**PROJECT REPORT**

**PSG INSTITUTE OF TECHNOLOGY AND APPLIED RESEARCH**

**SKILL AND JOB RECOMMENDER APPLICATION**

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

**FINAL YEAR**

**2019-2023**

**TEAM ID**: PNT2022TMID43362

**DOMAIN:**Cloud application Development

**Team Members:**

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Poornakala G 715519106033

Sri Prashiddhi D R 715519106051

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# INTRODUCTION

## 1.1 Project Overview

Finding a job has never been easy, whether it's because you don't know enough about the organization's mission, workplace culture, or open positions, or because you can't seem to locate the appropriate individual with the correct qualities.

Since then, online job search portals have been developed, making it easier for both parties to find jobs. The answer is a job portal, which brings together recruiters and job seekers with the goal of satisfying each party's specific needs.

They are the most efficient and cost-effective form of communication, irrespective of the distance between the users and renders,they can reach with just a click.

## 1.2 Purpose

Online job portals have been around for a while, however they have simply created more concerns, such as:

* Individual skill development is not always prioritised and fulfilled by the educational system.
* Hours searching through the vast amount of online posts to identify what is useful.
* People without a background in the field are unsure of exactly what they need to learn to find a job that suits them.

# LITERATURE SURVEY

## 2.1 Existing problem

* Instead than tailoring to a job seeker's skill set, most job portals function by matching people based on

information from resumes.

* Recruiters must sort through hundreds of applications that are quite identical in order to determine which applicant appears to be more pertinent or qualified for the position at hand.

**2.2 References**

<https://www.quora.com/Linkedln>

<https://ieeexplore.ieee.org/document/7944917>

<https://ieeexplore.ieee.org/document/9752295>

<https://ieeexplore.ieee.org/document/8960231>

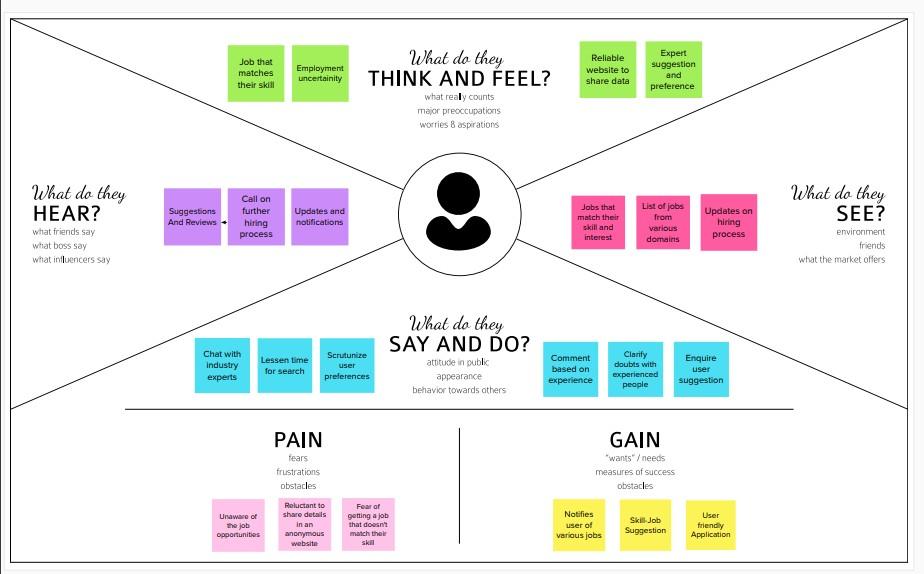
## 2.3 Problem Statement Definition



# IDEATION & PROPOSED SOLUTION

## 3.1 Empathy Map Canvas

An empathy map is a concise, simplistic picture that summarises information about a user's actions and views.It is a helpful tool that enables teams to comprehend their users more fully. It is important to comprehend both the actual issue and the individual who is experiencing it in order to develop a workable solution. Participants learn to think about situations from the user's perspective, including goals and problems, through the exercise of constructing the map.

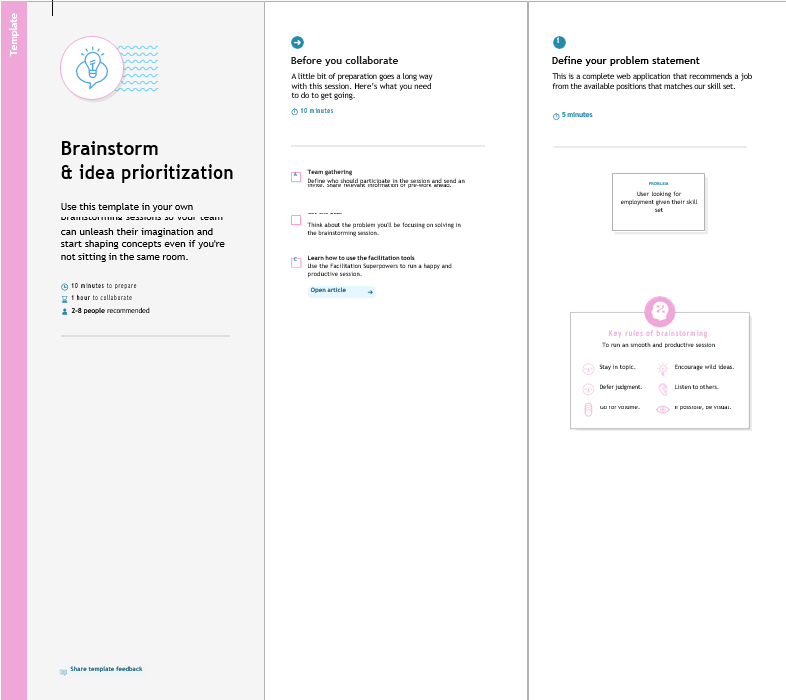


## 3.2 Ideation & Brainstorming

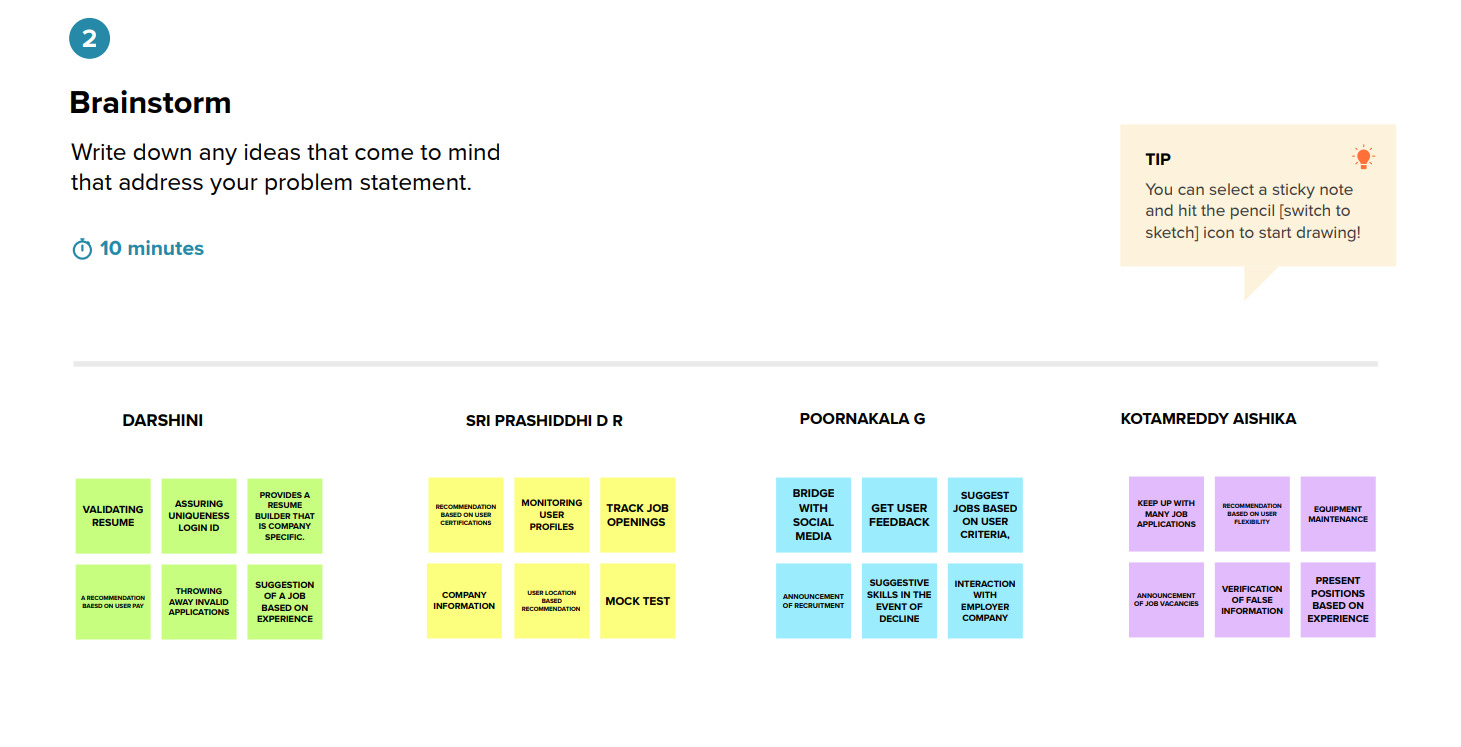
## During a brainstorming session, everyone on a team is encouraged to engage in the process of original thought that results in problem solving. Volume over quality is prioritised, unconventional ideas are welcomed and developed upon, and everyone is urged to participate in order to produce a wealth of original solutions.

