1. INTRODUCTION

1.1 Project overview

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

1.2 Purpose

Having lots of skills but wondering which job will best suit for you? Don't need to worry! we have come up with a skill recommender solution through which the fresher or the skilled person can login and find the jobs by using search option or they can directly interact with the chatbot and get their dream job.

To develop an end to end web application capable of displaying the current job openings based on the skillset of the users. The users and their information are stored in the Database. An alert is sent when there is an opening based on the user skillset. User will interact with the chatbot and can get the recommendations based on his skills. We can use job search API to get the current job openings in the market which will fetch the data directly from the webpage.

2. LITERATURE SURVEY

LITRATURE SURVEY 1:

NAME OF THE PAPER : Job Recommendation through Progression of Job

Selection.

NAME OF THE AUTHOR: Amber Nigam, Aakash Roy, Hartaran Singh, Harsimran Waila.

JOURNAL PUBLISHED: 2019 IEEE 6th International Conference on Cloud Computing and Intelligence Systems (CCIS).

PUBLISHED MONTH: April

PUBLISHED YEAR: 2020

OBJECTIVE OF THE PROJECT:

- It uses the candidates' job preference over time to incorporate the dynamics associated with highly volatile job market.
- The best results have been achieved through Bidirectional Long Short-term Memory Networks (Bi-LSTM) with Attention for recommending jobs through machine learning.

TECHNOLOGY USED: Filter-based technique.

LITRATURE SURVEY 2:

NAME OF THE PAPER: Job Recommender Systems. NAME OF THE AUTHOR: Juhi Dhameliya, Nikita Desai.

JOURNAL PUBLISHED: 2019 Innovations in Power and Advanced Computing Technologies (i- PACT).

PUBLISHED MONTH: March

PUBLISHED YEAR: 2019

OBJECTIVE OF THE PROJECT:

- It is used for building the personalized recommendation systems for job seekers as well as recruiters.
- The main issue of these portals is their inability to understand the complexity of matching between candidates' desires and organizations' requirements.

TECHNOLOGY USED: Boolean search methods - Word matching algorithms.

LITRATURE SURVEY 3:

NAME OF THE PAPER: Job Recommendation based on Job Seeker Skills.

NAME OF THE AUTHOR: Jorge Valverde-Rebaza, Ricardo Puma, Paul Bustios, Nathalia C. Silva.

JOURNAL PUBLISHED: First Workshop on Narrative Extraction from Text co-located with 40th European Conference on Information Retrieval.

PUBLISHED MONTH: March

PUBLISHED YEAR: 2018

OBJECTIVE OF THE PROJECT:

- In this, when a candidate submits his/ her profile at a job seeker engine.
- Their job recommendations are mostly suggested taking their academic qualification and work experience into considerations.

LITRATURE SURVEY 4:

NAME OF THE PAPER: A Research of Job Recommendation System Based on Collaborative Filtering.

NAME OF THE AUTHOR: Cheng Yang, Yingya Zhang, Zhixiang Niu.

JOURNAL PUBLISHED: 2014 Seventh International Symposium on Computational Intelligence and Design.

PUBLISHED MONTH: December

PUBLISHED YEAR: 2014

OBJECTIVE OF THE PROJECT:

- It analyze the candidate's resume and the companies' recruitment guidelines.
- To compare and come to a better conclusion upon finding the best suited candidates for the job.

TECHNOLOGY USED: Collaborative filtering algorithm.

LITARTURE SURVEY 5:

NAME OF THE PAPER: A survey of job recommender systems.

NAME OF THE AUTHOR: Shaha Alotaibi.

JOURNAL PUBLISHED: International Journal of Physical Sciences

PUBLISHED MONTH: July

PUBLISHED YEAR: 2012

OBJECTIVE OF THE PROJECT:

- 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.
- This article will present a survey of e-recruiting process and existing recommendation approaches for building personalized recommender systems for candidate.

TECHNOLOGY USED: Boolean Search Methods.

2.1 Problem Statement Definition

Job skills recommended application

Problem Statement:

Goal:

A job search has to be very intuitive for the students so that they can find job suiting their skills, position, industry, role and location by company name.

- The job Skills recommended application is an example of a search where documents are bulky because of the content in candidate resumes.
- The search provide over the candidate database is required to have huge set of fields to search.

Problem:

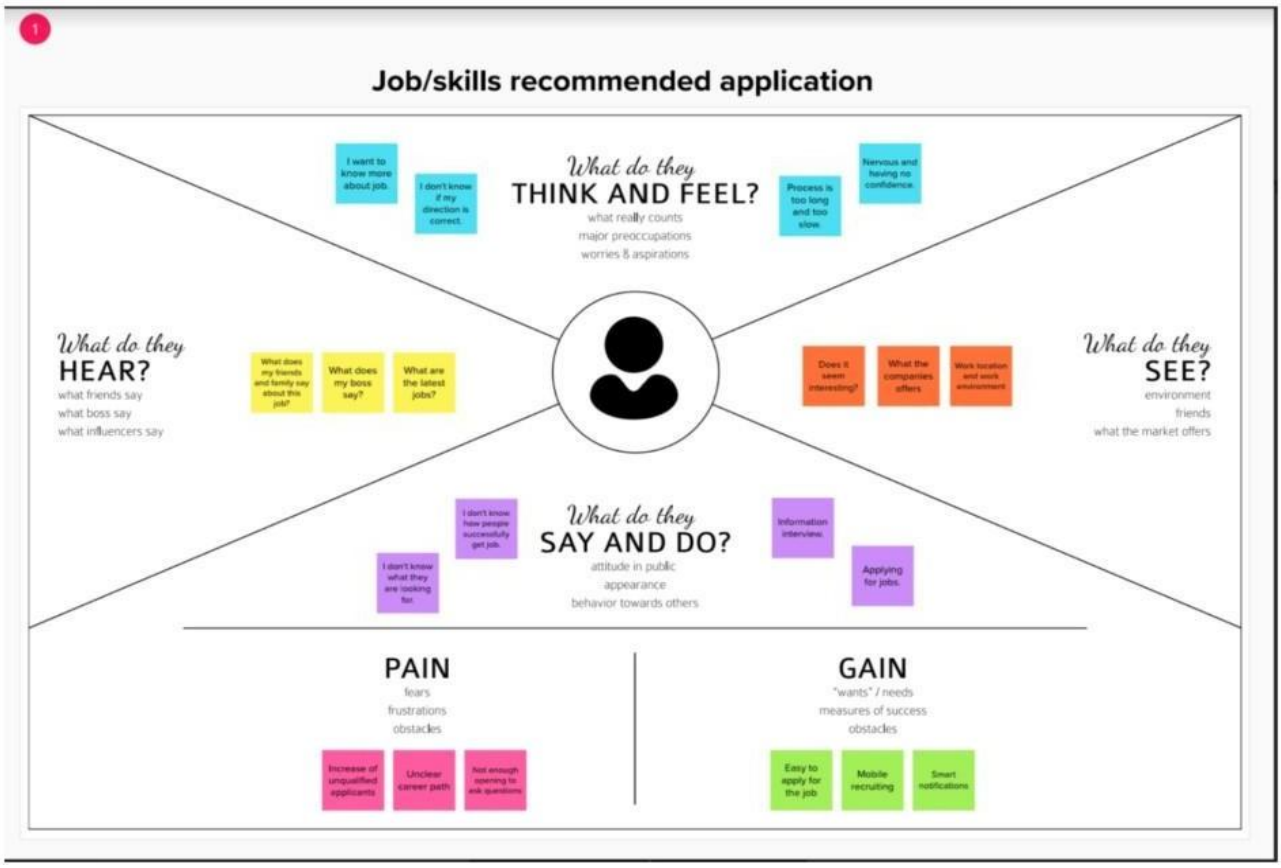
The current problem recruitment is done manually, most available jobs in Nigeria can only be applied at the agency can be done for which job seekers have to go to the agency check the available jobs at the agency.

Solution:

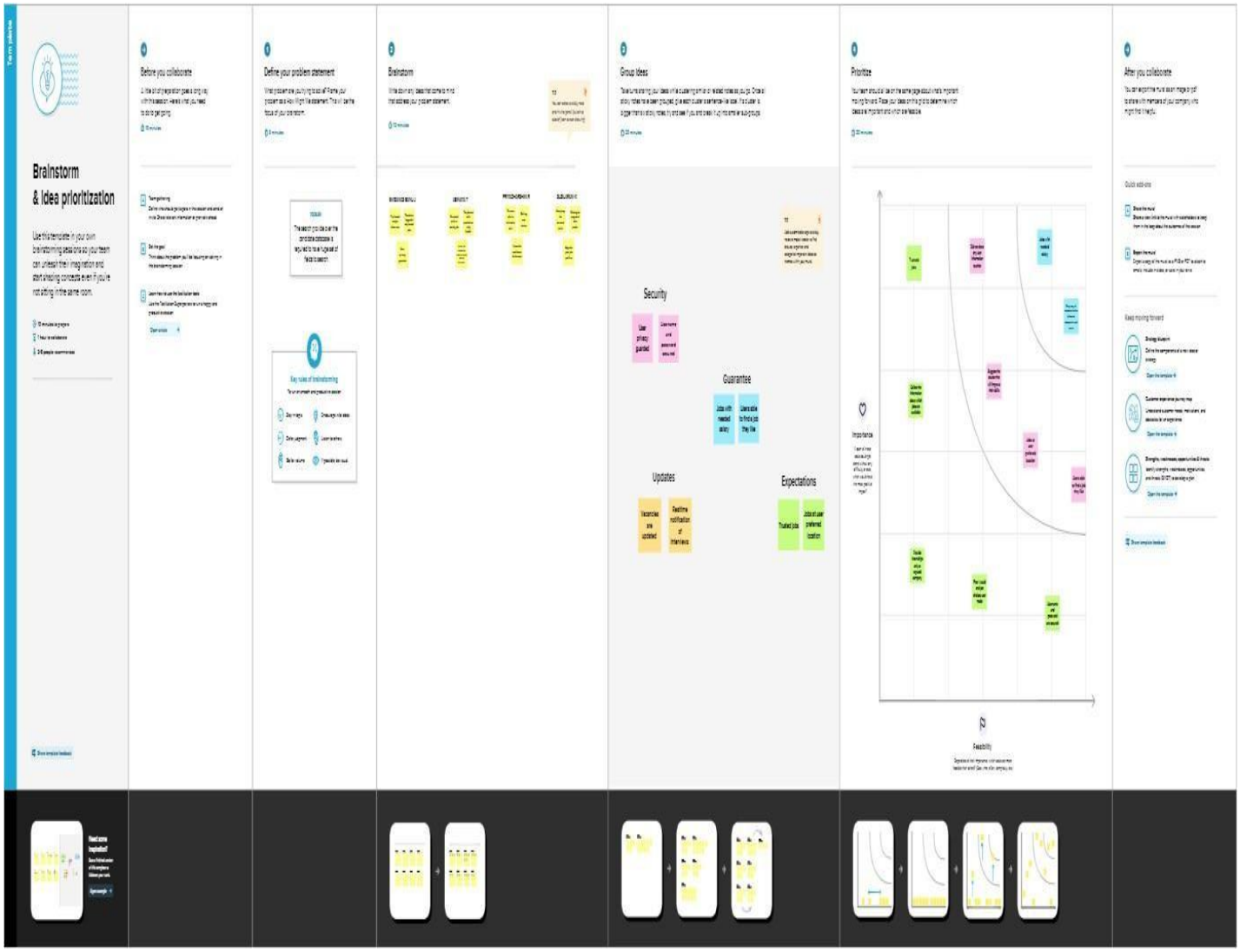
"The purpose of job-oriented application to help both the job seekers and recruiters find the right organization or the employers."

3. IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas



3.2 Ideation and Brainstroming :



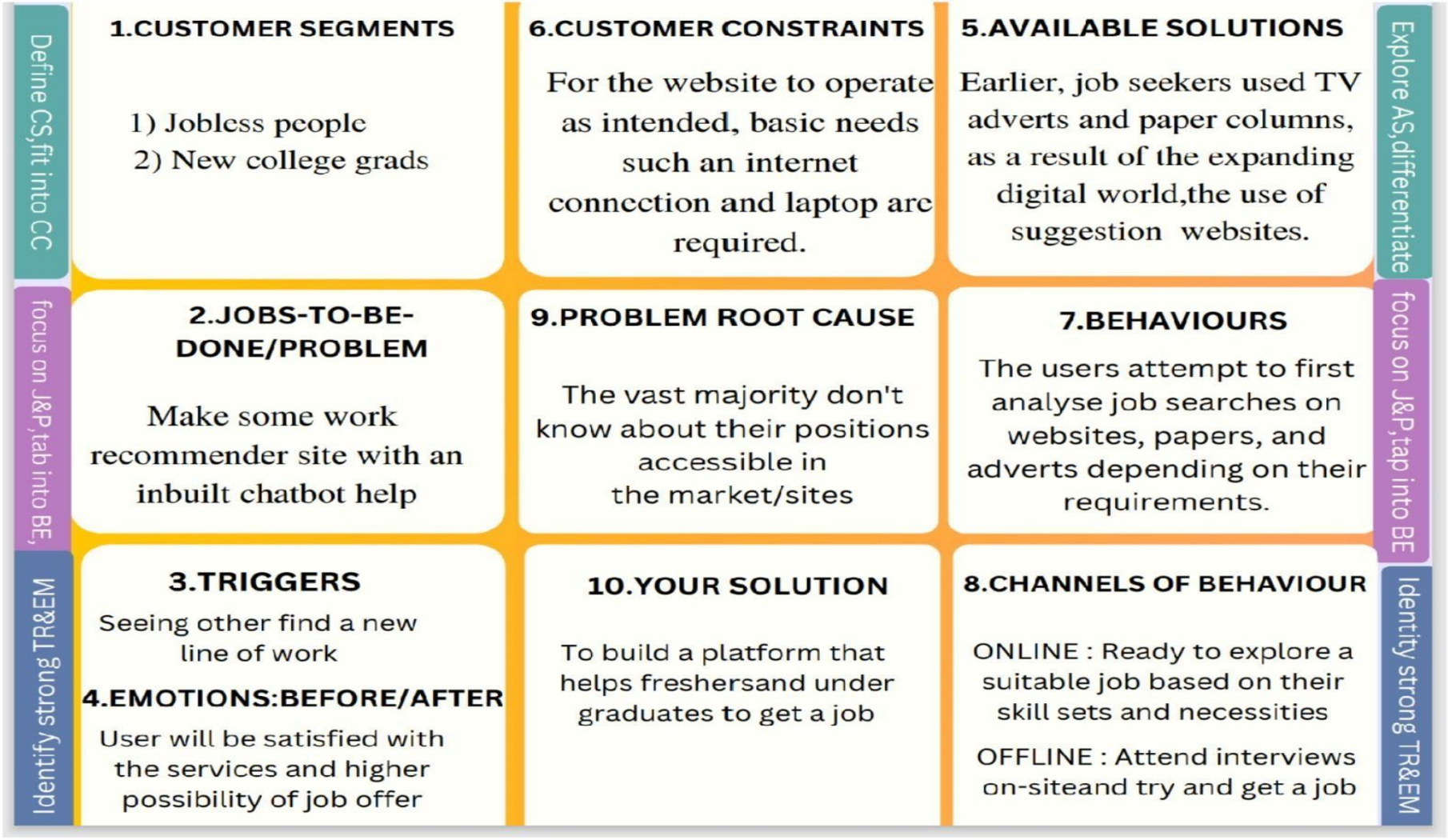
3.3 Proposed Solution

Proposed Solution:

S. No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	• The premium policy is a problem for users. • Look for jobs in a specific field because searching for jobs in all fields takes a long time. • Making salary estimates based on technical expertise.
2.	Idea / Solution description	• Access for all users is free. • Sorting the job based on its categories. • A salary estimator for use in estimating pay.
3.	Novelty / Uniqueness	• Improvements to the fields of work. • Earnings estimator based on user experience.
4.	Social Impact / Customer Satisfaction	• Since everyone has free access, open doors. • Users remain informed about the offers.
5.	Business Model (Revenue Model)	• Promotion of the platform. • Keeping abreast of emerging technologies and job opportunities.
6.	Scalability of the Solution	• Adaptable for use in professional coaching and training. • Scalability in locating a setting that is more accommodating to parents. • The primary factor in maximizing productivity is the development of a positive work environment.

3.4 Problem Solution Fit

Template:



4. REQUIREMENT ANALYSIS

4.1 Function Requirement

Software Required:

Python, Flask, Docker

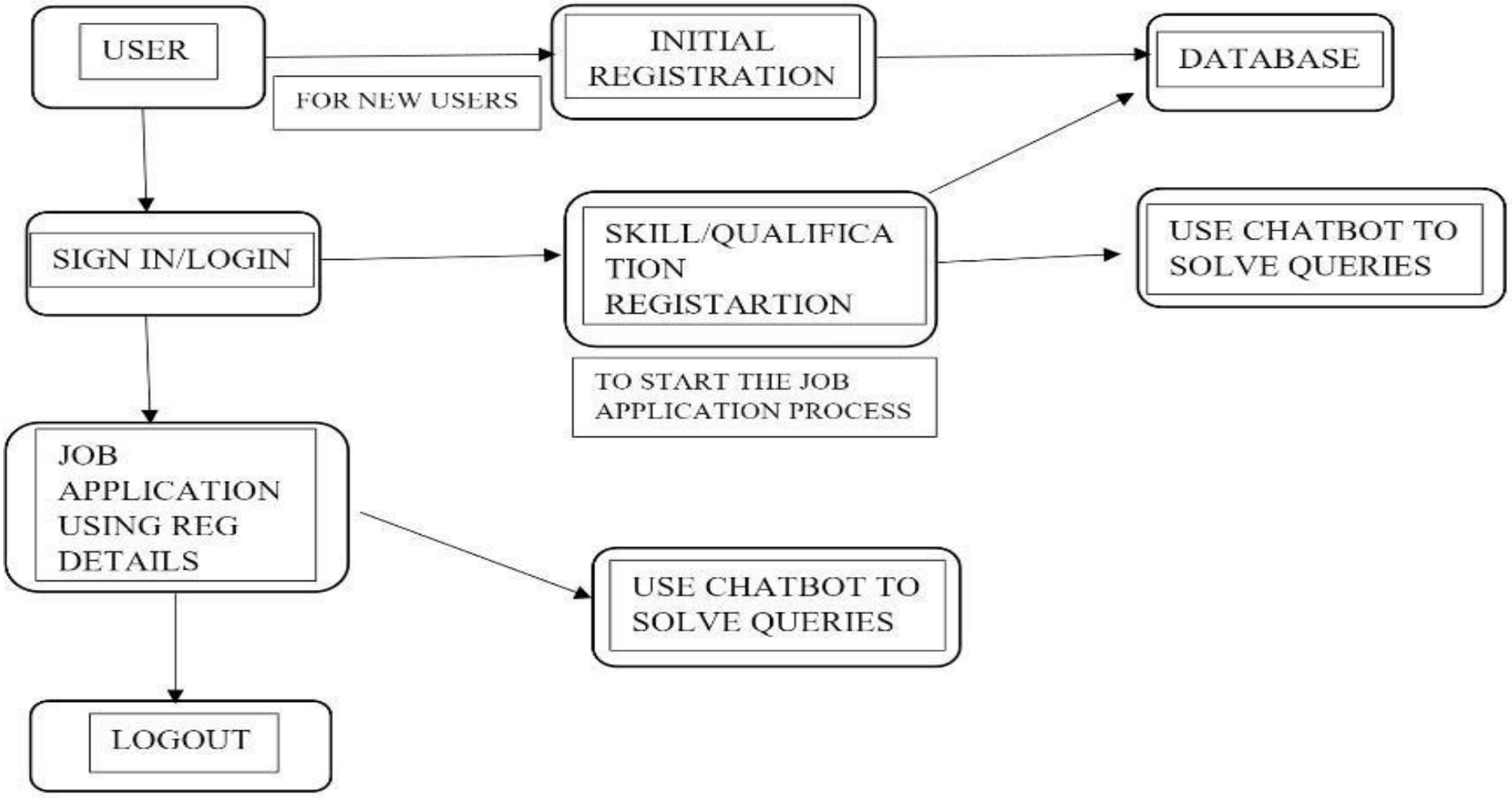
4.2 Non-Function Requirement

System Required:

