">Well directed career guidance programs for educational institutions

Appropriate certification courses that suit the industry need

Train the trainers; expanded awareness about the current industry standards

Liaise with corporates to offer niche internships

Establish technology development centers in colleges

Specialised incubation centers in collaboration with corporates.</p>

</div>

</div>

</div>

</div>

</div>

</section>

<!-- focus section ends -->

<!-- footer starts -->

<!-- Site footer -->

<footer class="site-footer">

<div class="container mt-5">

<div class="row">

<div class="col-sm-12 col-md-6">

<h3>JobPortal</h3>

<div class="col-xs-6 col-md-3">

<h4>Get in Touch</h4>

```
<ul class="footer-links">
<li><a href="mailto:test@gmail.com">jobportal@gmail.com</a></li>
<li><a href="">+91 8977787657</a></li>
</ul>
</div>
</div>
<hr>
</div>
</div>
</footer>
</body>
</html>
```

### login.html

```
<!DOCTYPE html>
<html lang="en">
<head>
<header>
<h2>SKILL/JOB RECOMMENDER</h2></header>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>JOBPORTAL | LOGIN</title>
<link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-32x32.png">
<link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
<link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/font-
awesome/4.7.0/css/font-awesome.css">
<link rel="stylesheet" href="static/css/style.css">
<link rel="stylesheet" href="style1.css">
```



```

<link rel="preconnect" href="https://fonts.gstatic.com">
<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"
rel="stylesheet">
<link href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
<body>
<div class="login text-center mt-5">
<h2> Login Form </h2>
<form action="/login" method="post">
<div class="msg">{{ msg }}</div>
<input type="text" name="username" placeholder="Enter Your Username" id="username"
required></br></br>
<input type="password" name="password" placeholder="Enter Your Password"
id="password" required></br></br>
</br></br>
<button type="submit" id="button" class="btn btn-primary"> Login </button>
</form>
</div>
<div class="another"><!--Register form -->
<p> Don't have an account yet? Click here to <a href="register">register! </a></p>
</div>
</body>
</html>

```

### register.html

```

<!DOCTYPE html>
<html lang="en">
<head>
<header>
<h2>SKILL/JOB RECOMMENDER</h2></header>
<meta charset="UTF-8">

```

```
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>JOBPORTAL | LOGIN</title>
<!-- favicon -->
<!--<link rel="shortcut icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->
<!--<link rel="icon" href="/assets/img/favicon.ico" type="image/x-icon"> -->
<link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-32x32.png">
<!-- bootstrap csscdn -->
<link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.css">
<!--css stylesheet -->
<link rel="stylesheet" href="static/css/style.css">
<link rel="stylesheet" href="style1.css">
<!-- font styles cdn -->
<link rel="preconnect" href="https://fonts.gstatic.com">
<link href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"
rel="stylesheet">
<link href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>
<body>
<!-- bootstrap navbar -->
<!-- navbar ends -->
<!-- Login form -->
<div class="login text-center mt-5">
<h2> Register Form </h2>
<form action="/register" method="post">
```

```

<div class="msg">{{ msg }}</div>
<!--<input type="text" placeholder="fullname" id="fullname"></br></br> -->
<input type="text" name="username" placeholder="Enter Your Username" id="username"
required></br></br>
<input type="email" name="email" placeholder="Enter Your Email ID" id="email"
required></br></br>
<input type="password" name="password" placeholder="Enter Your Password"
id="password" required></br></br>
</br>
</br>
<button type="submit" id="button" class="btn btn-primary"> Register </button>
</form>
</div>
<div class="another"><!--Register form -->
<p> already have an account ? please <a href="/login">login! </a></p>
</div>
</body>
</html>

```

### style.css

```

/* // Small devices (landscape phones, 576px and up) */
@media (min-width: 576px) {
}

/* // Medium devices (tablets, 768px and up) */
@media (min-width: 768px) {
}

/* // Large devices (desktops, 992px and up) */
@media (min-width: 992px) {
.header{
padding-top:15px;
padding-bottom:15px;
background-color: #979ADE;