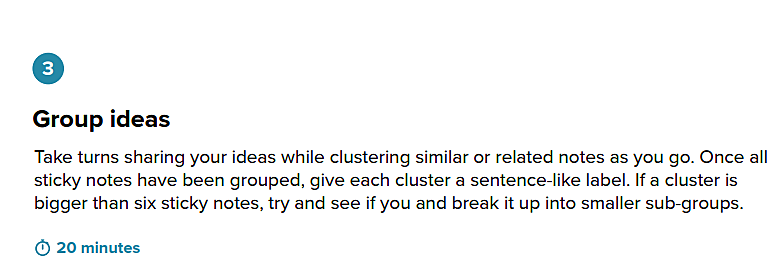
## Utilize this template during your own brainstorming meetings to enable your team to let their creativity run wild and begin developing notions even if they are not physically there.

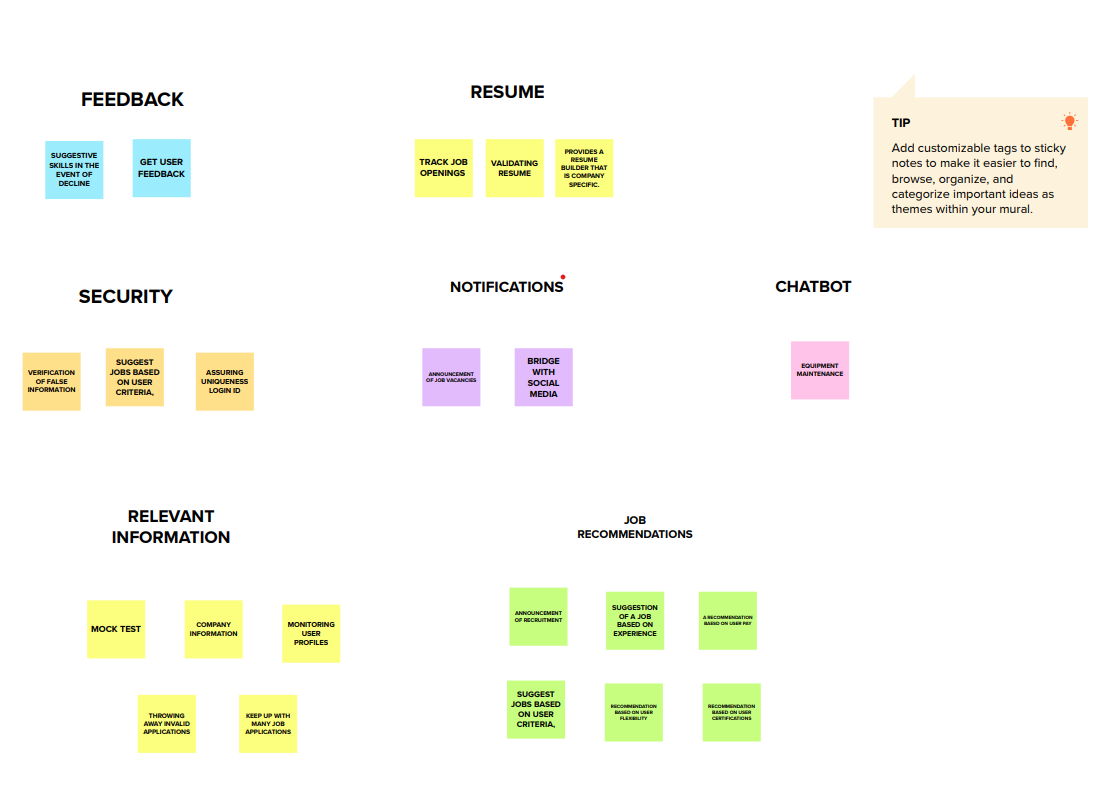
**Step-1**: Assembling the team, working together, and choosing the problem statement



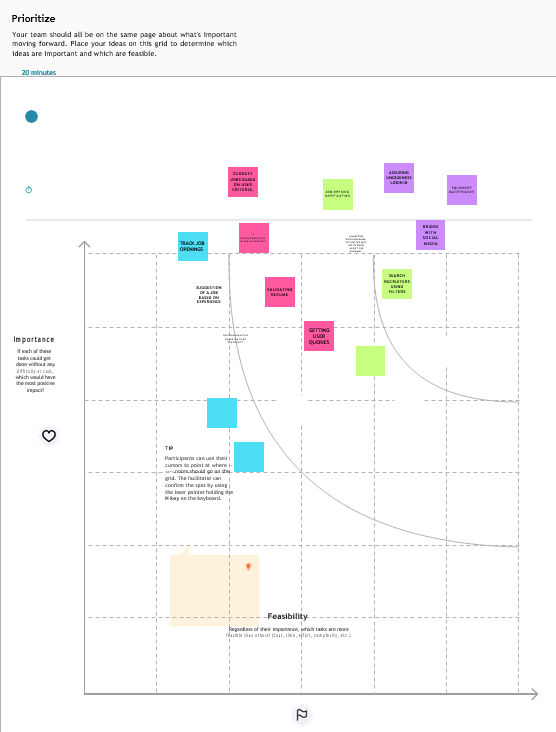
**Step-2**: Brainstorm, Idea Listing and Grouping







**Step-3**: Idea Prioritization



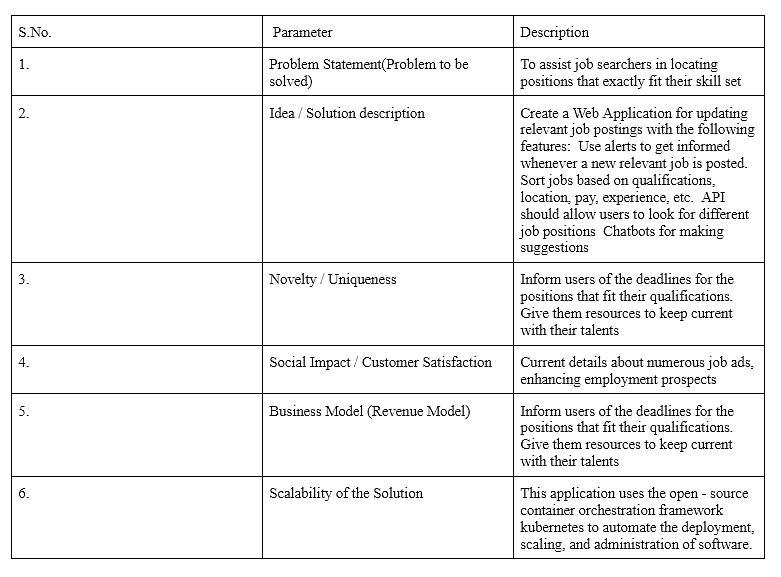
**3.3 Proposed Solution**

Based on the user's interests and skill set, the system only displays recommended jobs and customises them accordingly