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

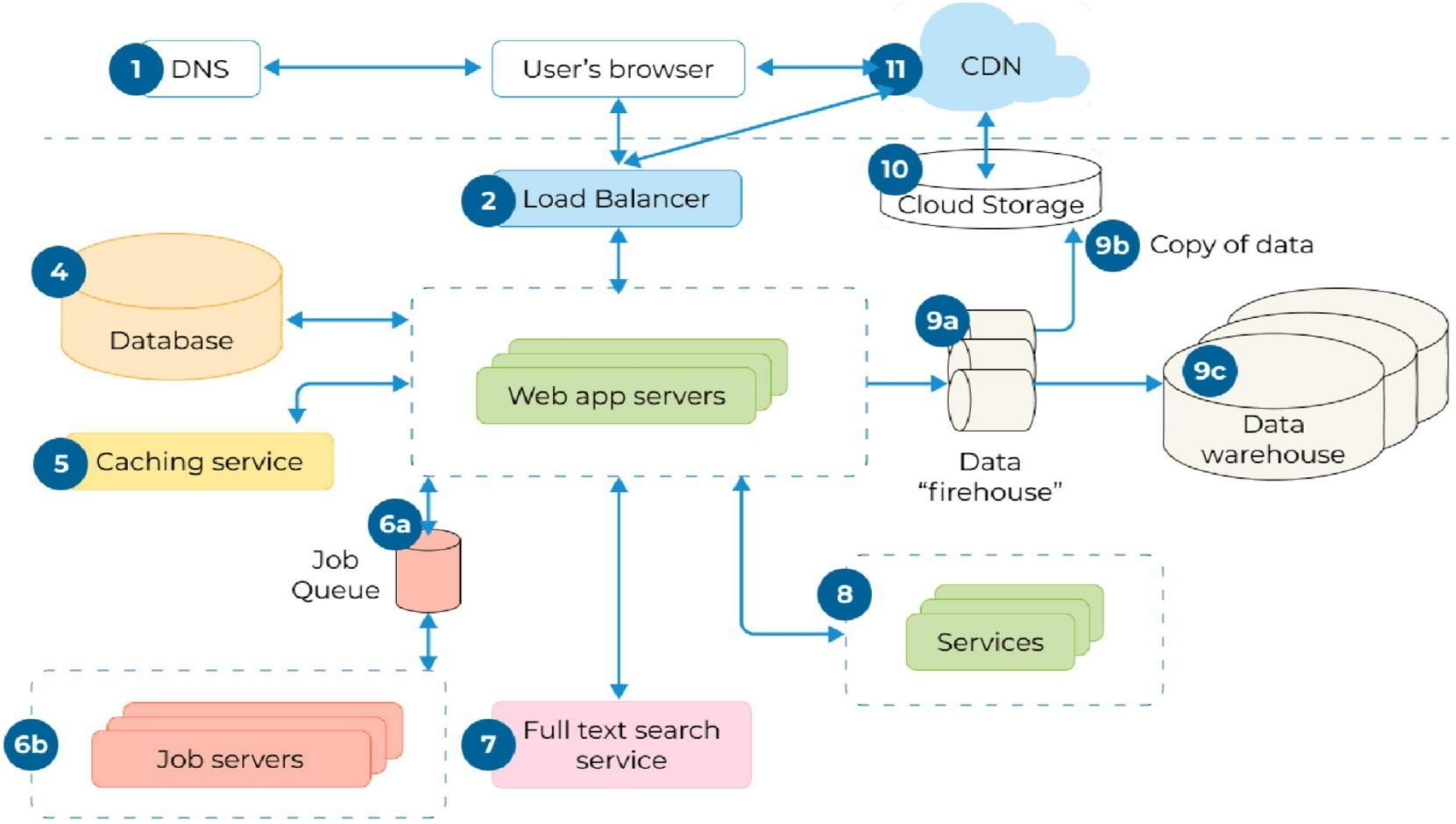
5. PROJECT DESIGN

5.1 Data Flow Diagrams

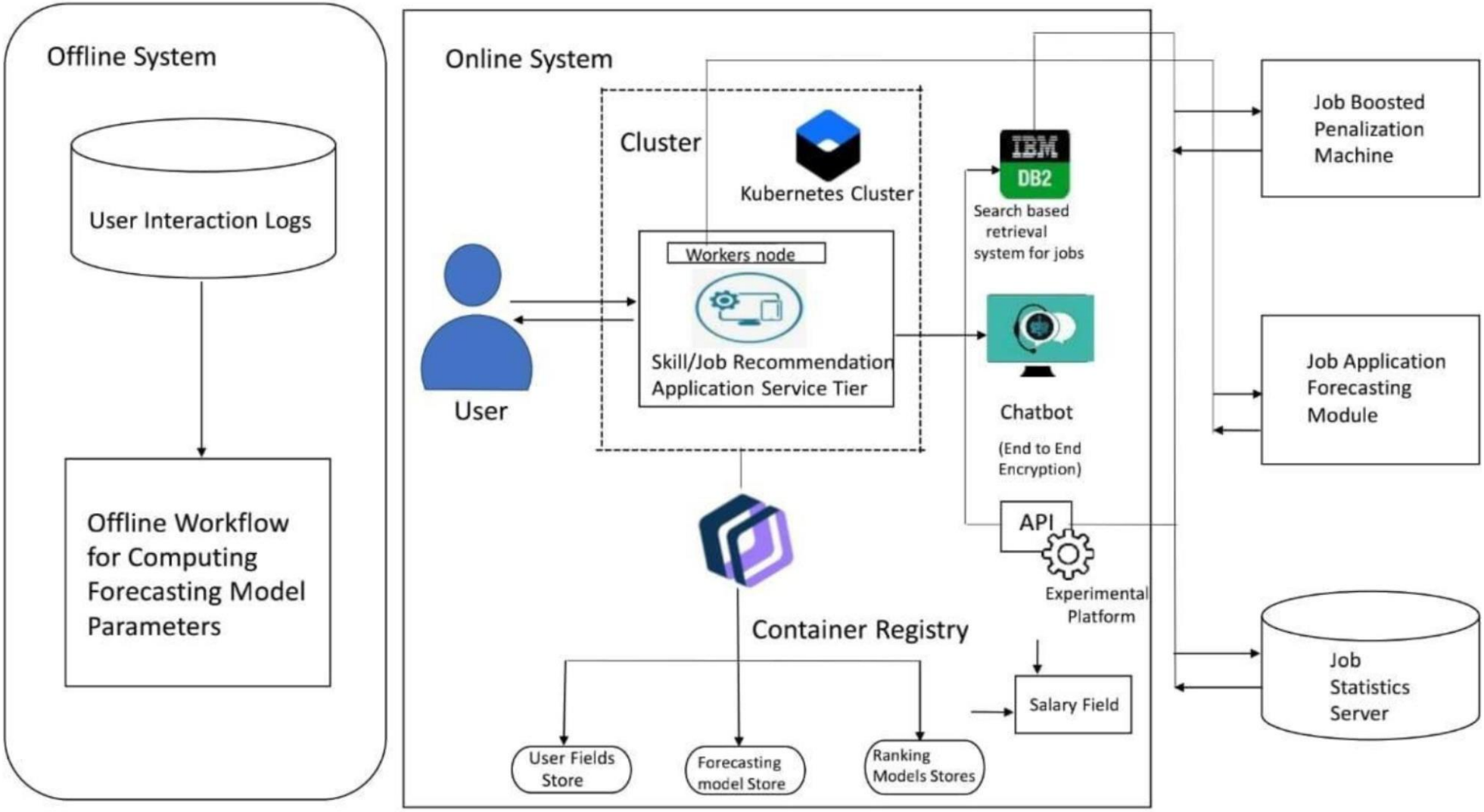


5.2 SOLUTION & TECHNICAL ARCHITECTURE

SOLUTION ARCHITECTURE



TECHNICAL ARCHITECTURE



5.3 USER STORIES

User Stories :

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2
		USN-4	As a user, I can register for the application through Gmail	I can receive confirmation email & click confirm	Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password	I can access my account / dashboard	High	Sprint-1
	Dashboard	USN-6	Create a model set that contains those models, then assign it to a role.	Assign that group to the appropriate roles on the Roles page	High	Sprint-1
Customer (Web user)	Identity-Aware	USN-7	Open, public access, User-authenticated access, Employee-restricted access.	Company public website. App running on the company intranet. App with access to customer private information.	High	Sprint-1
Customer Care Executive	Communication	USN-8	A customer care executive is a professional responsible for communicating the how's and why's regarding service expectations within a company.	For how to tackle customer queries.	Medium	Sprint-1
Administrator	Device management	USN-9	You can Delete/Disable/Enable devices in Azure Active Directory but you cannot Add/Remove Users in the directory.	Ease of use.	Medium	Sprint-1

6. PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Priority	Acceptance criteria	Team Members
Sprint-1	UI Design	USN-1	As a user, I can see and experience an awesome user interface in the website	Medium	Better Impression about a website	Muhammad imran
Sprint-1	Registration	USN-2	As a user, I can register for the application by entering my email, password, and confirming my password.	High	I can access my account *I* dashboard	Muhammad imran
Sprint-1		USN-3	As a user, I will receive confirmation email once I have registered for the application.	High	I can receive confirmation email & click confirm	Muhammad imran
Sprint-1		USN-4	As a user, I can register for the application through Facebook.	Low	I can register & access the dashboard with Facebook Login	Siva Suriya
Sprint-1		USN-5	As a user, I can register for the application through Gmail.	Medium	I can receive confirmation email & click confirm	Siva Suriya
Sprint-1	Login	USN-6	As a user, I can log into the application by entering email & password.	High	I can access my account *I* dashboard	Siva Suriya
Sprint-!	Flask	USN-7	As a user, I can access the website in a second.	High	I can access my account *I* dashboard	Isaiyamuthu

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Priority	Acceptance criteria	Team Members
Sprint-1	Dashboard	USN-8	As a user, If I Logged in correctly, I can view my dashboard and I can navigate to any pages which are already listed there.	High	I can access all the pages/ dashboard	Muhammad imran
			Submission Of Sprint-1			
Sprint-2	User Profile	USN-9	As a user, I can view and update my details	Medium	I can modify my details/data	Praveen kumar
Sprint-2	Database	USN-10	As a user, I can store my details and data in the website w	Medium	I can store my data	Praveen Kumar
Sprint-2	Cloud Storage	USN-11	As a user, I can upload my photo, resume and much more in the website.	Medium	I can Upload my documents and details	Asaiyamuthu
Sprint-2	Chatbot	USN-12	As a user, I can ask the Chatbot about latest job openings, which will help me and show the recent job openings based on my profile	High	I can know the recent job openings	Asaiyamuthu

Sprint-2	Identity-Aware	USN-13	As a User, I can access my account by entering by correct login credentials. My user credentials is only displayed to me.	High	I can have my account safely	Muhammad Imran
			Submission of Sprint-2			

Sprint	**Functional Requirement (Epic)**	**User Story Number**	**User Story / Task**	**Priority**	**Acceptance criteria**	**Team Members**
Sprint-3	Sendgrid service	USN-14	As a user, I can get a notification or mail about a job opening with the help of sendgrid service.	Medium	I can get a notification in a second.	Muhammad Imran Siva Suriyan
Sprint-3	Learning Resource	USN-15	As a user, I can learn the course and I will attain the skills which will be useful for developing my technical skills.	High	I can gain the knowledge and skills	Muhammad Imran Siva Suriyan Asaiyamuyhu
Sprint-3	Docker	USN-16	As a user, I can access the website in any device	High	I can access my account in any device	Muhammad Imran Siva Suriyan Praveen Kumar
Sprint-3	Kubernates	USN-17	As a user, I can access the website in any device	High	I can access my account in any device	Siva Suriyan Muhammad Imran

Sprint-3	Deployment in cloud	USN-18	As a user, I can access the website in any device	High	I can access my account in any device	Muhammad Imran Siva Suriyan
Sprint-3	Technical support	USN-19	As a user, I can get a customer care support from the website which will solve my queries.	Medium	I can tackle my problem & queries.	Muhammad Imran Siva Suriyan Praveen kumar
			Submission of Sprint-3			
Sprint	**Functional Requirement (Epic)**	**User Story Number**	**User Story / Task**	**Priority**	**Acceptance criteria**	**Team Members**
Sprint-4	Unit Testing	USN-15	As a user, I can access the website without any interruption	High	I can access the website without any interruption	Muhammad Imran Siva Suriyan
Sprint-4	Integration testing	USN-16	As a user, I can access the website without any interruption	High	I can access the website without any interruption	Muhammad Imran Siva Suriyan