```

```
    }
.navbar-brand{
    padding-left: 5px;
}
.navbar-nav {
    margin-left: 30px;
}
.nav-item {
    padding-left: 5px;
}
.donate-sponsor{
    margin-right: 10px;
}
#donate, #sponsor{
    margin: 5px;
    padding: 5px 15px 5px 15px;
}
.homepage-header{
    background: url('../img/group.JPG');
    background-size: cover;
    background-position: center top;
    padding: 0;
    position: relative;
    width: 100%;
    overflow: hidden;
    display: -webkit-flex;
    display: -ms-flexbox;
    display: flex;
    height: 85vh;
}
/* our focus */
.our-focus .container {
```

```
        margin-top:3rem !important;
    }
.our-focus .row{
    margin-top:1.5rem !important;
}
.our-focus .card {
    border: none !important;
}
.our-focus #focus-first {
    margin-right:80px;
}
.our-focus #focus-second {
    margin-right:90px;
}
/* footer */
.row-initiative {
    margin-top:10px
}
.site-footer {
    margin-top:30px;
    line-height:24px;
}
.another{
    position: absolute;
    top: 80%;
    left: 50%;
    margin: -25px 0 0 -150px;
}
.footer-links {
    padding-left:0;
    list-style: none;
}
```

```

.footer-links li {
    display: block;
}
.footer-links.inline li {
    display: inline-block;
}
.footer-links li a{
color: black;
}
.footer-logo img{
    width: 100px;
}
input {
    padding:10px 20px;
}
}
/* // X-Large devices (large desktops, 1200px and up) */
@media (min-width: 1200px) {
.navbar-brand{
    padding-left: 10px;
}
}
/* // XX-Large devices (larger desktops, 1400px and up) */
@media (min-width: 1400px) {
.navbar-brand{
    padding-left: 15px;
}
}
}