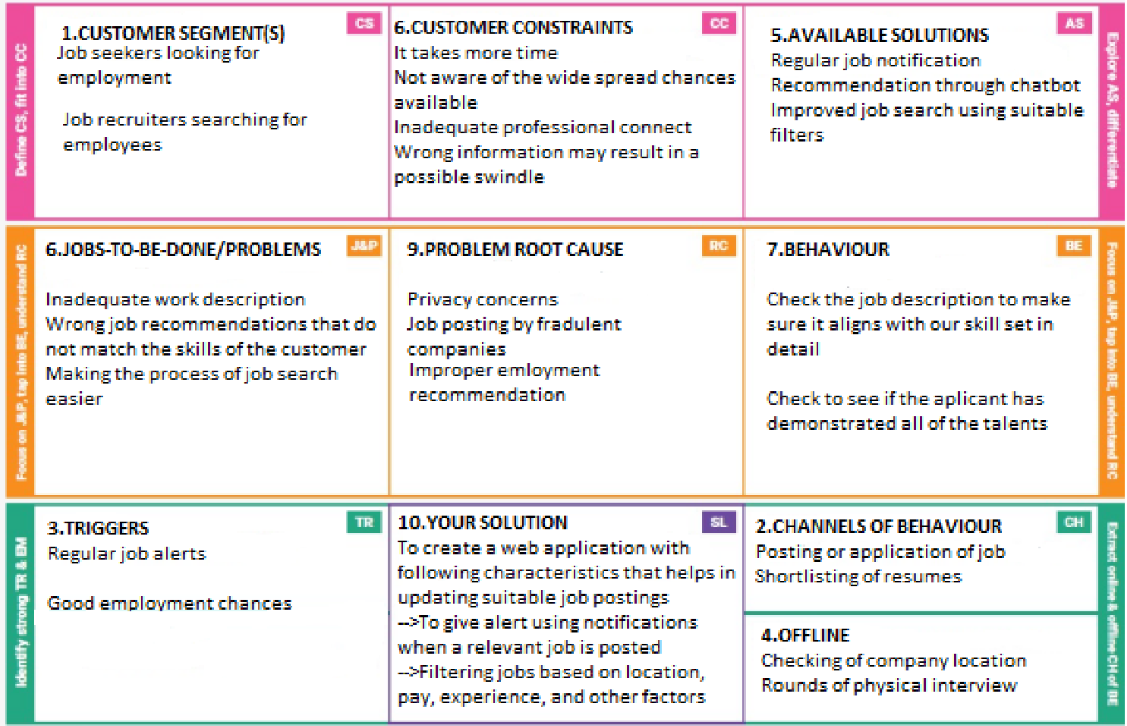
Similar to this, the same recommendation system aids in helping job recruiters locate the best qualified people for their company.

Personal information about both the host and the job seeker must also be stored carefully and securely. The simplest,safest, and most practical method is to use a SQL database.

In some circumstances, such as when information is provided to the host while applying for a job, data must also be kept private.