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Priority	Acceptance criteria	Team Members
Sprint-4	System testing	USN-17	As a user, I can access the website without any interruption	High	I can access the website without any interruption	Siva Suriya Muhammad imran Isaiyamuthu
Sprint-4	Correction	USN-18	As a user, I can access the website without any interruption	High	I can access the website without any interruption	Praveen kumar Isaiyamuthu
Sprint-4	Acceptance testing	USN-19	As a user, I can access the website without any interruption	High	I can access the website without any interruption	Muhammad imran Siva Suriyan

6.2 SPRINT DELIVERY PLANNING

Project Tracker, Velocity & Burndown Chart:

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	20	6 Days	24 Oct 2022	29 Oct 2022	20	06 Nov 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	10 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20	15 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	19 Nov 2022

7. CODING & SOLUTIONING

7.1 Feature

Registration page

```
<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1">
<style> body{ font-family: Calibri,
Helvetica, sans-serif; background-color:
pink;
}
.container {
    padding: 50px;
  background-color: lightblue;
}

input[type=text], input[type=password], textarea {
  width: 100%; padding: 15px; margin: 5px 0 22px
  0; display: inline-block; border: none;
  background: #f1f1f1;
}
input[type=text]:focus, input[type=password]:focus
  { background-color: orange; outline: none;
} div
 {
            padding: 10px 0;
        } hr { border: 1px
solid #f1f1f1; margin-
bottom: 25px;
}
.registerbtn { background-
  color: #4CAF50; color:
  white; padding: 16px 20px;
  margin: 8px 0; border:
  none; cursor: pointer;
  width: 100%; opacity: 0.9;
```

```
}
.registerbtn:hover {
  opacity: 1;
}
</style>
</head>
<body>
<form action="file:///D:/Skill%20Job%20Recommender/login.html?username=admin&password=PSW">
  <div class="container">
  <center> <h1> Student Registeration Form</h1> </center>
  <hr>
  <label> Firstname </label>
<input type="text" name="firstname" placeholder= "Firstname" size="15" required />
<label> Middlename: </label>
<input type="text" name="middlename" placeholder="Middlename" size="15" required />
<label> Lastname: </label>
<input type="text" name="lastname" placeholder="Lastname" size="15"required />
<div>
<label>
Course :
</label>

<select>
<option value="Course">Course</option>
<option value="BCA">BCA</option>
<option value="BBA">BBA</option>
<option value="B.Tech\B.E">B.Tech/B.E</option>
<option value="MBA">MBA</option>
<option value="MCA">MCA</option>
<option value="M.Tech">M.Tech</option>
</select>
</div>
<div>
<label>
Gender :
</label><br>
<input type="radio" value="Male" name="gender" checked > Male
<input type="radio" value="Female" name="gender"> Female
<input type="radio" value="Other" name="gender"> Other

</div>
<label>
Phone :
</label>
<input type="text" name="country code" placeholder="Country Code" value="+91" size="2"/>
<input type="text" name="phone" placeholder="phone no." size="10"/ required> Current
Address :
<textarea cols="80" rows="5" placeholder="Current Address" value="address" required>
</textarea>
 <label for="email"><b>Email</b></label>
 <input type="text" placeholder="Enter Email" name="email" required>

    <label for="psw"><b>Password</b></label>
    <input type="password" placeholder="Enter Password" name="psw" required>

    <label for="psw-repeat"><b>Re-type Password</b></label>
    <input type="password" placeholder="Retype Password" name="psw-repeat" required>
    <button type="submit" class="registerbtn">Register</button>
</form>
```

```
</body>
</html>
```

Login.html

```
<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1">
<title> Login Page </title>
<style>
Body { font-family: Calibri, Helvetica, sans-serif;
  background-color: pink;
} button { background-color: #4CAF50; width:
100%;
        color: orange; padding: 15px;
        margin: 10px 0px; border: none;
        cursor: pointer;
         } form { border: 3px solid #f1f1f1;
    } input[type=text], input[type=password] {
        width: 100%; margin: 8px 0; padding:
        12px 20px; display: inline-block;
        border: 2px solid green; box-sizing:
        border-box;
    } button:hover { opacity:
 0.7;
    }
  .cancelbtn { width: auto; padding:
    10px 18px; margin: 10px 5px; }


 .container { padding: 25px;
        background-color: lightblue; }
</style>
</head> <body>
    <center> <h1> Student Login Form </h1> </center> <form>
        <div class="container">
            <label>Username : </label>
            <input type="text" placeholder="Enter Username" name="username" required>
            <label>Password : </label>
            <input type="password" placeholder="Enter Password" name="password" required>
            <button type="submit">Login</button>
            <input type="checkbox" checked="checked"> Remember me
            <button type="button" class="cancelbtn"> Cancel</button> Forgot <a
            href="#"> password? </a>
        </div>
```

```
    </form>
</body>
</html>
```

7.2 Feature 2

```
import { useToast } from "@chakra-ui/react";
import React, { useContext } from "react";
import { Link, useNavigate } from "react-router-dom";
import { AppContext } from "../context/AppContext";

const Navbar = () => {
const navigate = useNavigate();

const toast = useToast();

const { user, setUser, setSkills } = useContext(AppContext);

const logout = () =>
{setUser(null);

setSkills([]);
toast({
title: "Logged out successfully!",
status: "info",
duration: 3000,
isClosable: true,
variant: "left-accent",
position: "top",
});

localStorage.removeItem("user");

navigate("/");
 };
```

CHATBOT:

Chatbot has been implemented to provide assistance.

```
window.watsonAssistantC hatOptions = { integrationID: "d73273d3-3f44430484ee-
8fd243016d1d", // The ID of this integration.
 region: "jp-tok",
 // The region your integration is hosted in.

                serviceInstanceID: "81229104-ee6b-46daac1c-67ede110663a", // The
ID of your service instance.
                        onLoad: function(instance)
                    {instance.render(); }
                      };
                         setTimeout(function(){
                    const t=document.createElement('script');

                      t.src="https://webchat.global.assistant.watson.app
                      domain. cloud/versions/" +
                      (window.watsonAssistantChatOptions.clie
                      ntVersion || 'latest') +
                      "/WatsonAssistantChatEntry.js";
                   document.head.appendChild(t);
                    });
```

7.3 Database Schema (if Applicable) :

```
# using SendGrid's Python Library
# https://github.com/sendgrid/sendgrid-python
import os from sendgrid import
SendGridAPIClient from sendgrid.helpers.mail
import Mail

# from_address we pass to our Mail object, edit with your name
FROM_EMAIL = 'Your_Name@SendGridTest.com'
```

```
def SendEmail(to_email):
    """ Send an email to the provided email addresses

    :param to_email = email to be sent to
    :returns API response code
    :raises Exception e: raises an exception """
message = Mail(         from_email=FROM_EMAIL,
to_emails=to_email,         subject='A Test from
SendGrid!',         html_content='<strong>Hello there
from SendGrid your URL is: ' +         '<a
href="https://github.com/cyberjive">right
here!</a></strong>')     try:
        sg =
SendGridAPIClient(os.environ.get('SENDGRID_API_KEY'))
response = sg.send(message)         code, body, headers =
response.status_code, response.body,
response.headers
        print(f"Response Code: {code} ")
print(f"Response Body: {body} ")
print(f"Response Headers: {headers} ")
print("Message Sent!")     except Exception
as e:
        print("Error: {0}".format(e))
return str(response.status_code)


if__name__== "__main__":
    SendEmail(to_email=input("Email address to send to? "))
```

8. TESTING

8.2 User Acceptance Testing

Purpose of Document

The purpose of this document is to briefly explain the test coverage and open issues of the Skills/Job Recommender.

Application project at the time of the release to User Acceptance Testing (UAT).

Defect Analysis

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

Section	Total Cases	Not Tested
Print Engine	7	0
Client Application	5	0
Security	3	0
Outsource Shipping	7	0

Resolution	Severity 1	Severity 2	Severity 3	Severity 4
By Design	3	2	1	1
Duplicate	1	0	2	0
External	2	0	0	1
Fixed	5	2	5	7
Not Reproduced	0	0	1	0
Skipped	0	0	0	1
Won't Fix	0	5	1	1
Totals	11	9	10	11

1. Test Case Analysis

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

ExceptionReporting	6	0	0	6
Final ReporOutput	3	0	0	3
Version Control	2	0	0	2

9. RESULTS

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

10. ADVANTAGES & DISADVANTAGES

ADVANTAGES:

- Person who looks for a job can easily find a suitable job based on their skill set.
- Person can check their eligibility by attending eligibility test.
- Most of the Recruiters find the suitable person based on the scores they have gotten in the eligibility.

DISADVANTAGES

- Person Job May get technical difficulty while taking the eligibility.
- Job seeker may have trouble to contact recruiters directly.

11. CONCLUSION

The application has been developed to make job search easier. The application that we have developed is user friendly .User can find a job based on their skillset in the

short period of time. The jobseeker certainly get benefit by using this application. In the addition, Chatbot Has been implemented with the help of IBM watson. The chatbot helps jobseeker and organization when they experience the difficulties.

12. FUTURE SCOPE

The linked in the well-known application to find a job and stay connected with professional and organization. The job seekers and organization use linked in to find a job. In the future, There are lots of possibilities to enhance our project similar to linkedin.