```

### **style1.css**

```

@import url(https://fonts.googleapis.com/css?family=Open+Sans);
.btn {

```

```
display: inline-block;
*display: inline;
*zoom: 1;
padding: 10px 30px 10px;
margin-bottom: 0;
font-size: 13px;
line-height: 18px;
color: #333333;
text-align: center;
text-shadow: 0 1px 1px rgba(255, 255, 255, 0.75);
vertical-align: middle;
background-color: #f5f5f5;
background-image: -moz-linear-gradient(top, #ffffff, #e6e6e6);
background-image: -ms-linear-gradient(top, #ffffff, #e6e6e6);
background-image: -webkit-gradient(linear, 0 0, 0 100%, from(#ffffff), to(#e6e6e6));
background-image: -webkit-linear-gradient(top, #ffffff, #e6e6e6);
background-image: -o-linear-gradient(top, #ffffff, #e6e6e6);
background-image: linear-gradient(top, #ffffff, #e6e6e6);
background-repeat: repeat-x;
filter: progid:dximagetransform.microsoft.gradient(startColorstr=#ffffff,
endColorstr=#e6e6e6, GradientType=0);
border-color: #e6e6e6 #e6e6e6 #e6e6e6;
border-color: rgba(0, 0, 0, 0.1) rgba(0, 0, 0, 0.1) rgba(0, 0, 0, 0.25);
border: 1px solid #e6e6e6;
-webkit-border-radius: 4px;
-moz-border-radius: 4px;
border-radius: 4px;
-webkit-box-shadow: inset 0 1px 0 rgba(255, 255, 255, 0.2), 0 1px 2px rgba(0, 0, 0, 0.05);
-moz-box-shadow: inset 0 1px 0 rgba(255, 255, 255, 0.2), 0 1px 2px rgba(0, 0, 0, 0.05);
box-shadow: inset 0 1px 0 rgba(255, 255, 255, 0.2), 0 1px 2px rgba(0, 0, 0, 0.05);
cursor: pointer; *margin-left: .3em;
}
```

```
.btn:hover, .btn:active, .btn.active, .btn.disabled, .btn[disabled] { background-color: #e6e6e6;
}

.btn-large {
    padding: 9px 14px;
    font-size: 15px;
    line-height: normal;
    -webkit-border-radius: 5px;
    -moz-border-radius: 5px;
    border-radius: 5px;
}

.btn:hover {
color: #333333;
    text-decoration: none;
    background-color: #e6e6e6;
    background-position: 0 -15px;
    -webkit-transition: background-position 0.1s linear;
    -moz-transition: background-position 0.1s linear;
    -ms-transition: background-position 0.1s linear;
    -o-transition: background-position 0.1s linear;
    transition: background-position 0.1s linear;
}

.btn-primary, .btn-primary:hover {
    text-shadow: 0 -1px 0 rgba(0, 0, 0, 0.25);
color: #ffffff;
}

.btn-primary.active { color: rgba(255, 255, 255, 0.75);
.btn-primary {
    background-color: #4a77d4;
    background-image: -moz-linear-gradient(top, #6eb6de, #4a77d4);
    background-image: -ms-linear-gradient(top, #6eb6de, #4a77d4);
    background-image: -webkit-gradient(linear, 0 0, 0 100%, from(#6eb6de), to(#4a77d4));
    background-image: -webkit-linear-gradient(top, #6eb6de, #4a77d4);
```



```

background-image: -o-linear-gradient(top, #6eb6de, #4a77d4);
background-image: linear-gradient(top, #6eb6de, #4a77d4);
background-repeat: repeat-x;
filter: progid:dximagetransform.microsoft.gradient(startColorstr=#6eb6de,
endColorstr=#4a77d4, GradientType=0);
border: 1px solid #3762bc;
text-shadow: 1px 1px 1px rgba(0,0,0,0.4);
box-shadow: inset 0 1px 0 rgba(255, 255, 255, 0.2), 0 1px 2px rgba(0, 0, 0, 0.5);
}
.btn-primary:hover, .btn-primary:active, .btn-primary.active, .btn-primary.disabled, .btn-
primary[disabled] {
    filter: none;
    background-color: #4a77d4;
}
.btn-block { width: 100%; display: block; }
* { -webkit-box-sizing: border-box; -moz-box-sizing: border-box; -ms-box-sizing: border-box;
-o-box-sizing: border-box; box-sizing: border-box; }
html { width: 100%; height: 100%; overflow: hidden; }
body {
    width: 100%;
    height: 100%;
    font-family: 'Open Sans', sans-serif;
    background: #ffffff;
color: #000000;
    font-size: 18px;
text-align: center;
    letter-spacing: 1.2px;
}
.header {
    top: 0;
    margin: 0px;
    left: 0px;