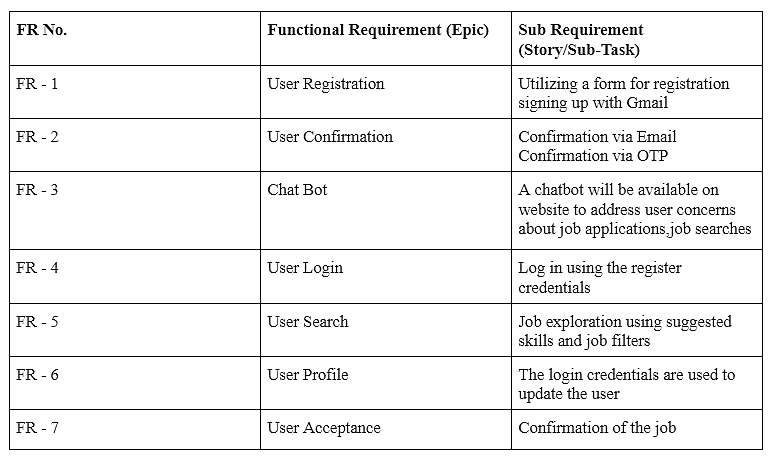


**3.4 Problem Solution fit**

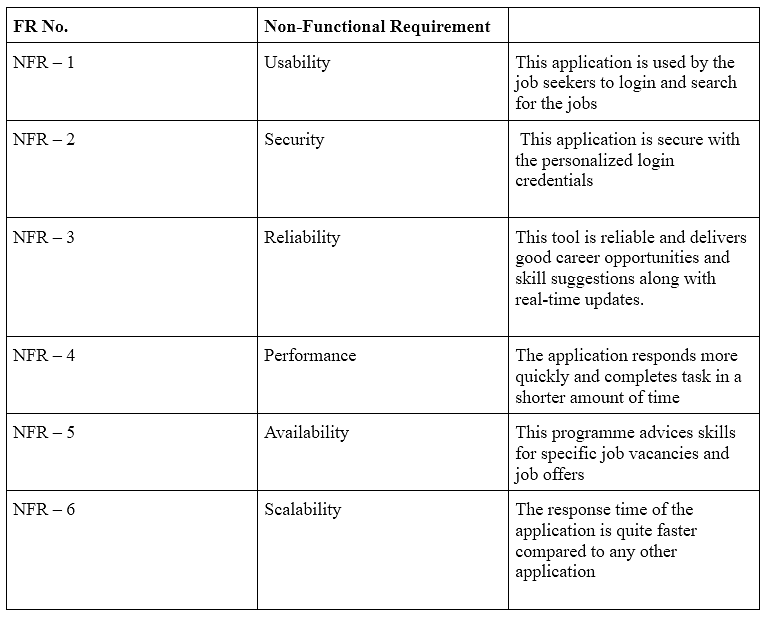


**4.REQUIREMENT ANALYSIS**

**4.1 Functional requirement**



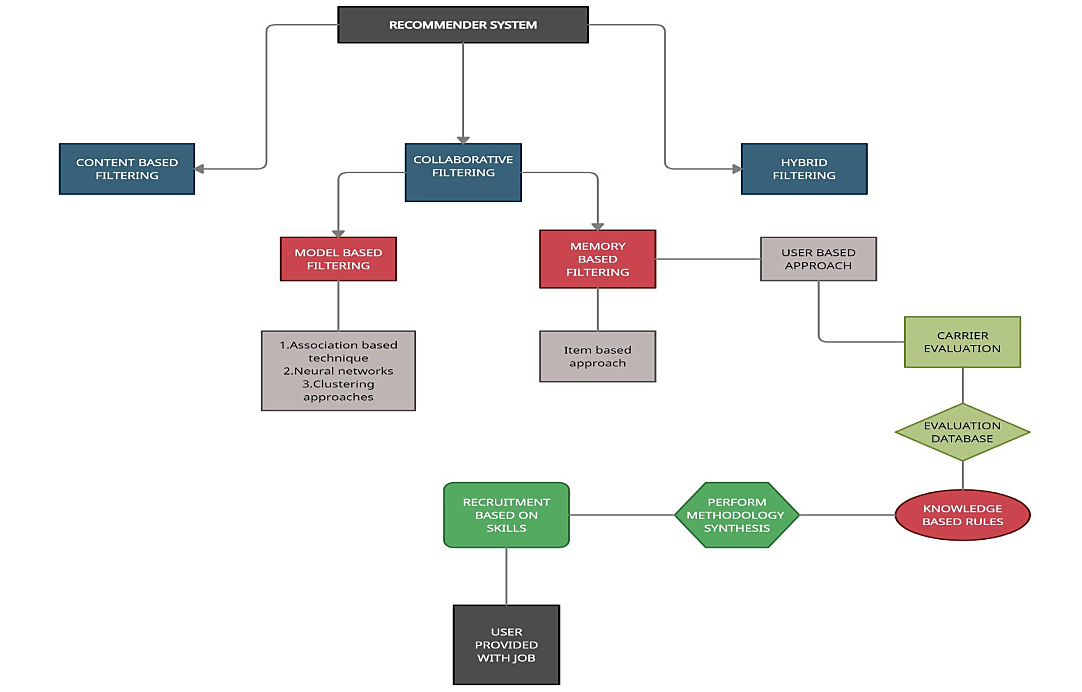
**4.2 Non-Functional requirements**



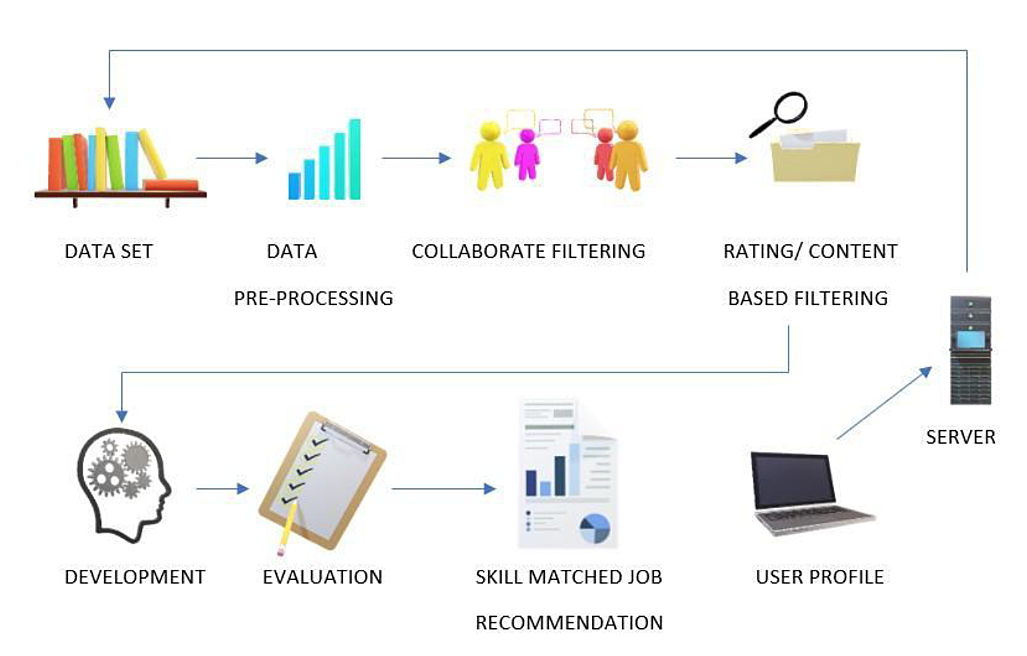
# 5. PROJECT DESIGN

## 5.1 Data Flow Diagrams

## 



**5.2 Solution & Technical Architecture**



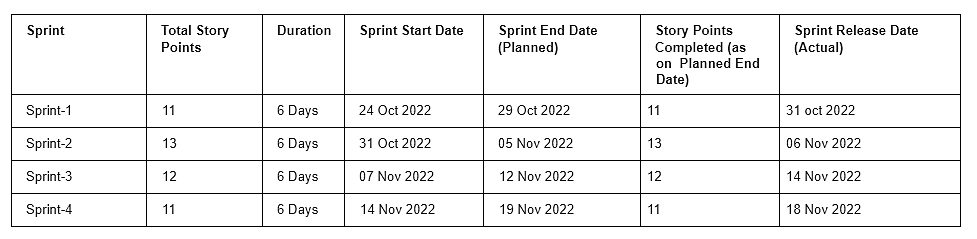
**5.3 User Stories**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **User Type** | **Functional**  **Requirement (Epic)** | **User Story Number** | **User Story / Task** | **Acceptance Criteria** | **Priority** | **Release** |
| Customer  (Web user) | Registration | USN-1 | As a user, I will be able to register by giving details such as email  ID,username,password,phone number and four digit pin | I can access and view my  account \dashboard | High | Sprint-1 |
|  | Login | USN-2 | As a user I will be able to login to the page by entering details of username and password | I can login to the page | High | Sprint-1 |
|  | Forgot Password | USN-3 | As a user, in case I forgot my password during login then I can login using another method by entering username  and a 4 digit pin | I will be able to login through alternate method | Low | Sprint-1 |
| Customer  (Web user) | Welcome page | USN-4 | As a user,after login I will be directed to the home or welcome page | I will be able to view the contents of home page | Medium | Sprint-2 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Skills page | USN-5 | As a user, I can select the option skills in home page | I can view the skills page | High | Sprint-2 |
|  | About us | USN-6 | As a user, I can select the option about us in home page | I can view the details under  about us | High | Sprint-2 |
| Backend | Creating routes | USN-7 | To create routes for welcome page,register page,login page,forget page,skill page and about us page | Created appropriate  routes for each page | Medium | Sprint-3 |
|  | Linking | USN-8 | To connect IBM\_db with Flask | Connection is established | Low | Sprint-3 |
|  | Chatbot | USN-9 | To create a chatbot | Chatbot is created | Medium | Sprint-4 |
|  | Deployment | USN-10 | deploy docker and IBM container registry | Deployment is  done | High | Sprint-4 |

**6. PROJECT PLANNING & SCHEDULING**

## 6.1 Sprint Planning & Estimation

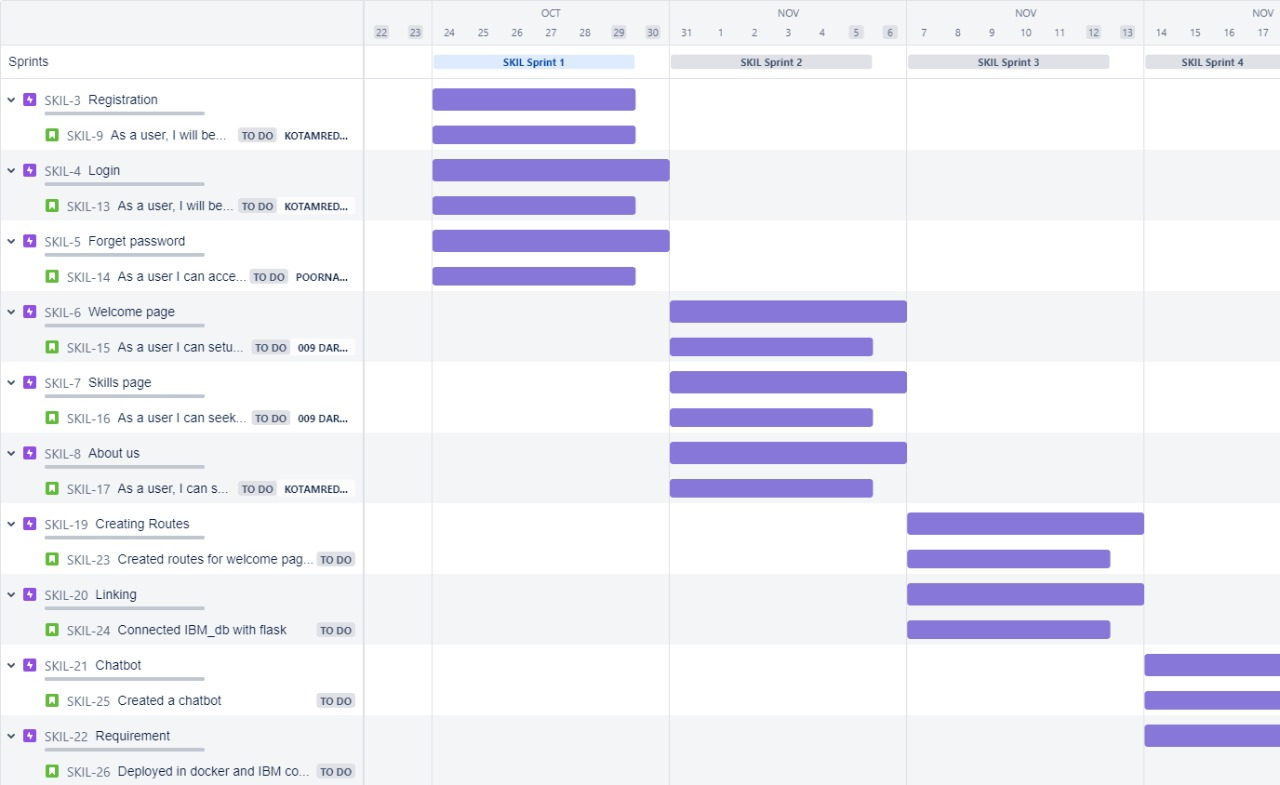


**6.2 Sprint Delivery Schedule**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sprint** | **Functional**  **Requirement (Epic)** | **User Story**  **Number** | **User Story / Task** | **Story Points** | **Priority** | **Team**  **Members** |
| Sprint-1 | Registration | USN-1 | As a user, I will be able to register by giving details such as email ID, username, password, phone number and four digit pin. | 2 | High | Darshini s |
| Sprint-1 | Login | USN-2 | As a user, I will be able to login to the page by entering the details such as username and password | 4 | High | Kotamreddy Aishika |
| Sprint-1 | Forget Password | USN-3 | As a user, in case I forgot my password during login then I can login using another method by entering username and 4 digit pin | 3 | Low | Poornakala G |
| Sprint-2 | Welcome Page | USN-4 | As a user, after login I will directed to home or welcome page | 5 | Medium | Kotamreddy Aishika |
| Sprint-2 | Skills Page | USN-5 | As a user, I can select the option skills in home page | 7 | High | Sri Prashiddhi D R |
| Sprint-2 | About Us | USN-6 | As a user, I can select the option about us in home page | 4 | High | Darshini S |
| Sprint-3 | Creating routes | USN-7 | Created routes for welcome page, login page, forget page ,skills page and about us page | 3 | Medium | Sri Prashiddhi D R |
| Sprint-3 | Linking | USN-8 | Connected IBM\_db with flask | 8 | Low | Kotamreddy Aishika |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sprint-4 | Chatbot | USN-8 | Created a chatbot | 5 | Medium | Darshini S |
| Sprint-4 | Deployment | USN-9 | Deployed in docker and IBM container registry | 6 | High | Poornakala G |