13.APPENIX

SOURCE CODE

__init__.py

```
from dotenv import dotenv_values
from flask import Flask from
flask_cors import CORS
import ibm_db

# Get the environment variables
config = dotenv_values("backend/.env")

# Connect to db try:
    # conn = 'dd'     conn =
ibm_db.pconnect( f"DATABASE={config['DB2_DATABASE']};HOSTNAME={con
fig['DB2_HOSTN AME']};
PORT={config['DB2_PORT']};SECURITY=SSL; SSLServerCertificate=backend/
                                DigiCertGlobalRootCA.crt;UID={config['DB2_USERNAME']};
PWD={config['DB2_PASSWORD']}", '', '')
print("Connected to IBM_DB2 successfully!!")
print(conn) except:
    print("Failed to connect to Database!")


def create_app():
```

```
    # Tell flask to use the build directory of react to serve static content
app = Flask(__name__, static_folder='../build', static_url_path='/')

    CORS(app)

    # Set the secret key for flask
    app.config['SECRET_KEY'] = config['APP_SECRET']

    # Import and register auth_router
from .auth_router import auth
    app.register_blueprint(auth, url_prefix='/api/auth')

    from .files_router import files
    app.register_blueprint(files, url_prefix='/api/files')

    from .user_router import user
app.register_blueprint(user, url_prefix='/api/user')

    # In production serve the index.html page at root

    @app.route("/")
def home():
        return app.send_static_file('index.html')

    return app
```

auth_middleware.py

```
from
functools import wraps import jwt
from flask import request from
backend import conn, config
import ibm_db

# Middleware function that checks for JWT token in header
# All routes that have the @token_required decorator will be protected


def token_required(f):
@wraps(f)     def decorated(*args,
**kwargs):
```

```
        token = None        if "Authorization"
in request.headers:
            token = request.headers["Authorization"].split(" ")[1]
if not token:            return {
                "error": "Unauthorized"
            }, 401
try:
            # Get the user's email from the decoded token
            data = jwt.decode(
                token, config["APP_SECRET"], algorithms=["HS256"])

            # Retreive user's info from the database
            sql = f"select * from users where
email='{data['email']}'"            stmt = ibm_db.prepare(conn,
sql)            ibm_db.execute(stmt)
            current_user = ibm_db.fetch_assoc(stmt)

            # If user does not exist throw error.
if current_user is None:                return {
                    "error": "Unauthorized"
                }, 401
        except Exception as
e:            return
{ "error": str(e)
            }, 500

        # Pass the authorized user in function args.
return f(current_user, *args, **kwargs)

    return decorated
```

auth_router.py

```
from flask import Blueprint, jsonify, request
from backend import conn, config import
bcrypt import jwt
import ibm_db

auth = Blueprint("auth", __name_)

LOGIN_FEILDS = ('email', 'password')
SIGNUP_FEILDS = ('name', 'email', 'phone_number', 'password')
```

```
@auth.route("/login", methods=['POST']) def
login_user():
  # Check if all the required feild are present
for feild in LOGIN_FEILDS:
    if not (feild in request.json):        return
jsonify({"error": f"All feilds are required!"}), 409    email =
request.json['email']    password = request.json['password']
sql = f"select * from users where email='{email}'"    stmt =
ibm_db.prepare(conn, sql)    ibm_db.execute(stmt)    user =
ibm_db.fetch_assoc(stmt)    if not user:
    return jsonify({"error": "Invalid credentials!"}), 401
if bcrypt.checkpw(password.encode('utf-8'),
user["PASSWORD"].encode('utf-8')):
    token = jwt.encode(
{"email": email},
config["APP_SECRET"],
      algorithm="HS256"
    )
    return jsonify({"name": user["NAME"], "email": email, "phone_number":
user["PHONE_NUMBER"], "token": token}), 200
else:
    return jsonify({"error": "Invalid credentials!"}), 401


@auth.route("/signup", methods=['POST']) def
register_user():
  # Check if all the required feild are present
for feild in SIGNUP_FEILDS:      if not
(feild in request.json):
      return jsonify({"error": f"All feilds are required!"}), 409

  email = request.json['email']
  phone_number = request.json['phone_number']
  name = request.json['name']
  password = request.json['password']

  # Sql stmt to check if email/number is already in use
  sql = f"select * from users where email='{email}' or
phone_number='{phone_number}'"    stmt = ibm_db.prepare(conn, sql)
ibm_db.execute(stmt)    user = ibm_db.fetch_assoc(stmt)
  if user:
```

```
        return jsonify({"error": f"Email/Phone number is alread in use!"}), 409

    # If user does not exist, then create account
hashed_password          =
                                bcrypt.hashpw(passwor
d.encode('utf-8'), bcrypt.gensalt())
    sql  =  f"insert  into  users(name,email,phone_number,password)
values('{name}','{email}','{phone_number}',?)"     stmt = ibm_db.prepare(conn, sql)
ibm_db.bind_param(stmt, 1, hashed_password)     ibm_db.execute(stmt)     token =
jwt.encode(         {"email": email},         config["APP_SECRET"],
        algorithm="HS256"
    )
    return jsonify({"name": name, "email": email, "phone_number": phone_number,
"token": token}), 200
```

files_router.py

```
from flask import Blueprint
from backend.auth_middleware import token_required import
ibm_boto3
from ibm_botocore.client import Config, ClientError from
backend import config

cos = ibm_boto3.resource("s3",
                    ibm_api_key_id=config["COS_API_KEY_ID"],
ibm_service_instance_id=config["COS_INSTANCE_CRN"],
                    config=Config(signature_version="oauth"),
endpoint_url=config["COS_ENDPOINT"]
                    )

files = Blueprint("files",__name__)


def multi_part_upload(bucket_name, item_name, file_path):
try:
        print("Starting file transfer for {0} to bucket:
            {1}\n".format(item_name, bucket_name))
        # set 5 MB chunks
part_size = 1024 * 1024 * 5

        # set threadhold to 15 MB
        file_threshold = 1024 * 1024 * 15
```

```
        # set the transfer threshold and chunk size
transfer_config =
ibm_boto3.s3.transfer.TransferConfig(multipart_thresho
ld=file_threshold,
            multipart_chunksize=part_size
        )

        # the upload_fileobj method will automatically execute a multi-part upload
        # in 5 MB chunks for all files over 15 MB
with open(file_path, "rb") as file_data:
            cos.Object(bucket_name, item_name).upload_fileobj(
                Fileobj=file_data,
                Config=transfer_config
            )

        print("Transfer for {0} Complete!\n".format(item_name))
except ClientError as be:
        print("CLIENT ERROR: {0}\n".format(be))
except Exception as e:
        print("Unable to complete multi-part upload: {0}".format(e))


@files.route('/avatar', methods=["POST"])
@token_required def
upload_profile_photo(current_user):
    return "hello"
```

user_router.py

```
from flask import Blueprint, jsonify, request
from backend import conn
from backend.auth_middleware import token_required import
ibm_db

user = Blueprint("user",__name__)


@user.route("/skills", methods=["GET", "POST", "DELETE"])
@token_required def
manage_skills(current_user):
# Get user_id of current user
    user_id = current_user['USER_ID']
```

```
   # Handle GET request     if
request.method == 'GET':
       skills = []

       sql = f"select name from skills where
user_id={user_id}"         stmt = ibm_db.prepare(conn, sql)
ibm_db.execute(stmt)
       dict = ibm_db.fetch_assoc(stmt)

       # Iterate over all the results and append skills to the array
while dict != False:
           skills.append(dict['NAME'])
           dict = ibm_db.fetch_assoc(stmt)

       return jsonify({"skills": skills}), 200

   # Get the skills from the request
if not ('skills' in request.json):
       return jsonify({"error": f"All feilds are required!"}), 409

   skills = request.json['skills']

   # If no skills are provided then return empty array
if skills == []:
       return jsonify({"skills": []}), 200

   # Handle POST request     if
request.method == "POST":
       # Prepare the SQL statement to insert multiple rows
values = "         for i in range(len(skills)):             if i ==
0:
               values += 'values'
values += f"('{skills[i]}',{user_id})"
if i != len(skills)-1:
               values += ','
       sql = f"insert into skills(name,user_id) {values}"
stmt = ibm_db.prepare(conn, sql)
       status = ibm_db.execute(stmt)

       if status:
           return jsonify({"message": "Updated skills successfully!"}), 200
else:
           jsonify({"error": "Something went wrong!!"}), 409
```

```
   # Handle DELETE request
if request.method == 'DELETE':
values = ""         for i in
range(len(skills)):             values
+= f"'{skills[i]}'"             if i !=
len(skills)-1:
                values += ','
       sql = f"delete from skills where name in
({values})"         stmt = ibm_db.prepare(conn, sql)
status = ibm_db.execute(stmt)         if status:
            return jsonify({"message": "Deleted skills successfully!"}), 200
else:
            jsonify({"error": "Something went wrong!!"}), 409
```

avatar.svg

```
<svg width="480" height="480" fill="none"
xmlns="http://www.w3.org/2000/svg"><rect opacity=".1" width="480"
height="480" rx="32" fill="#fff"/><path d="M374.308 240c0 71.691-58.117
129.808-129.808 129.808S114.692 311.691 114.692 240 172.809 110.192 244.5
110.192 374.308 168.309 374.308 240z" fill="#F6F6F6" stroke="#fff" stroke-
width="10.385"/><path fill-rule="evenodd" clip-rule="evenodd" d="M244.5
256.2c-21.627 0-64.8 10.854-64.8 32.4v16.2h129.6v-16.2c0-21.546-43.173-
32.4-64.8-32.4m0-16.2c17.901 0 32.4-14.499 32.4-32.4 0-17.901-14.499-32.4-
32.4-32.4-17.901 0-32.4 14.499-32.4 32.4 0 17.901 14.499
32.4 32.4 32.4" fill="#35374A" opacity=".3"/></svg>
```

JobCard.jsx

```
import React, { useEffect } from "react";


const JobCard = ({ title, company, description, link }) =>
{return (
   <div className="max-w-sm flex flex-col rounded overflow-hidden
shadowlg border-2 border-slate-200">
     <>
       <div className="px-6 py-4">
```

```
        <div className="font-bold text-xl">{title}</div>
        <div className="text mb-2 text-gray-400">{company}</div>
        <p className="text-ellipsis overflow-hidden text-gray-800 text-sm">
          {description}
        </p>
      </div>
      <div className="px-6 pt-4 pb-2 mt-auto mb-2">
        <a href={link} target="__blank" className="bg-transparent hover:bg-purple-400 text-purple-400 fontsemibold hover:text-white py-2 mb-0 mt-4 px-4 border border-purple-400 hover:border-transparent rounded"
        >
          Apply
        </a>
      </div>
    </>
  </div>
 );
};

export default JobCard;
```