```

```
        right: 0px;
        position: fixed;
        background: #4a77d4;
color: #979ADE;
        box-shadow: 0px 8px 4px grey;
        overflow: hidden;
        padding: 15px;
        font-size: 1.5vw;
        width: 100%;
        text-align: center;
    }
```

```
.login {
    position: absolute;
    top: 10%;
    left: 50%;
    margin: -25px 0 0 -150px;
    width:400px;
    height:400px;
}
```

```
.register {
    position: absolute;
    top: 10%;
    left: 50%;
    margin: -25px 0 0 -150px;
    width:400px;
    height:400px;
}
```

```
.note mt-3 text-center div {
    position: absolute;
    top: 60%;
    left: 50%;
    margin: -25px 0 0 -150px;
```

```
width:400px;
height:400px;
}
.header div { color: #fff; text-shadow: 0 0 10px rgba(0,0,0,0.3); letter-spacing:1px; text-align:center; float:left; padding-left:150px;}
ul {
list-style-type: none;
margin: 0;
padding: 0;
padding-right:150px;
overflow: hidden;
}
li {
float: right;
}
li a {
display: block;
color: white;
text-align: center;
padding: 0px 15px;
text-decoration: none;
}
input {
width: 100%;
margin-bottom: 10px;
background: rgba(255,255,255,255);
border: none;
outline: none;
padding: 10px;
font-size: 13px;
color: black;
text-shadow: black;
```

```
border: 1px solid rgba(0,0,0,0.3);
border-radius: 4px;
box-shadow: inset 0 -5px 45px rgba(100,100,100,0.2), 0 1px 1px rgba(255,255,255,0.2);
-webkit-transition: box-shadow .5s ease;
-moz-transition: box-shadow .5s ease;
-o-transition: box-shadow .5s ease;
-ms-transition: box-shadow .5s ease;
transition: box-shadow .5s ease;
}
input:focus { box-shadow: inset 0 -5px 45px rgba(100,100,100,0.4), 0 1px
1px rgba(255,255,255,0.2); }
textarea {
    width: 100%;
    margin-bottom: 10px;
    background: rgba(255,255,255,255);
    border: none;
    outline: none;
    padding: 10px;
    font-size: 13px;
color: black;
    text-shadow: black;
    border: 1px solid rgba(0,0,0,0.3);
    border-radius: 4px;
    box-shadow: inset 0 -5px 45px rgba(100,100,100,0.2), 0 1px 1px rgba(255,255,255,0.2);
    -webkit-transition: box-shadow .5s ease;
    -moz-transition: box-shadow .5s ease;
    -o-transition: box-shadow .5s ease;
    -ms-transition: box-shadow .5s ease;
    transition: box-shadow .5s ease;
}
textarea:focus { box-shadow: inset 0 -5px 45px rgba(100,100,100,0.4), 0 1px
1px rgba(255,255,255,0.2); }
```

```
select {
    width: 100%;
    margin-bottom: 10px;
    background: rgba(255,255,255,255);
    border: none;
    outline: none;
    padding: 10px;
    font-size: 13px;
    color: #000000;
    text-shadow: 1px 1px 1px rgba(0,0,0,0.3);
    border: 1px solid rgba(0,0,0,0.3);
    border-radius: 4px;
    box-shadow: inset 0 -5px 45px rgba(100,100,100,0.2), 0 1px 1px rgba(255,255,255,0.2);
    -webkit-transition: box-shadow .5s ease;
    -moz-transition: box-shadow .5s ease;
    -o-transition: box-shadow .5s ease;
    -ms-transition: box-shadow .5s ease;
    transition: box-shadow .5s ease;
}
```

```
@import url(https://fonts.googleapis.com/css?family=Open+Sans);
```

```
.btn {
    display: inline-block;
    *display: inline;
    *zoom: 1;
    padding: 10px 30px 10px;
    margin-bottom: 0;
    font-size: 13px;
    line-height: 18px;
    color: #333333;
    text-align: center;
    text-shadow: 0 1px 1px rgba(255, 255, 255, 0.75);
    vertical-align: middle;
```

```

background-color: #f5f5f5;
background-image: -moz-linear-gradient(top, #ffffff, #e6e6e6);
background-image: -ms-linear-gradient(top, #ffffff, #e6e6e6);
background-image: -webkit-gradient(linear, 0 0, 0 100%, from(#ffffff), to(#e6e6e6));
background-image: -webkit-linear-gradient(top, #ffffff, #e6e6e6);
background-image: -o-linear-gradient(top, #ffffff, #e6e6e6);
background-image: linear-gradient(top, #ffffff, #e6e6e6);
background-repeat: repeat-x;
filter: progid:dximagetransform.microsoft.gradient(startColorstr=#ffffff,
endColorstr=#e6e6e6, GradientType=0);
border-color: #e6e6e6 #e6e6e6 #e6e6e6;
border-color: rgba(0, 0, 0, 0.1) rgba(0, 0, 0, 0.1) rgba(0, 0, 0, 0.25);
border: 1px solid #e6e6e6;
-webkit-border-radius: 4px;
-moz-border-radius: 4px;
border-radius: 4px;
-webkit-box-shadow: inset 0 1px 0 rgba(255, 255, 255, 0.2), 0 1px 2px rgba(0, 0, 0, 0.05);
-moz-box-shadow: inset 0 1px 0 rgba(255, 255, 255, 0.2), 0 1px 2px rgba(0, 0, 0, 0.05);
box-shadow: inset 0 1px 0 rgba(255, 255, 255, 0.2), 0 1px 2px rgba(0, 0, 0, 0.05);
cursor: pointer; *margin-left: .3em;
}
.btn:hover, .btn:active, .btn.active, .btn.disabled, .btn[disabled] { background-color: #e6e6e6;
}
.btn-large {
padding: 9px 14px;
font-size: 15px;
line-height: normal;
-webkit-border-radius: 5px;
-moz-border-radius: 5px;
border-radius: 5px;
}
.btn:hover {