**6.3 Reports from Jira**



**7 CODING & SOLUTIONING**

## 7.1 Feature 1

Skill based job recommendation - Positions are suggested depending on the unique skill set of the job seeker.

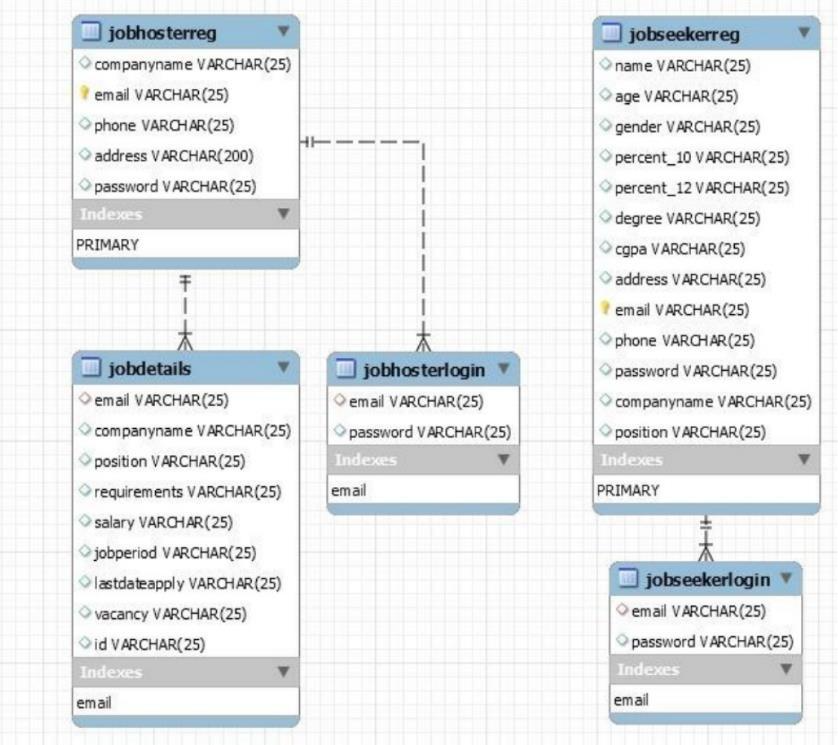
Additionally, this results in a unique list of jobs that varies for various job seekers.

## 7.2 Feature 2

Hosting jobs: A job hoster can readily host positions that a variety of applicants can access.

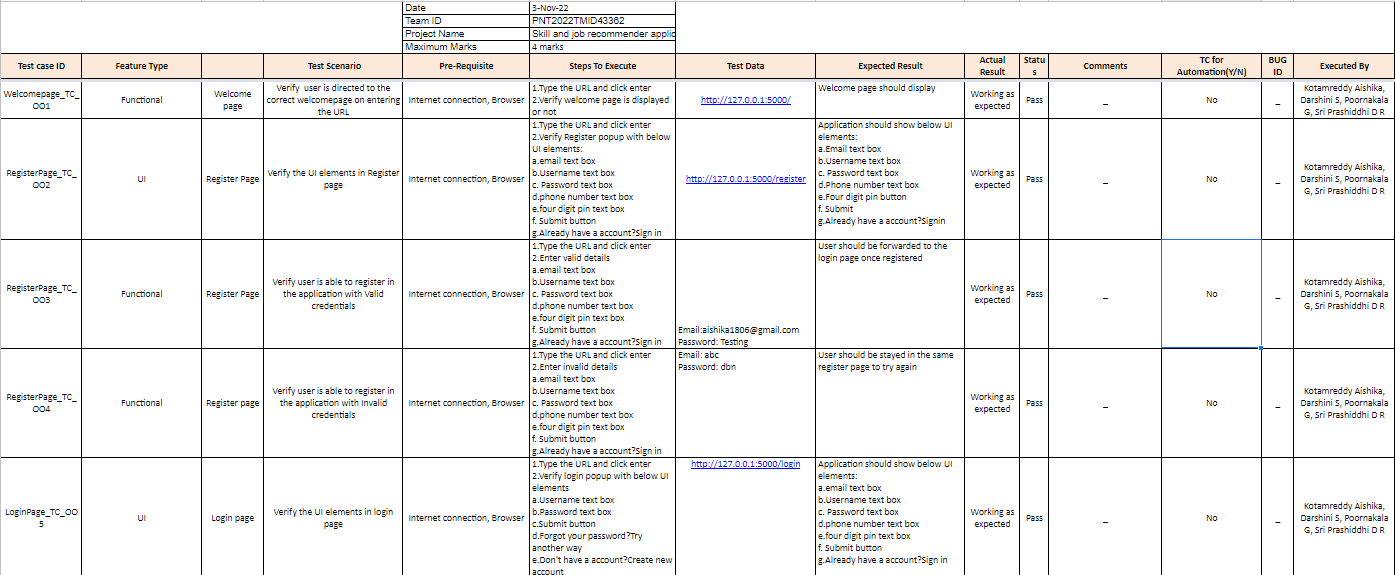
Filtering through jobs by skill, region, income or stipend, and method of employment is another function (for both applying and hosting jobs).

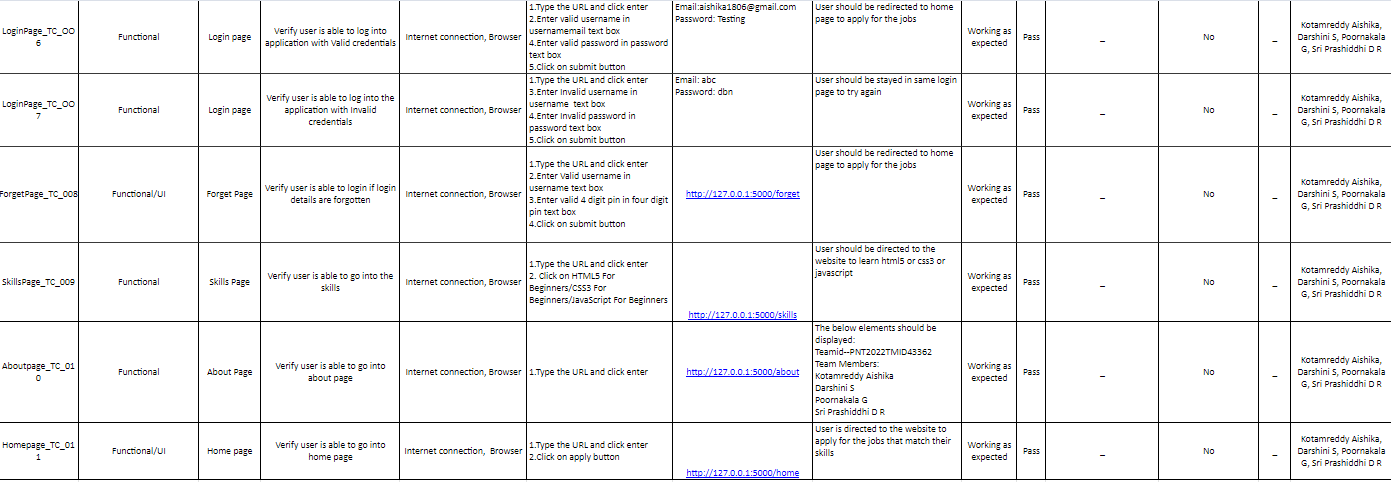
**7.3 Database Schema**



**8.TESTING**

**8.1 Test cases**





**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 [ProductName] 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 | 3 | 2 | 2 | 2 | 9 |
| Duplicate | 2 | 0 | 3 | 0 | 5 |
| External | 3 | 2 | 0 | 2 | 7 |
| Fixed | 7 | 4 | 4 | 4 | 19 |
| Not Reproduced | 0 | 0 | 1 | 0 | 1 |
| Skipped | 1 | 0 | 0 | 0 | 1 |
| WontFix | 1 | 0 | 0 | 0 | 1 |
| Totals | 17 | 8 | 10 | 8 | 43 |