Login.jsx

```
import React, { useContext, useState } from "react";
import { Link, useNavigate } from "react-router-dom";
import { AppContext } from "../context/AppContext";
import { loginUser } from "../proxies/backend_api";
import { emailRegex } from "../utils/helper";

const Login = () => {   const { setShowAlert, setUser } =
useContext(AppContext);
```

```
  const navigate = useNavigate();

  const [inputs, setInputs] =
useState({email: "",       password: "",
  });

  const [error, setErrors] =
useState({email: "",       password:
"",
  });

  const handleChange = ({ target: { name, value } })
=> {     setErrors((prev) => {       return { ...prev,
[name]: "" };
    });
    setInputs((prev) => ({ ...prev, [name]: value }));
  };

  const checkInputErrors = () => {     let status = true;     if
(inputs.email.trim() === "" || !emailRegex.test(inputs.email.trim()))
{ setErrors((prev) => {      return { ...prev, email: "Enter a valid email" };
      });
      status = false;
    }

    if (inputs.password.trim() === "")
{ setErrors((prev) => {      return { ...prev, password:
"Enter a valid password" };
      });
      status = false;
    }
```

```
    if (inputs.password.trim().length < 6)
{ setErrors((prev) => {      return { ...prev, password:
"Minimum 6 characters" };
      });
      status = false;
    }
    return status;
  };

  const handleLogin = async () => {if (checkInputErrors()) {            const
data = await loginUser(inputs);       if (data.error) {
                                      setShowAlert({ type: "error",
message: data.error, duration: 3000 });                          return;
      }
      setUser(data);
                            setShowAlert({ typ
e: "success",              message: `Welcome
back ${data.name}`,        duration: 3000,
      });
      localStorage.setItem("user", JSON.stringify(data));
navigate("/dashboard");
    }
  };

  return (
    <div className="flex flex-col justify-center items-center gap-10 mt-5">
      <div>
        <button className="bg-base-300 rounded-box flex flex-row justify-evenly
items-center gap-10 px-10 py-5 w-fit mx-auto">
          <span>Sign in with Github</span>
          <img src={`github-dark.png`} alt="github" width="14%" />
        </button>
        <div className="divider max-w-xs">or</div>
```

```
      <form          onSubmit={(e) =>
e.preventDefault()}
className="card bg-base-300 rounded-
box flex flex-col justify-center items-
center gap-5 px-10 py-5 w-fit mx-auto"
      >
        <div>
          <input              value={inputs.email}
type="text"              name="email"
placeholder="email"              className="input input-bordered
input-primary w-full"              onChange={handleChange}
          />
          {error.email !== "" && (
            <p className="text-sm text-red-500 mt-1 font-medium">
              {error.email}
            </p>
          )}
        </div>
        <div>
          <input              value={inputs.password}
type="password"              name="password"
placeholder="password"              className="input input-
bordered input-primary w-full" onChange={handleChange}
          />
          {error.password !== "" && (
            <p className="text-sm text-red-500 mt-1 font-medium">
{error.password}
            </p>
          )}
        </div>
```

```
          <div className="text-center">
            <button              type="submit"
onClick={handleLogin}              className="btn
btn-sm btn-primary mb-4"
            >
              Login
            </button>
            <p>
              Don't have an account?{" "}
              <Link className="text-blue-400" to="/signup">
                Sign up
              </Link>
            </p>
          </div>
        </form>
      </div>
    </div>
  );
};

export default Login;
```

Navbar.jsx

```
import { useToast } from "@chakra-ui/react"; import
React, { useContext } from "react"; import { Link,
useNavigate } from "react-router-dom"; import
{ AppContext } from "../context/AppContext";
```

```
const Navbar = () => {   const
navigate = useNavigate();

  const toast = useToast();

  const { user, setUser, setSkills } = useContext(AppContext);

  const logout = () => {
setUser(null);

    setSkills([]);

    toast({       title: "Logged out
successfully!",       status: "info",
duration: 3000,       isClosable: true,
variant: "left-accent",       position:
"top",
    });

    localStorage.removeItem("user");

   navigate("/");
  };

  return (
    <div className="navbar bg-base-100 border-b-2">
      <div className="flex-1">
        <Link
          className="btn btn-ghost normal-case text-xl"
to={user ? "/dashboard" : "/"}
        >
```

```
          F-ing Jobs
        </Link>
      </div>
      {user && (
        <div className="flex-none gap-2">
          <div className="dropdown dropdown-end">
            <label tabIndex={0} className="btn btn-ghost btn-circle avatar ">
              <div className="w-10 rounded-full ring ring-opacity-50 ring-
purple700">
                <img src="https://placeimg.com/80/80/people" />
              </div>
            </label>
<ul
tabIndex={0}
              className="mt-3 p-2 shadow menu menu-compact dropdown-content bg-
base-100 rounded-box w-52"
            >
              <li>
                <a
                  className="justify-between"
onClick={() => navigate("/profile")}
                >
                  Profile
                </a>
              </li>
              <li>
                <a onClick={logout}>Logout</a>
              </li>
            </ul>
          </div>
        </div>
```

```
      )}
    </div>
  );
};

export default Navbar;
```

SearchBar.jsx

```
import React from "react"; import
{BsSearch } from "react-icons/bs";

const SearchBar = ({ setquery, onClick })
=> {   const handlesubmit = (e) =>
{e.preventDefault();   onClick();
  };

  return (
    <form className="flex items-center" onSubmit={handlesubmit}>
      <label htmlFor="simple-search" className="sr-only">
        Search
      </label>
      <div className="relative w-full">
        <div className="flex absolute inset-y-0 left-0 items-center pl-3 pointerevents-
none">
          <BsSearch />
        </div>        <input          onChange={(e) => setquery(e.target.value)}
name="search"          type="text"          id="simple-search"
className="bg-gray-50 border border-gray-300 text-gray-900 text-sm
rounded-lg focus:ring-blue-500 focus:border-blue-500 block w-full pl-10 p-
2.5 dark:bg-gray-700 dark:border-gray-600 dark:placeholder-gray-400
dark:textwhite dark:focus:ring-blue-500 dark:focus:border-blue-500"
placeholder="Search"          required=""
```

```
        />
      </div>      <button      type="submit"      className="p-2.5 ml-2
text-sm font-medium text-white bg-purple-700 rounded-lg border border-
purple-700 hover:bg-purple-800 focus:ring-4 focus:outline-none focus:ring-
purple-300"
      >
        <BsSearch />
        <span className="sr-only">Search</span>
      </button>
    </form>
  );
};

export default SearchBar;
```

Signup.jsx

```
import React, { useContext, useEffect, useState } from "react";
import { useNavigate } from "react-router-dom"; import
{ AppContext } from "../context/AppContext"; import
{ registerUser } from "../proxies/backend_api"; import
{ emailRegex } from "../utils/helper";

const SignUp = () => {   const { setUser } =
useContext(AppContext);

  const navigate = useNavigate();

  const [inputs, setInputs] =
useState({name: "",    email:  "",
phone_number: "",     password: "",
confirm_password: "",
  });
```

```
  const [error, setErrors] =
    useState({name: "",    email: "",
phone_number: "",
password: "",
confirm_password: "",
  });

  const handleChange = ({ target: { name, value } })
=> {     setErrors((prev) => {       return { ...prev,
[name]: "" };
    });
    setInputs((prev) => ({ ...prev, [name]: value }));
  };

  const checkInputErrors = () => {     let status = true;     if
(inputs.email.trim() === "" || !emailRegex.test(inputs.email.trim()))
{ setErrors((prev) => {      return { ...prev, email: "Enter a valid email" };
      });
      status = false;
    }

    if (inputs.name.trim() === "")
{ setErrors((prev) => {      return { ...prev, name:
"Enter a valid name" };
      });
      status = false;
    }

    if (inputs.phone_number.trim() === "") {       setErrors((prev) =>
{return { ...prev, phone_number: "Enter a valid phone number" };
```

```
      });
      status = false;
    }

    if (inputs.confirm_password.trim() === "") {       setErrors((prev)
=> {         return { ...prev, confirm_password: "Enter a valid
password" };
      });
      status = false;
    }

    if (inputs.password.trim() === "")
{ setErrors((prev) => {      return { ...prev, password:
"Enter a valid password" };
      });
      status = false;
    }

    if (inputs.password.trim().length < 6)
{ setErrors((prev) => {      return { ...prev, password:
"Minimum 6 characters" };
      });
      status = false;
    }

    if (inputs.password.trim() !== inputs.confirm_password.trim())
{       setErrors((prev) => {         return { ...prev, confirmPassword:
"Password don't match" };
      });
      status = false;
    }
```

```
    return status;
  };

  const handleSignUp = async () => {     if
(checkInputErrors()) {       const data =
await registerUser(inputs);       if
(data.error) {         toast({          title:
data.error,          status: "error",
duration: 3000,          isClosable: true,
variant: "left-accent",          position:
"top",
        });
return;
      }
      setUser(data);       toast({         title: `Your
journey starts here ${data.name}`,         status:
"success",         duration: 3000,         isClosable:
true,
        variant: "left-accent",
position: "top",
      });
      localStorage.setItem("user", JSON.stringify(data));
navigate("/profile");
    }
  };

  return (
<>
      <div>
        <button className="bg-base-300 rounded-box flex flex-row justify-evenly
items-center gap-10 px-10 py-5 w-fit mx-auto">
```

```
          <span>Sign in with Github</span>
          <img src={`github-dark.png`} alt="github" width="14%" />
        </button>
        <div className="divider max-w-xs">or</div>
        <div className="card bg-base-300 rounded-box flex flex-col justify-center
items-center gap-3 px-10 py-5 w-fit mx-auto">
          <div>
            <input              value={inputs.name}
type="text"              name="name"
placeholder="name"              className="input input-bordered
input-primary w-full"              onChange={handleChange}
            />
            {error.name !== "" && (
              <p className="text-sm text-red-500  font-medium">{error.name}</p>
            )}
          </div>
          <div>
            <input              value={inputs.email}
type="text"              name="email"
placeholder="email"              className="input input-bordered
input-primary w-full"              onChange={handleChange}
            />
            {error.email !== "" && (
              <p className="text-sm text-red-500  font-medium">{error.email}</p>
            )}
          </div>
          <div>
            <input
              value={inputs.phone_number}              type="text"
name="phone_number"              placeholder="phone number"
```

```
className="input input-bordered input-primary w-full"
onChange={handleChange}
          />
          {error.phone_number !== "" && (
            <p className="text-sm text-red-500  font-medium">
              {error.phone_number}
            </p>
          )}
        </div>
        <div>
          <input              value={inputs.password}
type="password"              name="password"
placeholder="password"              className="input input-
bordered input-primary w-full" onChange={handleChange}
          />
          {error.password !== "" && (
            <p className="text-sm text-red-500  font-medium">
              {error.password}
            </p>
          )}
        </div>
        <div>
          <input value={inputs.confirm_password}
type="password"              name="confirm_password"
placeholder="confirm password"              className="input
input-bordered input-primary w-full"
onChange={handleChange}
          />
          {error.confirm_password !== "" && (
```

```
            <p className="text-sm text-red-500  font-medium">
              {error.confirm_password}
            </p>
          )}
        </div>
        <div className="text-center">
          <button            onClick={handleSignUp}
  className="btn btn-sm btn-primary mb-4"
          >
            Sign Up
          </button>
        </div>
      </div>
    </div>
  </>
 );
};

export default SignUp;
```

Skill.jsx import React, { useEffect, useState } from "react";

```
const Skill = ({ skill, setSelectedSkills, disabled }) =>
  {const [isSelected, setIsSelected] = useState(false);

  useEffect(() => {    if (isSelected)
{ setSelectedSkills((prev) => [...prev,
skill]);
    } else {
      setSelectedSkills((prev) => prev.filter((item) => item !== skill));
    }
```

```
  }, [isSelected]);

  return (
    <li className="hover:text-white flex gap-1 items-center justify-between p-1
rounded-sm">
      {skill}
      <button         disabled={disabled}
onClick={() => setIsSelected(!isSelected)}
className={`cursor-pointer border-2 ${
          !isSelected ? "border-green-500" : "border-red-400"
        } p-1 rounded-lg`}
      >
        {!isSelected ? "Add" : "Remove"}
      </button>
    </li>
  );
};

export default Skill;
```