```

```

color: #333333;
text-decoration: none;
background-color: #e6e6e6;
background-position: 0 -15px;
-webkit-transition: background-position 0.1s linear;
-moz-transition: background-position 0.1s linear;
-ms-transition: background-position 0.1s linear;
-o-transition: background-position 0.1s linear;
transition: background-position 0.1s linear;
}
.btn-primary, .btn-primary:hover {
text-shadow: 0 -1px 0 rgba(0, 0, 0, 0.25);
color: #ffffff;
}
.btn-primary.active { color: rgba(255, 255, 255, 0.75); }
.btn-primary {
background-color: #4a77d4;
background-image: -moz-linear-gradient(top, #6eb6de, #4a77d4);
background-image: -ms-linear-gradient(top, #6eb6de, #4a77d4);
background-image: -webkit-gradient(linear, 0 0, 0 100%, from(#6eb6de), to(#4a77d4));
background-image: -webkit-linear-gradient(top, #6eb6de, #4a77d4);
background-image: -o-linear-gradient(top, #6eb6de, #4a77d4);
background-image: linear-gradient(top, #6eb6de, #4a77d4);
background-repeat: repeat-x;
filter: progid:dximagetransform.microsoft.gradient(startColorstr=#6eb6de,
endColorstr=#4a77d4, GradientType=0);
border: 1px solid #3762bc;
text-shadow: 1px 1px 1px rgba(0,0,0,0.4);
box-shadow: inset 0 1px 0 rgba(255, 255, 255, 0.2), 0 1px 2px rgba(0, 0, 0, 0.5);
}
.btn-primary:hover, .btn-primary:active, .btn-primary.active, .btn-primary.disabled, .btn-
primary[disabled] {

```

```
    filter: none;
    background-color: #4a77d4;
  }
.btn-block { width: 100%; display: block; }
* { -webkit-box-sizing: border-box; -moz-box-sizing: border-box; -ms-box-sizing: border-box;
-o-box-sizing: border-box; box-sizing: border-box; }
html { width: 100%; height: 100%; overflow: hidden; }
body {
  width: 100%;
  height: 100%;
  font-family: 'Open Sans', sans-serif;
  background: #ffffff;
  color: #000000;
  font-size: 18px;
  text-align: center;
  letter-spacing: 1.2px;
}
.header {
  top: 0;
  margin: 0px;
  left: 0px;
  right: 0px;
  position: fixed;
  background: #4a77d4;
  color: #979ADE;
  box-shadow: 0px 8px 4px grey;
  overflow: hidden;
  padding: 15px;
  font-size: 1.5vw;
  width: 100%;
  text-align: center;
}
```



```
.login {
    position: absolute;
    top: 10%;
    left: 50%;
    margin: -25px 0 0 -150px;
    width:400px;
    height:400px;
}

.register {
    position: absolute;
    top: 10%;
    left: 50%;
    margin: -25px 0 0 -150px;
    width:400px;
    height:400px;
}

.note mt-3 text-center div {
    position: absolute;
    top: 60%;
    left: 50%;
    margin: -25px 0 0 -150px;
    width:400px;
    height:400px;
}

.header div { color: #fff; text-shadow: 0 0 10px rgba(0,0,0,0.3); letter-spacing:1px; text-align:center; float:left; padding-left:150px;}

ul {
    list-style-type: none;
    margin: 0;
    padding: 0;
    padding-right:150px;
    overflow: hidden;
```

```

}
li {
    float: right;
}
li a {
    display: block;
color: white;
    text-align: center;
    padding: 0px 15px;
    text-decoration: none;
}
input {
    width: 100%;
    margin-bottom: 10px;
    background: rgba(255,255,255,255);
    border: none;
    outline: none;
    padding: 10px;
    font-size: 13px;
color: black;
    text-shadow: black;
    border: 1px solid rgba(0,0,0,0.3);
    border-radius: 4px;
    box-shadow: inset 0 -5px 45px rgba(100,100,100,0.2), 0 1px 1px rgba(255,255,255,0.2);
    -webkit-transition: box-shadow .5s ease;
    -moz-transition: box-shadow .5s ease;
    -o-transition: box-shadow .5s ease;
    -ms-transition: box-shadow .5s ease;
    transition: box-shadow .5s ease;
}
input:focus { box-shadow: inset 0 -5px 45px rgba(100,100,100,0.4), 0 1px
1px rgba(255,255,255,0.2); }