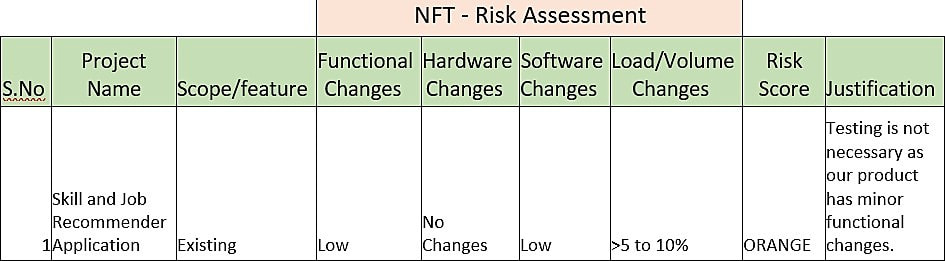
**3.Test case Analysis**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Section | Total Cases | Not Tested | Fail | Pass |
| Welcome page | 1 | 0 | 0 | 1 |
| Register page | 3 | 0 | 0 | 3 |
| Login page | 3 | 0 | 0 | 3 |
| Forget page | 1 | 0 | 0 | 1 |
| Skills page | 1 | 0 | 0 | 1 |
| About page | 1 | 0 | 0 | 1 |
| Home page | 1 | 0 | 0 | 1 |

**9.RESULTS**

**9.1 Performance Metrics**



## 

# 10. ADVANTAGES & DISADVANTAGES

* It takes a lot of work to find applicants, therefore it can be expensive for a business in terms of both time and money. According to one study, hiring referred applicants takes about 55% more quickly than hiring workers that were located through career websites. Employee recommendations have the benefit of saving the recruiter time by establishing the relationship through a current team member. Additionally, the applicant can be a better fit than other applicants that submit an external application. Additionally, this will hasten the procedure and lessen the requirement for finding alternate solutions.
* Employees will seek a partner who will increase their own productivity and daily workload. Therefore, you can generally have more faith in the candidate's capacity to do the necessary responsibilities. Additionally, nearly three out of ten employers have discovered a phoney reference on an application, according to research conducted by Zao. Therefore, a personal recommendation that is already known within the organisation might give potential employers trust that the reference is reliable and accurate.
* After two years, referred personnel are retained at a rate of 45% as opposed to 20% through job boards. Employee referrals frequently remain employed longer, possibly as a result of their close relationships with their peers. Not to mention that after their firm accepts their recommendation, the referrer themself might feel more appreciated and valued. Additionally, a worker may become more devoted when they feel respected and valued. To express your gratitude, you might also choose to award an employee who refers a colleague a bonus.
* While an employee's motivations should generally be "pure," there may be instances in which a person only wants to work with a friend or get the referral incentive. As a result, the candidate might not be as qualified as the referrer or the referee claimed. The referrer might believe they can compensate for the applicant's flaws or give them a crash course to uplevel their abilities. This can have a detrimental effect on their own output. Your business may now have two underperformers, and you may need to fill both of these roles in the not-too-distant future.

# 11.CONCLUSION

For the task of employment recommendations, we offered a framework. According to the preferences of the job recommender system creator, this architecture both makes it easier to grasp how the job suggestion process works and permits the use of a variety of text processing and recommendation methods. Additionally, we contribute by making a fresh dataset with profiles of job searchers and open positions publicly accessible. Future areas of our research will centre on conducting a more thorough review taking into account a larger number of methodologies and data as well as a thorough evaluation of the impact of each job seeker's professional skill on the recommendation they obtain for a position.

# 12.FUTURE SCOPE

This system must use content-based filtering, which can only make job recommendations based on the user's existing profile, in order to be hybrid. Based on the user's previous queries, it cannot provide anything unexpected. This study also used collaborative filtering, which is known to have issues with cold startup and privacy violations. The system offers a wide range of applications that can be utilised to strengthen and perfect it. First, when a new company is added to the database, the crawling process needs to be automated. In other words, it is possible to do away with the one-time configuration step or process required to fetch employment from a specific new organisation. These models can use collaborative filtering methods like KNN. Using NLP in content-based filtering can result in better and more precise search matching.Additionally, more user data must be gathered and tested in order for the collaborative filtering module to operate more effectively. Finally, it is necessary to use natural language processing to improve the job description's cleaning procedure. This work can be enhanced by employing collaborative filtering and assigning various individuals varying weights based on their LinkedIn abilities.

**13. APPENDIX**

**Source Code**

**app.py**

from flask import Flask, render\_template,request,redirect,url\_for,session,flash

import ibm\_db

import os

from sendgrid import SendGridAPIClient

from sendgrid.helpers.mail import Mail

import requests

app=Flask(\_\_name\_\_)

app.secret\_key='a'

conn = ibm\_db.connect("DATABASE=bludb;HOSTNAME=19af6446-6171-4641-8aba-9dcff8e1b6ff.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=30699;SECURITY=SSL;SSLServerCertificat=DigiCertGlobalRootCA.crt;UID=mjc12838;PWD=R0w7xxbuh4C1PKHz",'','')

@app.route("/")

def dash():

return render\_template('login.html',msg=" ")

@app.route("/register")

def signup():

return render\_template('register.html')

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

def register():

error = None

if request.method=='POST':

username=request.form['username']

email=request.form['email']

phone\_number=request.form['phonenumber']

password=request.form['password']

pin=request.form['pin']

sql="SELECT \* FROM user WHERE username=?"

prep\_stmt=ibm\_db.prepare(conn,sql)

ibm\_db.bind\_param(prep\_stmt,1,username)

ibm\_db.execute(prep\_stmt)

account=ibm\_db.fetch\_assoc(prep\_stmt)

print(account)

if account:

error="Account already exists! Log in to continue !"

else:

insert\_sql="INSERT INTO user values(?,?,?,?,?)"

prep\_stmt=ibm\_db.prepare(conn,insert\_sql)

ibm\_db.bind\_param(prep\_stmt,1,email)

ibm\_db.bind\_param(prep\_stmt,2,username)

ibm\_db.bind\_param(prep\_stmt,3,phone\_number)

ibm\_db.bind\_param(prep\_stmt,4,password)

ibm\_db.bind\_param(prep\_stmt,5,pin)

ibm\_db.execute(prep\_stmt)

flash(" Registration successfull. Log in to continue !")

else:

pass

return render\_template('welcome.html',error=error)

@app.route("/login")

def signin():

return render\_template('login.html')

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

def login():

error = None

if request.method=='POST':

username=request.form['username']

password=request.form['password']

sql="SELECT \* FROM user 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']

session["username"]=account["USERNAME"]

flash("Logged in successfully!")

return render\_template('welcome.html',error=error)

else:

error="Incorrect username / password"

return render\_template('login.html')

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

def forget():

error = None

if request.method=='POST':

username=request.form['username']

pin=request.form['pin']

sql="SELECT \* FROM user WHERE username=? AND pin=?"

stmt=ibm\_db.prepare(conn,sql)

ibm\_db.bind\_param(stmt,1,username)

ibm\_db.bind\_param(stmt,2,pin)

ibm\_db.execute(stmt)

account=ibm\_db.fetch\_assoc(stmt)

print(account)

if account:

session['Loggedin']=True

session['id']=account['USERNAME']

session["username"]=account["USERNAME"]

flash("Logged in successfully!")

return redirect(url\_for("home"))

else:

error="Incorrect username / pin"

return render\_template('login.html',error=error)

return render\_template('forget.html',error=error)

@app.route('/welcome')

def welcome\_page():

return render\_template("welcome.html",msg=" ")