AppContext.jsx

```
import { createContext, useEffect, useState } from "react"; import
{ useNavigate } from "react-router-dom";

export const AppContext = createContext();

export const AppProvider = ({ children }) =>
{const navigate = useNavigate();

  const [skills, setSkills] = useState([]);
```

```
  const [user, setUser] = useState(null);

  useEffect(() => {     let temp_user =
JSON.parse(localStorage.getItem("user"));     if (!temp_user)
{       navigate("/");
    } else
      { setUser(temp_use
     r);
    }
  }, []);

  return (
    <AppContext.Provider value={{ user, setUser, skills, setSkills }}>
      {children}
    </AppContext.Provider>
  );
};
```

backend_api.js

```
import { BASE_URL } from "../utils/helper";

export const loginUser = async (inputs) =>
{try {
    const response = await fetch(`${BASE_URL}/auth/login`, {       method: "POST",
body: JSON.stringify(inputs),       headers: {
        "Content-Type": "application/json",
      },
    });
    const data = await response.json();
return data;   } catch (error)
{ console.error(error);
  }
```

```
};

export const registerUser = async (inputs) =>
{try {
   const response = await
fetch(`${BASE_URL}/auth/signup`, {      method: "POST",
body: JSON.stringify(inputs),      headers: {
       "Content-Type": "application/json",
     },
   });
   const data = await response.json();
return data;   } catch (error)
{ console.error(error);
  }
};
```

Profile.jsx

```
import
{ Progress,
  SkeletonCircle,
SkeletonText,
Spinner,   useToast,
} from "@chakra-ui/react"; import React, { useContext,
useEffect, useState } from "react"; import { AiOutlineClose }
from "react-icons/ai"; import { BsLinkedin } from "react-
icons/bs"; import { GoMarkGithub } from "react-icons/go";
import { MdDeleteForever } from "react-icons/md"; import
{RiEdit2Fill } from "react-icons/ri"; import { TfiTwitterAlt }
from "react-icons/tfi"; import { VscAdd } from "react-
icons/vsc"; import { AppContext } from
"../context/AppContext"; import {   getUserSkills,
removeUserSkills,   saveUserSkills,   updateUserDetails,
```

```
} from "../proxies/backend_api";

const Profile = () =>
{ const toast = useToast();

  const { user, setUser, skills, setSkills } = useContext(AppContext);    const [addSkill,
setAddSkill] = useState("");

  const [newSkills, setNewSkills] = useState([]);

  const [removedSkills, setRemovedSkills] = useState([]);

  const [isEditingEnabled, setIsEditingEnabled] = useState(false);

  const [loading, setLoading] = useState(false);

  const [userInfo, setUserInfo] =
useState({     name: "",     phone_number:
"",
  });

  const handleUserInfoChange = ({ target: { name, value } }) =>
{setUserInfo((prev) => ({ ...prev, [name]: value }));
  };

  const changeSkills = () =>
{if (
     addSkill !== "" &&
     !skills.find((item) => item.toLowerCase() === addSkill.toLowerCase())
    ) {
```

```
      setNewSkills((prev) => [...prev, addSkill.trim()]);
setSkills((prev) => [...prev, addSkill.trim()]);
    }
    setAddSkill("");
  };

  const removeSkills = (skill_name) =>
{ setRemovedSkills((prev) => [...prev, skill_name]);

    setSkills((prev) => prev.filter((item) => item !== skill_name));

    setNewSkills((prev) => prev.filter((item) => item !== skill_name));
  };

  const updateSkills = async () =>
{setLoading(true);

    let skillsAdded = false,
skillsRemoved = false;

    if (newSkills.length !== 0) {       skillsAdded = await
saveUserSkills(newSkills, user.token);
    }

    if (removeSkills.length !== 0) {       skillsRemoved = await
removeUserSkills(removedSkills, user.token);
    }

    if (skillsAdded || skillsRemoved)
{       toast({         title: "Profile
Updated!",         status: "info",
```

```
duration: 3000,        isClosable:
true,
        variant: "left-accent",
position: "top",
      });
    }

    setNewSkills([]);

    setRemovedSkills([]);

    setLoading(false);
  };

  const updateUserInfo = async () =>
{setLoading(true);

    const data = await updateUserDetails(userInfo, user.token);

    if (data) {       setUser((prev) => {         prev = { ...prev, name: data.name,
phone_number: data.phone_number };

        localStorage.setItem("user", JSON.stringify(prev));

        return prev;
      });

      toast({         title: "Profile
Updated!",         status:
"info",
```

```
        duration: 3000,
isClosable: true,
variant: "left-accent",
position: "top",
      });
    }

    setLoading(false);

    setIsEditingEnabled(false);
  };

  useEffect(() => {
if (user) {       (async
() => {
setLoading(true);

        let data = await getUserSkills(user?.token);

        if (data) setSkills(data);

        setLoading(false);
      })();

      setUserInfo({         name: user.name,
phone_number: user.phone_number,
      });
    }
  }, [user]);

  return (
```

```
   <>
     {loading && <Progress size="xs" isIndeterminate colorScheme={"purple"}
/>}
     <div className="my-5 mx-10">
       <div className="border-2 border-blue-100 w-full h-fit rounded-xl p-5 flex flex-
col gap-3">
         <div className="flex justify-between w-full min-h-[25vh]">
           <div className="flex flex-col justify-between">
             <h1 className="md:text-2xl  text-xl font-medium flex items-center gap-
4">
               Your Profile{" "}
               <button>
                 {isEditingEnabled ? (                    <AiOutlineClose
color="#ff8977"                    onClick={() =>
setIsEditingEnabled(!isEditingEnabled)}
                   />
                 ) : (
                   <RiEdit2Fill                    color="#4506cb"
onClick={() => setIsEditingEnabled(!isEditingEnabled)}
                   />
                 )}
               </button>
             </h1>
             <div className="flex flex-col gap-3">
               {isEditingEnabled ? (
                 <>
                   <input                    name="name"
value={userInfo.name}                    className="input input-bordered w-full
input-xs p-3 text-lg inputprimary"
                     type="text"
placeholder="name"
onChange={handleUserInfoChange}
```

```
                />                <input                    disabled
value={user?.email}                  className="input input-bordered w-full
input-xs p-3 text-lg inputprimary"
                  type="text"
placeholder="name"
                />
                <input
                  name="phone_number"
value={userInfo.phone_number}                  className="input input-
bordered w-full input-xs p-3 text-lg inputprimary"
                  type="number"
placeholder="phone number"
onChange={handleUserInfoChange}
                />
                <button                  className="btn btn-xs
btn-outline btn-primary"
onClick={updateUserInfo}
                >
                  Update
                </button>
              </>
            ) : (
              <>
                <h2 className="md:text-2xl xl:text-2xl sm:text-xl">
                  {user?.name}
                </h2>
                <p className="md:text-xl sm:text-md text-gray-700">
                  {user?.email}
                </p>
                <span className="text-gray-700">{user?.phone_number}</span>
              </>
```

```
            )}
          </div>
        </div>
        <div className="flex flex-col justify-end w-fit gap-4">
          <img
src="avatar.webp"
alt="profile"
            className="md:w-36 w-20 rounded-md object-contain"
          />
        </div>
      </div>
      <div className="divider my-2"></div>
      <div className="flex flex-col">
        <div className="flex justify-between gap-2 flex-col">
          <h4 className="text-xl">Skills</h4>
          <form              className="flex
gap-5 items-center"              onSubmit={(e)
=> e.preventDefault()}
          >
            <input              autoComplete="off"
value={addSkill}              type="text"              name="addSkill"
placeholder="Add skills"              onChange={(e) =>
setAddSkill(e.target.value)}              className="input input-bordered
w-full input-primary max-w-xl input-sm"
            />

            <button
className="hover:rotate-90 transition-all"
onClick={changeSkills}
            >
              <VscAdd size={20} />
```

```
            </button>
          </form>
          {loading ? (
<Spinner
thickness="3px"
speed="0.65s"
emptyColor="gray.200"
color="blue.500"
size="md"
className="m-3"
            />
          ) : (
            <ul className="flex gap-2 flex-wrap">
              {skills?.map((addSkill, ind) => (
                <li
                  className="bg-indigo-100 rounded p-2 flex gap-2 items-center"
key={ind}
                >
                  {addSkill}
                  <MdDeleteForever
color="#ff8977"                    onClick={() =>
removeSkills(addSkill)}                    size={20}
                  />
                </li>
              ))}
            </ul>
          )}

          <button              className="btn btn-sm
w-fit btn-primary"              type="button"
onClick={updateSkills}
```

```
          >
            Save
          </button>
        </div>
        <div className="divider my-2"></div>
        <div className="flex justify-between gap-2 flex-col">
          <h4 className="text-xl">Resume/Portfolio</h4>
          <div className="flex gap-5">
            <input
              className="input input-bordered w-full input-primary max-w-xl input-
sm"
              type="text"
placeholder="paste the link"
            />
            <button className="btn btn-primary btn-sm">update</button>
          </div>
        </div>
        <div className="divider my-2"></div>
        <div className="flex gap-2 flex-col">
          <h3 className="text-xl">Socials</h3>
          <div className="flex flex-col gap-2">
            <div className="flex gap-5 items-center">
              <GoMarkGithub size={20} />
              <input type="text" placeholder="paste the
link" className="border-2 border-gray-300 rounded-md px-3 my-
1 maxw-md"
              />
            </div>
            <div className="flex gap-5 items-center">
              <BsLinkedin size={20} />
```

```
                <input
type="text"
placeholder="paste the link"
className="border-2
border-gray-300 rounded-
md px-3 my-1 maxw-md"
                />
              </div>
              <div className="flex gap-5 items-center">
                <TfiTwitterAlt size={20} />
                <input                type="text"                placeholder="paste the
link"                 className="border-2 border-gray-300 rounded-md px-3 my-
1 maxw-md"
                />
              </div>
              <button className="btn btn-primary btn-sm max-w-
fit">                save              </button>
            </div>
          </div>
        </div>
      </div>
    </div>
  </>
 );
};

export default Profile;
```