```

```
textarea {
  width: 100%;
  margin-bottom: 10px;
  background: rgba(255,255,255,255);
  border: none;
  outline: none;
  padding: 10px;
  font-size: 13px;
  color: black;
  text-shadow: black;
  border: 1px solid rgba(0,0,0,0.3);
  border-radius: 4px;
  box-shadow: inset 0 -5px 45px rgba(100,100,100,0.2), 0 1px 1px rgba(255,255,255,0.2);
  -webkit-transition: box-shadow .5s ease;
  -moz-transition: box-shadow .5s ease;
  -o-transition: box-shadow .5s ease;
  -ms-transition: box-shadow .5s ease;
  transition: box-shadow .5s ease;
}
textarea:focus { box-shadow: inset 0 -5px 45px rgba(100,100,100,0.4), 0 1px
1px rgba(255,255,255,0.2); }
select {
  width: 100%;
  margin-bottom: 10px;
  background: rgba(255,255,255,255);
  border: none;
  outline: none;
  padding: 10px;
  font-size: 13px;
  color: #000000;
  text-shadow: 1px 1px 1px rgba(0,0,0,0.3);
  border: 1px solid rgba(0,0,0,0.3);
```

```

border-radius: 4px;
box-shadow: inset 0 -5px 45px rgba(100,100,100,0.2), 0 1px 1px rgba(255,255,255,0.2);
-webkit-transition: box-shadow .5s ease;
-moz-transition: box-shadow .5s ease;
-o-transition: box-shadow .5s ease;
-ms-transition: box-shadow .5s ease;
transition: box-shadow .5s ease;
}

```

### **app.py**

```

from flask import Flask, render_template, request, redirect, url_for, session
import ibm_db
import re
app = Flask(__name__)
app.secret_key = 'a'
conn = ibm_db.connect("DATABASE=bludb;HOSTNAME=3883e7e4-18f5-4afe-be8c-
fa31c41761d2.bs2io90l08kqb1od8lcg.databases.appdomain.cloud;PORT=31498;SECURITY
=SSL;SSLServerCertificate=DigiCertGlobalRootCA.crt;UID=sch83401;PWD=j7QZUHGA
tUGbPhns",",")

@app.route('/')
def homer():
    return render_template('home.html')

@app.route('/login', methods=['GET', 'POST'])
def login():
    global userid
    msg = ""
    if request.method == 'POST':
        username = request.form['username']
        password = request.form['password']
        sql = "SELECT * FROM users WHERE username=? AND password=?"
        stmt = ibm_db.prepare(conn, sql)
        ibm_db.bind_param(stmt, 1, username)
        ibm_db.bind_param(stmt, 2, password)
        ibm_db.execute(stmt)

```

```

        account = ibm_db.fetch_assoc(stmt)
        print (account)
        if account:
            session['loggedin'] = True
            session['id'] = account['USERNAME']
userid= account['USERNAME']
            session['username'] = account['USERNAME']
msg = 'Logged in successfully !'
msg = 'Logged in successfully !'
            return render_template('dashboard.html', msg = msg)
        else:
msg = 'Incorrect username / password !'
            return render_template('login.html', msg = msg)

@app.route('/register', methods=['GET', 'POST'])
def registet():
msg = "
    if request.method == 'POST' :
        username = request.form['username']
        email = request.form['email']
        password = request.form['password']
sql = "SELECT * FROM job WHERE username =?"
stmt = ibm_db.prepare(conn, sql)
ibm_db.bind_param(stmt,1,username)
ibm_db.execute(stmt)
        account = ibm_db.fetch_assoc(stmt)
        print(account)
        if account:
msg = 'Account already exists !'
elif not re.match(r'^@]+@^[^@]+\.[^@]+', email):
msg = 'Invalid email address !'
elif not re.match(r'[A-Za-z0-9]+', username):
msg = 'name must contain only characters and numbers !'
        else:
insert_sql = "INSERT INTO users VALUES (?, ?, ?)"
prep_stmt = ibm_db.prepare(conn, insert_sql)
ibm_db.bind_param(prepare_stmt, 1, username)