@app.route('/home')

def home():

return render\_template("welcome.html",msg=" ")

@app.route('/skills')

def skills():

return render\_template("skills.html",msg=" ")

@app.route('/about')

def about():

return render\_template("about.html",msg=" ")

@app.route('/contact')

def contact():

return render\_template("contact.html",msg=" ")

if \_\_name\_\_=='\_\_main\_\_':

app.run(debug=True)

**HTML:**

**About.html**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

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

<link rel="stylesheet" type="text/css" href="https://fonts.googleapis.com/css?family=Poppins" />

<title>about us</title>

<link rel="stylesheet" href="{{url\_for('static',filename='registerstyle.css')}}">

</head>

<body>

<header>

<nav class="navbar navbar-expand-lg navbar-dark bg-dark">

<div class="container-fluid">

<a class="navbar-brand" href="#">SKILL/JOB RECOMMENDER</a>

<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarNavAltMarkup" aria-controls="navbarNavAltMarkup" aria-expanded="false" aria-label="Toggle navigation">

<span class="navbar-toggler-icon"></span>

</button>

<div class="collapse navbar-collapse" id="navbarNavAltMarkup">

<div class="navbar-nav">

<a class="nav-link active" aria-current="page" href="{{url\_for('home')}}">Home</a>

<a class="nav-link" href="{{url\_for('register')}}">Register</a>

<a class="nav-link" href="{{url\_for('login')}}">Login</a>

<a class="nav-link" href="{{url\_for('skills')}}">Skills</a>

<a class="nav-link" href="{{url\_for('about')}}">About us</a>

</div>

</div>

</div>

</nav>

<br>

<div class="info">

<p>Team id--PNT2022TMID43362</p>

<br>

<p>Team Members:</p>

<p>Kotamreddy Aishika</p>

<p>Darshini S</p>

<p>Poornakala G</p>

<p>Sri Prashiddhi D R</p>

</div>

</header>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC" crossorigin="anonymous">

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min.js" integrity="sha384-MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM" crossorigin="anonymous"></script>

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min.js" integrity="sha384-MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM" crossorigin="anonymous"></script>

</body>

</html>

**forget.html**

<html>

<head>

<title>Login page</title>

<link rel="stylesheet" href="{{url\_for('static',filename='registerstyle.css')}}">

<link rel="stylesheet" type="text/css" href="https://fonts.googleapis.com/css?family=Poppins" />

</head>

<body>

<header>

<nav class="navbar navbar-expand-lg navbar-dark bg-dark">

<div class="container-fluid">

<a class="navbar-brand" href="#">SKILL/JOB RECOMMENDER</a>

<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarNavAltMarkup" aria-controls="navbarNavAltMarkup" aria-expanded="false" aria-label="Toggle navigation">

<span class="navbar-toggler-icon"></span>

</button>

<div class="collapse navbar-collapse" id="navbarNavAltMarkup">

<div class="navbar-nav">

<a class="nav-link active" aria-current="page" href="{{url\_for('home')}}">Home</a>

<a class="nav-link" href="{{url\_for('register')}}">Register</a>

<a class="nav-link" href="{{url\_for('login')}}">Login</a>

<a class="nav-link" href="{{url\_for('skills')}}">Skills</a>

<a class="nav-link" href="{{url\_for('about')}}">About us</a>

</div>

</div>

</div>

</nav>

</header>

<section id="sss1">

<center><h1 class="two" >Job Recommender</h1></center>

</section>

<br><br>

{% if error %}

<p><strong style="color:red">Error</strong>: {{error}}</p>

{% endif %}

{% with messages = get\_flashed\_messages() %}

{% if messages %}

{% for message in messages %}

<p style="color:green">{{ message }}</p>

{% endfor %}

{% endif %}

{% endwith %}

<div class="container"> <br /><br />

<form action="/forget" method="POST">

<h1>Try to login with your 4 digit pin</h1> <br /><br />

<label class="form\_label"for="email"><b>Username</b></label><br><br>

<input class="form\_input"type="text" name= "username" /><br><br>

<label class="form\_label"for="psw"><b>Pin</b></label><br><br>

<input class="form\_input"type="password" name="pin"/>

</br></br></br>

<center><input type="submit" class="submitbtn"value="submit" /></center>

</form>

</div>

<center><p>Back to <a href="{{url\_for('login')}}">login</a></p></center>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC" crossorigin="anonymous">

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min.js" integrity="sha384-MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM" crossorigin="anonymous"></script>

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min.js" integrity="sha384-MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM" crossorigin="anonymous"></script>

</body>

</html>

**Login.html**

<html>

<head>

<title>Login page</title>

<link rel="stylesheet" href="{{url\_for('static',filename='registerstyle.css')}}">

<link rel="stylesheet" type="text/css" href="https://fonts.googleapis.com/css?family=Poppins" />

</head>

<body>

<header

<nav class="navbar navbar-expand-lg navbar-dark bg-dark">

<div class="container-fluid">

<a class="navbar-brand" href="#">SKILL/JOB RECOMMENDER</a>

<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarNavAltMarkup" aria-controls="navbarNavAltMarkup" aria-expanded="false" aria-label="Toggle navigation">

<span class="navbar-toggler-icon"></span>

</button>

<div class="collapse navbar-collapse" id="navbarNavAltMarkup">

<div class="navbar-nav">

<a class="nav-link active" aria-current="page" href="{{url\_for('home')}}">Home</a>

<a class="nav-link" href="{{url\_for('register')}}">Register</a>

<a class="nav-link" href="{{url\_for('login')}}">Login</a>

<a class="nav-link" href="{{url\_for('skills')}}">Skills</a>

<a class="nav-link" href="{{url\_for('about')}}">About us</a>

<div class="navi">

<a class="nav-link" href="{{url\_for('home')}}">Logout</a>

</div>

</div>

</div>

</div>

</nav>

</header>

<br><br>

<div class="container"> <br /><br />

<form action="/login" method="POST">

<h1>Login</h1> <br /><br />

<label class="form\_label"for="email"><b>Username</b></label><br><br>

<input class="form\_input"type="text" name= "username" /><br><br>

<label class="form\_label"for="psw"><b>Password</b></label><br><br>

<input class="form\_input"type="password" name="password"/>

</br></br></br>

<center><input type="submit" class="submitbtn"value="submit" /></center>

</form>

</div>

<center><p>Forgot your password? <a href="{{url\_for('forget')}}" class="else">Try Another Way</a></p></center>

<center><p>Don't have a account <a href="{{url\_for('register')}}">Create new account</a></p></center>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC" crossorigin="anonymous">

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min.js" integrity="sha384-MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM" crossorigin="anonymous"></script>

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min.js" integrity="sha384-MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM" crossorigin="anonymous"></script>

</body>

</html>

**Register.html**

<html>

<head>

<title>Registration page</title>

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

<link rel="stylesheet" type="text/css" href="https://fonts.googleapis.com/css?family=Poppins" />

</head>

<body>

<header>

<nav class="navbar navbar-expand-lg navbar-dark bg-dark">

<div class="container-fluid">

<a class="navbar-brand" href="#">SKILL/JOB RECOMMENDER</a>

<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarNavAltMarkup" aria-controls="navbarNavAltMarkup" aria-expanded="false" aria-label="Toggle navigation">

<span class="navbar-toggler-icon"></span>

</button>

<div class="collapse navbar-collapse" id="navbarNavAltMarkup">

<div class="navbar-nav">

<a class="nav-link active" aria-current="page" href="{{url\_for('home')}}">Home</a>

<a class="nav-link" href="{{url\_for('register')}}">Register</a>

<a class="nav-link" href="{{url\_for('login')}}">Login</a>

<a class="nav-link" href="{{url\_for('skills')}}">Skills</a>

<a class="nav-link" href="{{url\_for('about')}}">About us</a>

</div>

</div>

</div>

</nav>

</header>

<div class="container">

<form action="/register" method="POST">

<br>

<h2>Registration</h2>

<label class="form\_label"for="email"><b>Email ID</b></label><br><br>

<input class="form\_input"type="email" name="email"/><br><br>

<label class="form\_label"for="user"><b>Username</b></label><br><br>

<input class="form\_input"type="text" name= "username" /><br><br>

<label class="form\_label"for="psw"><b>Password</b></label><br><br>

<input class="form\_input"type="password" name="password"/><br><br>

<label class="form\_label"for="pho"><b> Enter Phone number:</b></label><br><br>

<input class="form\_input"type="number" name="phonenumber"/><br><br>

<label class="form\_label"for="pho"><b> Enter four digit pin:</b></label><br><br>