Dashboard.jsx

```
import {
```

```
  Progress,
  SkeletonCircle,
  SkeletonText,
  Spinner,
} from "@chakra-ui/react"; import axios from "axios"; import
React, { useContext, useEffect, useState } from "react";
import JobCard from "../components/JobCard"; import
SearchBar from "../components/SearchBar"; import Skill from
"../components/Skill"; import { AppContext } from
"../context/AppContext"; import { getUserSkills } from
"../proxies/backend_api";

const Dashboard = () => {   const { user, skills, setSkills
} = useContext(AppContext);

  const [selectedSkills, setSelectedSkills] = useState([]);

  const [skillsLoading, setSkillsLoading] = useState(false);

  const [jobsLoading, setJobsLoading] = useState(false);

  const [query, setquery] = useState("");

  const [posts, setPosts] = useState(null);

  const id = import.meta.env.VITE_ADZUNA_API_ID;

  const key = import.meta.env.VITE_ADZUNA_API_KEY;

  const baseURL_with_skills =
`http://api.adzuna.com/v1/api/jobs/in/search/1?app_id=${id}&app_key=${key
```

```
}&results_per_page=15&what=${query}&what_and=${selectedSkills.join(
    " "
  )}&&content-type=application/json`;

  const baseURL =
`http://api.adzuna.com/v1/api/jobs/in/search/1?app_id=${id}&app_key=${key
}&results_per_page=15&what=${query}&content-type=application/json`;

  const searchJobsFromQuery = async () =>
{setJobsLoading(true);

    if (query !== "" || !posts) {       const { data
} = await axios.get(baseURL);
setPosts(data.results);
    }

    setJobsLoading(false);
  };

  const searchWithSkills = async () =>
{setJobsLoading(true);

    const { data } = await axios.get(baseURL_with_skills);

    setPosts(data.results);

    setJobsLoading(false);
  };

  useEffect(() => {     if (user) {       (async ()
=> {         setSkillsLoading(true);
```

```
setSkills(await getUserSkills(user.token));
setSkillsLoading(false);
      })();
    }
  }, [user]);

  useEffect(() =>
{ searchWithSkills
();
  }, [selectedSkills]);

  useEffect(() =>
{ searchJobsFromQuery
();
  }, []);

  return (
    <>
      {(jobsLoading || skillsLoading) && (
        <Progress size="xs" isIndeterminate colorScheme={"purple"} />
      )}
      <div className="flex gap-10 m-10">
        <div className="hidden lg:flex bg-purple-600 w-1/5 p-5 h-3/6 rounded-lg text-
center flex-col gap-4">
          <div className="text-2xl text-white capitalize font-extrabold">
            Your skills
          </div>
          {skillsLoading ? (
<Spinner              className="self-
center my-5"
thickness="3px"
speed="0.65s"
```

```
emptyColor="gray.200"
color="black.100"              size="lg"
          />
        ) : (
          <ul className="list-none text-gray-200 flex flex-col gap-2">
            {skills?.length === 0 ? (
              <p className="text-gray-300">
                Skills you add in the profile section will appear here!!
              </p>
            ) : (
              skills.map((skill, ind) => (
                <Skill                    skill={skill}
key={ind}
setSelectedSkills={setSelectedSkills}
disabled={skillsLoading}
                  />
              ))
            )}
          </ul>
        )}
        <p className="text-white text-sm">
          (Include your skills in the search result)
        </p>
      </div>

      <div className="mx-auto min-w-[80%] ">
        <SearchBar setquery={setquery} onClick={searchJobsFromQuery} />
        {query === "" ? (
          <h2 className="text-2xl mt-5">Recommended Jobs</h2>
        ) : (
          <h2 className="text-2xl mt-5">
```

```
            Search for keywords {query}
            {filterUsingSkills && `,${skills.join(",")}`}
          </h2>
        )}

        <div className="mt-5 grid grid-cols-1 lg:grid-cols-3 md:grid-cols-2
gap5">
          {jobsLoading
            ? [...new Array(10)].map((_, ind) => (
                <div key={ind}>
                  <SkeletonCircle size="8" className="mb-5" />
                  <SkeletonText
mt="4"
noOfLines={8}
spacing="4"
color={"red"}
                  />
                </div>
              ))
            : posts?.map((post, ind) => (
                <JobCard
key={ind}
title={post.title}
                  company={post.company.display_name}
description={post.description} link={post.redirect_url}
                />
              ))}
        </div>
      </div>
    </div>
```

```
    </>
  );
};

export default Dashboard;
```

Auth.jsx

```
import { Tab, TabList, TabPanel, TabPanels, Tabs } from "@chakra-
ui/react"; import React, { useContext, useEffect } from "react"; import
{useNavigate } from "react-router-dom"; import Login from
"../components/Login"; import SignUp from "../components/Signup";
import { AppContext } from "../context/AppContext";

const Auth = () => {   const
navigate = useNavigate();

  const { user } = useContext(AppContext);

  useEffect(() => {     if (user)
navigate("dashboard");
  }, []);

  return (
    <div className="flex flex-col justify-center items-center gap-10 mt-5">
      <Tabs isFitted variant="line" colorScheme={"purple"}>
        <TabList mb="1em">
          <Tab>Login</Tab>
          <Tab>SignUp</Tab>
        </TabList>
        <TabPanels>
```

```
          <TabPanel>
            <Login />
          </TabPanel>
          <TabPanel>
            <SignUp />
          </TabPanel>
        </TabPanels>
      </Tabs>
    </div>
  );
};

export default Auth;
```

helper.js export const emailRegex = /^[\w-.]+@([\w-]+\.)+[\w-]{2,4}$/;

export const urlRegex = /((([A-Za-z]{3,9}:(?:\/\/)?)(?:[-;:&=\+\$,\w]+@)?[A-Za-z0-9.-]+(:[0-9]+)?|(?:www.|[-;:&=\+\$,\w]+@)[A-Za-z0-9.-]+)((?:\/[\+~%\/.\w-_]*)?\??(?:[-\+=&;%@.\w_]*)#?(?:[\w]*))?)/;

export const BASE_URL = import.meta.env.VITE_BACKEND_ENDPOINT;

App.jsx

import { useEffect } from "react"; import { HashRouter, Route, Routes } from "react-router-dom"; import Navbar from "./components/Navbar"; import { AppProvider } from "./context/AppContext"; import Auth from "./screens/Auth";

```
import Dashboard from "./screens/Dashboard"; import Profile
from "./screens/Profile";


function App() {   useEffect(() => {     window.watsonAssistantChatOptions =
{       integrationID: import.meta.env.VITE_WATSON_INTEGRATION_ID, //
The ID of this integration.
     region: import.meta.env.VITE_WATSON_REGION, // The region your
integration is hosted in.
     serviceInstanceID:
import.meta.env.VITE_WATSON_SERVICE_INSTANCE_ID, // 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);
   });
 }, []);
 return (
   <HashRouter>
     <AppProvider>
       <Navbar />
       <Routes>
         <Route path="/" element={<Auth />} />
         <Route path="/dashboard" element={<Dashboard />} />
         <Route path="/profile" element={<Profile />} />
       </Routes>
```

```
      </AppProvider>
    </HashRouter>
  );
}

export default App;
```

main.jsx

```
import { ChakraProvider } from "@chakra-
ui/react"; import React from "react"; import
ReactDOM from "react-dom/client"; import App
from "./App"; import "./index.css";

ReactDOM.createRoot(document.getElementById("root")).render(
  <React.StrictMode>
    <ChakraProvider>
      <App />
    </ChakraProvider>
  </React.StrictMode>
);
```

Index.css

```
@import
url("https://fonts.googleapis.com/css2?family=Ubuntu&display=swap");

@tailwind base;
@tailwind components;
@tailwind utilities;

:root {
```

```
  font-family: Inter, Avenir, Helvetica, Arial, sans-
serif;   font-size: 16px;   line-height: 24px;   font-
weight: 400;

  color-scheme: light;
  /* color: rgba(255, 255, 255, 0.87);   background-
color: #242424; */

  font-synthesis: none;   text-
rendering: optimizeLegibility;   -
webkit-font-smoothing: antialiased;
  -moz-osx-font-smoothing: grayscale;
  -webkit-text-size-adjust: 100%;
}

* {   margin: 0;   padding: 0;
font-family: "Ubuntu", sans-serif;
}

body::-webkit-scrollbar
{ width: 5px;background-
color: none;   border-radius:
20px;
}

body::-webkit-scrollbar-thumb
{ background-color: #adadad;border-
radius: 20px;
}
```

```
body {   max-height:
100vh;
}
```

Deployment.yaml

```
## Enter your <docker_username> before use

apiVersion:
v1 kind:
Service
metadata:
name: test
labels:     app:
test spec:
  type: NodePort
ports:     - port:
5000       name: http
nodePort: 30080
selector:     app: app
---
apiVersion: extensions/v1beta1 kind:
Deployment
metadata: name:
test spec:
replicas: 1
template:
metadata:
labels:
app: app
```

```
spec:
containers:
- name: ibm_project          image:https://github.com/IBM-EPBL/IBM-Project-
  3989-1658678612          ports:
- containerPort: 5000       imagePullSecrets:
- name: regcred
```

main.py

```
from backend import create_app

app = create_app()

if__name__== '__main__':
from waitress import serve
serve(app, port=5000)
```

package.json

```
{
  "name": "react-flask-app",
  "private": true,
  "version": "0.0.0",
  "type": "module",
  "scripts":
  { "start": "vite",
    "build": "vite build",
    "preview": "vite preview",
    "server": "cd backend && flask --debug run"
  },
```

```
  "dependencies":
    { "axios": "^1.1.3",
    "daisyui": "^2.33.0",
    "react": "^18.2.0",
    "react-dom": "^18.2.0",
    "react-icons": "^4.6.0",
    "react-router-dom": "^6.4.2"
  },
  "devDependencies":
    { "@types/react":
    "^18.0.17",
    "@types/react-dom": "^18.0.6",
    "@vitejs/plugin-react": "^2.1.0",
    "autoprefixer": "^10.4.12",
    "postcss": "^8.4.18",
    "tailwindcss": "^3.1.8",
    "vite": "^3.1.0"
  } }
```

postcss.config.cjs

```
module.exports =
{plugins:
{ tailwindcss: {},
autoprefixer: {},
  },
}
```

tailwind.config.cjs

```
/** @type {import('tailwindcss').Config} */
module.exports = {   darkMode: "class",   content:
["./index.html", "./src/**/*.{js,ts,jsx,tsx}"],   theme:
{     extend: {},
  },
```

```
  plugins:
[require("daisyui")],
daisyui: {     themes:
["light"],
  },
};
```

vite.config.js

```
import react from "@vitejs/plugin-react"; import
{ defineConfig } from "vite";

// https://vitejs.dev/config/ export
default defineConfig({    plugins:
[react()],
  server:
{ port:
3000,cors:
false,
  },
});
```

Dockerfile

```
# Build step #1: build the React front end
FROM node:16-alpine as react-builder
WORKDIR /app
ENV PATH /app/node_modules/.bin:$PATH
COPY package.json ./
COPY ./src ./src
COPY ./public ./public
COPY ./index.html ./vite.config.js ./postcss.config.cjs ./tailwind.config.cjs ./.env
./
RUN npm install
```

```
RUN npm run build

# Build step #2: build the API with the client as static files
FROM python:3.10
WORKDIR /app
COPY --from=react-builder /app/dist ./dist
COPY main.py ./main.py

RUN mkdir ./backend
COPY backend/ ./backend/
RUN pip install -r ./backend/requirements.txt

EXPOSE 5000
ENTRYPOINT ["python","main.py"]
```

GITHUB & PROJECT DEMO LINK:

All the tasks of developing the application were uploaded on the github.
The github has been uploaded below. https://github.com/IBM-EPBL/IBM-Project-50334-1660903344