```

```

ibm_db.bind_param(prepare_stmt, 2, email)
ibm_db.bind_param(prepare_stmt, 3, password)
ibm_db.execute(prepare_stmt)
msg = 'You have successfully registered !'
if request.method == 'POST':
    msg = 'Please fill out the form !'
    return render_template('register.html', msg = msg)

@app.route('/dashboard')
def dash():
    return render_template('dashboard.html')

@app.route('/apply', methods = ['GET', 'POST'])
def apply():
    msg = "
    if request.method == 'POST' :
        username = request.form['username']
        email = request.form['email']
        qualification = request.form['qualification']
        skills = request.form['skills']
        jobs = request.form['s']
    sql = "SELECT * FROM users WHERE username =?"
    stmt = ibm_db.prepare(conn, sql)
    ibm_db.bind_param(stmt, 1, username)
    ibm_db.execute(stmt)
        account = ibm_db.fetch_assoc(stmt)
        print(account)
        if account:
    msg = 'there is only 1 job position! for you'
        return render_template('apply.html', msg = msg)
    insert_sql = "INSERT INTO job VALUES (?, ?, ?, ?, ?)"
    prepare_stmt = ibm_db.prepare(conn, insert_sql)
    ibm_db.bind_param(prepare_stmt, 1, username)
    ibm_db.bind_param(prepare_stmt, 2, email)
    ibm_db.bind_param(prepare_stmt, 3, qualification)
    ibm_db.bind_param(prepare_stmt, 4, skills)
    ibm_db.bind_param(prepare_stmt, 5, jobs)

```

```

ibm_db.execute(prepare_stmt)
elif request.method == 'POST':
    msg = 'Please fill out the form !'
    return render_template('apply.html', msg = msg)

@app.route('/display')
def display():
    print(session["username"], session['id'])
    cursor = mysql.connection.cursor()
    cursor.execute('SELECT * FROM job WHERE userid = % s', (session['id'],))
    account = cursor.fetchone()
    print("accountdisplay", account)
    return render_template('display.html', account = account)

@app.route('/logout')
def logout():
    session.pop('loggedin', None)
    session.pop('id', None)
    session.pop('username', None)
    return render_template('home.html')

if __name__ == '__main__':
    app.run(host='0.0.0.0', port=8080)

```

## **Integrating sendgrid with python code**

### **sendemail.py**

```

import smtplib
import sendgrid
import os
from sendgrid.helpers.mail import Mail, Email, To, Content
SUBJECT = "Interview Call"
s = smtplib.SMTP('smtp.gmail.com', 587)

def sendmail(TEXT, email):
    print("sorry we cant process your candidature")
    s = smtplib.SMTP('smtp.gmail.com', 587)

```

```

s.starttls()
s.login("mukilsneha12@gmail.com", "mukilsendgridaccount")
    message = 'Subject: { }\n\n{ }'.format(SUBJECT, TEXT)
s.sendmail("mukilsneha12@gmail.com", email, message)
s.quit()
def sendgridmail(user,TEXT):
    sg = sendgrid.SendGridAPIClient('SG.atzbAf29RVeuAWT-
m0BPWA.7tTsm61FY47S9pXiFSt-h-feo6Oi_DhAFPIIdg92mn0')
    from_email = Email("mukilsneha12@gmail.com") # Change to your verified sender
    to_email = To(user) # Change to your recipient
    subject = "You have received a call for"
    content = Content("Check more for further details",TEXT)
    mail = Mail(from_email, to_email, subject, content)

    # Get a JSON-ready representation of the Mail object
mail_json = mail.get()
    # Send an HTTP POST request to /mail/send
    response = sg.client.mail.send.post(request_body=mail_json)
    print(response.status_code)
    print(response.headers)

```