<input class="form\_input"type="password" name="pin"/>

</br></br></br>

<center> {% if error %}

<p><strong style="color:red">Error</strong>: {{error}}</p>

{% endif %}

{% with messages = get\_flashed\_messages() %}

{% if messages %}

{% for message in messages %}

<p style="color:green">{{ message }}</p>

{% endfor %}

{% endif %}

{% endwith %} </center>

<center><input type="submit" class="submitbtn" value="submit"/></center>

<center><p>Already have a account <a href="{{url\_for('login')}}">Sign in</a></p></center>

</form>

</div>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC" crossorigin="anonymous">

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min.js" integrity="sha384-MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM" crossorigin="anonymous"></script>

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min.js" integrity="sha384-MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM" crossorigin="anonymous"></script>

</body>

</html>

**Skills.html**

<!DOCTYPE html>

<html lang="en">

<head>

<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>Job Recommender</title>

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

<link rel="stylesheet" type="text/css" href="https://fonts.googleapis.com/css?family=Poppins" />

</head>

<body>

<header>

<nav class="navbar navbar-expand-lg navbar-dark bg-dark">

<div class="container-fluid">

<a class="navbar-brand" href="#">SKILL/JOB RECOMMENDER</a>

<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarNavAltMarkup" aria-controls="navbarNavAltMarkup" aria-expanded="false" aria-label="Toggle navigation">

<span class="navbar-toggler-icon"></span>

</button>

<div class="collapse navbar-collapse" id="navbarNavAltMarkup">

<div class="navbar-nav">

<a class="nav-link active" aria-current="page" href="{{url\_for('home')}}">Home</a>

<a class="nav-link" href="{{url\_for('register')}}">Register</a>

<a class="nav-link" href="{{url\_for('login')}}">Login</a>

<a class="nav-link" href="{{url\_for('skills')}}">Skills</a>

<a class="nav-link" href="{{url\_for('about')}}">About us</a>

</div>

</div>

</div>

</nav>

</header>

<br>

<section id="sss1">

<center><h1 class="two" >Job Recommender</h1></center>

</section>

<br><br>

<section id="courses">

<center><h1>Our Courses</h1></center>

<br>

<div class="course">

<br><br>

<img src="{{url\_for('static',filename='img/course-01.jpg')}}"alt="skill 1">

<br><br>

<center><h2><a href="https://www.w3schools.com/html/">HTML5 For Beginners</a></h2></center>

<center><h6>This course was designed for students starting out in Front End Web Development wanting to learn HTML5 to get started........</h6></center>

</div>

<div class="course2">

<br><br>

<img src="{{url\_for('static',filename='img/course-02.jpg')}}"alt="skill 2">

<br><br>

<center><h2><a href="https://www.w3schools.com/css/">CSS3 For Beginners</a></h2></center>

<center><h6>This course was designed for students starting out in Front End Web Development wanting to learn CSS3 to get started........</h6></center>

</div>

<div class="course3">

<br><br>

<img src="{{url\_for('static',filename='img/course-03.jpg')}}"alt="skill 3">

<br><br>

<center><h2><a href="https://www.w3schools.com/js/">JavaScript For Beginners</a></h2></center>

<center><h6>This course was designed for students starting out in Front End Web Development wanting to learn JavaScript to get started........</h6></center>

</div>

</section>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC" crossorigin="anonymous">

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min.js" integrity="sha384-MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM" crossorigin="anonymous"></script>

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min.js" integrity="sha384-MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM" crossorigin="anonymous"></script>

</body>

</html>

**welcome.html**

<!DOCTYPE html>

<html lang="en">

<head>

<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>Job Recommender</title>

<link rel="stylesheet" href="{{url\_for('static',filename='welcomestyle.css')}}">

<link rel="stylesheet" type="text/css" href="https://fonts.googleapis.com/css?family=Poppins" />

<script>

window.watsonAssistantChatOptions = {

integrationID: "65c01ed6-9fc1-4883-979a-3676279ebe44", // The ID of this integration.

region: "us-south", // The region your integration is hosted in.

serviceInstanceID: "8fcd017f-a192-420a-aafc-18cb0330efca", // The ID of your service instance.

onLoad: function(instance) { instance.render(); }

};

setTimeout(function(){

const t=document.createElement('script');

t.src="https://web-chat.global.assistant.watson.appdomain.cloud/versions/" + (window.watsonAssistantChatOptions.clientVersion || 'latest') + "/WatsonAssistantChatEntry.js";

document.head.appendChild(t);

});

</script>

</head>

<body>

<header>

<nav class="navbar navbar-expand-lg navbar-dark bg-dark">

<div class="container-fluid">

<a class="navbar-brand" href="#">SKILL/JOB RECOMMENDER</a>

<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarNavAltMarkup" aria-controls="navbarNavAltMarkup" aria-expanded="false" aria-label="Toggle navigation">

<span class="navbar-toggler-icon"></span>

</button>

<div class="collapse navbar-collapse" id="navbarNavAltMarkup">

<div class="navbar-nav">

<a class="nav-link active" aria-current="page" href="{{url\_for('home')}}">Home</a>

<a class="nav-link" href="{{url\_for('register')}}">Register</a>

<a class="nav-link" href="{{url\_for('login')}}">Login</a>

<a class="nav-link" href="{{url\_for('skills')}}">Skills</a>

<a class="nav-link" href="{{url\_for('about')}}">About us</a>

</div>

</div>

</div>

</nav>

</header>

<br>

<section id="sss1">

<center><h1 class="two" >Job Recommender</h1></center>

</section>

<br><br>

<div id="jobs">

<center><h2 class="app">APPLY JOBS</h2></center><br>

<div class="image">

<img style="position:absolute;top: 250px;"src="{{url\_for('static',filename='img/php.jpg')}}" alt=""width="330" height="200">

<img style="position:absolute;top: 600px;"src="{{url\_for('static',filename='img/python.jpg')}}" alt=""width="330" height="200">

<img style="position:absolute;top: 250px;left: 540px;"src="{{url\_for('static',filename='img/software.jpg')}}" alt=""width="330" height="200">

<img style="position:absolute;top: 600px;left: 540px;"src="{{url\_for('static',filename='img/java.jpg')}}" alt=""width="330" height="200">

<img style="position:absolute;top: 250px;left: 1050px;"src="{{url\_for('static',filename='img/web.jpg')}}" alt=""width="330" height="200">

<img style="position:absolute;top: 600px;left: 1050px;"src="{{url\_for('static',filename='img/sql.jpg')}}" alt=""width="330" height="200">

<ul>

<li><a href="https://in.indeed.com/PHP-Developer-jobs?vjk=10cca9575b193c7d" style="position:absolute;top: 500px;left:80px;">APPLY</a></li>

<li><a href="https://in.indeed.com/Software-Developer-jobs?vjk=b7da08f07cac87d5" style="position:absolute;top: 500px;left:650px">APPLY</a></li>

<li><a href="https://in.indeed.com/Web-Developer-jobs?vjk=b81e49165da51eeb" style="position:absolute;top: 500px;left:1200px">APPLY</a></li>

<li><a href="https://in.indeed.com/SQL-Developer-jobs?vjk=ac86b15908022123" style="position:absolute;top: 850px;left:1200px">APPLY</a></li>

<li><a href="https://in.indeed.com/Java-Developer-jobs?vjk=da306a665e00eb30" style="position:absolute;top: 850px;left:650px">APPLY</a></li>

<li><a href="https://in.indeed.com/Python-Developer-jobs?vjk=fa7b9bd250044569" style="position:absolute;top: 850px;left:80px">APPLY</a></li>

</ul>

</div>

</div>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC" crossorigin="anonymous">

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min.js" integrity="sha384-MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM" crossorigin="anonymous"></script>

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min.js" integrity="sha384-MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM" crossorigin="anonymous"></script>

</body>

</html>

**GITHUB ACCOUNT**

**<https://github.com/IBM-EPBL/IBM-Project-42371-1660660734>**

**VIDEO DEMO LINK**

https://drive.google.com/file/d/1bS44NVMzet2LTcohz4EiMgy9J5RHQpe5/view?usp=share\_link