ANNAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES – KADAPA
(AUTONOMOUS)
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CRT-PROJECT

TITLE : GROUP PARTNER MATCHING SYSTEM

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DESCRIPTION

Group Partner Matching System:

A system designed to help users form effective groups by matching them with suitable partners based on their skills, availability, and project needs. It collects user details and preferences, then finds the best matches from the available members. This ensures better teamwork, improved coordination, and successful project outcomes

PROJECT TECH STACK

- This project is built by using Python and SQL

Frontend : Command Line Interface(CLI)

➢ User interacts via text-based commands

Backend :

➢ Python-handles application logic

➢ MySQL-Manages DataBase

DB CONNECTION ESTABLISHMENT:

```
import mysql.connector
def connect():
    conn=mysql.connector.connect(
        host="localhost",
        user="root",
        password="Hari@2005",
        database="group_partner_matching_system"
    )
    return conn
if(connect()):
    print("Connection established successfully")
else:
    print("Connection failed")
```

OUTPUT

```
sktop/Group Partner Matching System/users.py"
Connection established successfully
```

Creating Database and Required Table

```sql
create database group_partner_matching_system;
use group_partner_matching_system;

CREATE TABLE add_users  (
    user_id INT AUTO_INCREMENT PRIMARY KEY,
    name VARCHAR(100),
    contact varchar(20),
    skill1 varchar(50),
    skill2 varchar(50),
    skill3 varchar(50),
    skill4 varchar(50),
    skill5 varchar(50),
    email varchar(100),
    years_of_experience int,
    availability VARCHAR(50)
);
```

DATABASE SCHEMA

Table:

	user_id	name	contact	skill1	skill2	skill3	skill4	skill5	email	years_of_experience	availability	username	password

Here,

user_id is the PRIMARY KEY

LOGIN PROCESS:

```python
def login_user():
    conn=connect()
    cursor=conn.cursor()
    username=input("Username: ")
    password=input("Password: ")
    query="SELECT * FROM Register_User WHERE username=%s AND password=%s"
    values=(username,password)
    cursor.execute(query,values)
    user=cursor.fetchone()
    if user:
        print("Login successful. Welcome",user[1])
        find_partner()
    else:
        print("Invalid credentials.")
```

If User Exists:

```
Connection established successfully
Username: Hari_Priya
Password: 9856743
Login successful. Welcome hari
```

If User Doesn't Exists:

```
Connection established successfully
Username: faf77Agmail.com
Password: 200513
Invalid credentials.
```

FUNCTIONALITIES:

- connect() – Connects to the MySQL database.
- Register_User() – Takes user details and saves them into the database.
- login_user() – Verifies username and password for login.
- find_partner() – Finds and displays matching partners based on skills and availability.
  cursor.execute()– Executes SQL queries.
- conn.commit()– Saves changes to the database.
- input() – Takes user input.
- print() – Displays output to the user.

INPUTS AND OUTPUTS

Inputs:

```
Connection established successfully
Username: faf77@gmail.com
Password: 200513
Login successful. Welcome Faf
Enter required skill 1: python
Enter required skill 2: java
Enter required skill 3: c
How many partners do you want (1 to 10)? 3
```

Outputs:

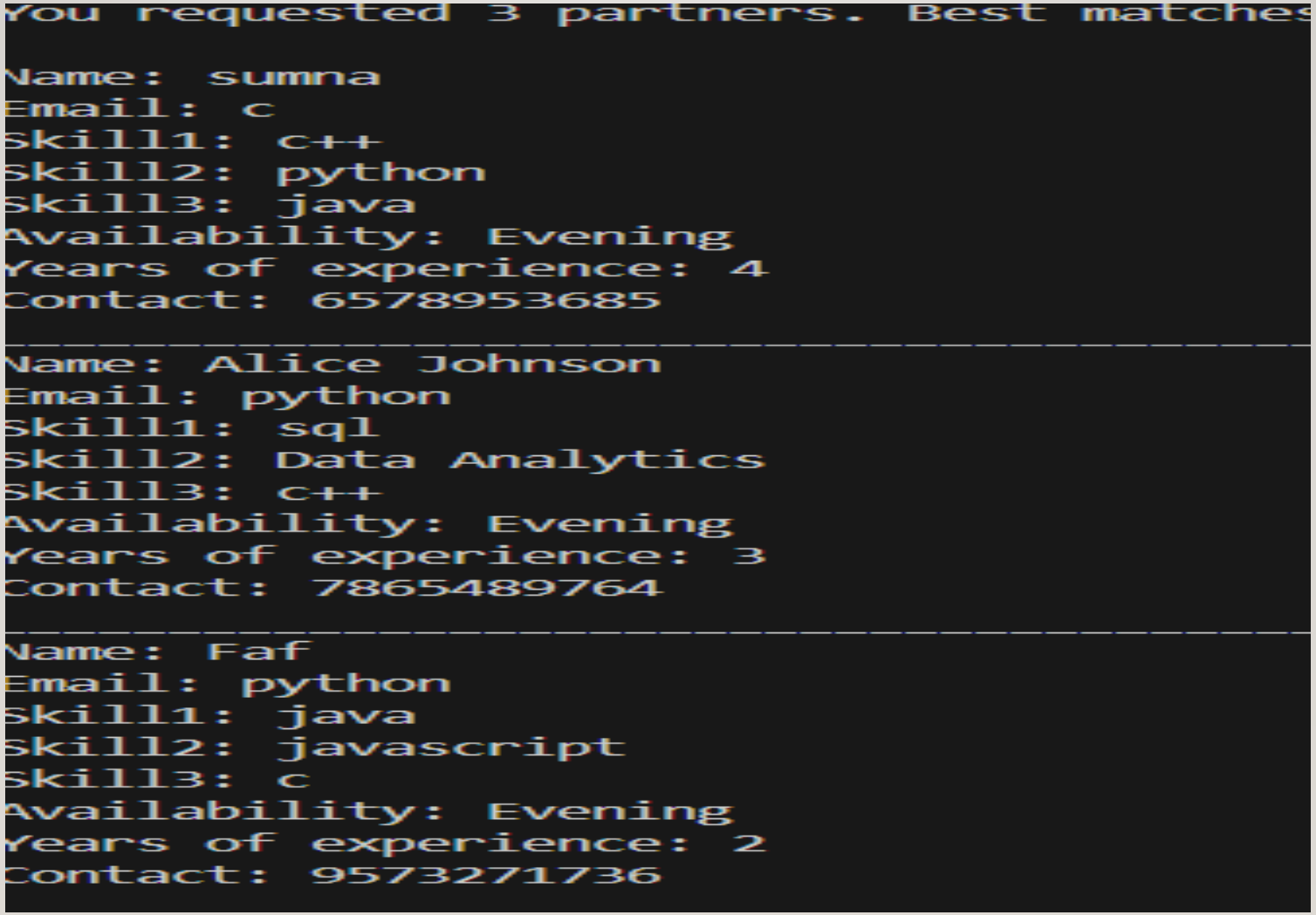
```
You requested 3 partners. Best matches:

Name: sumna
Email: c
Skill1: c++
Skill2: python
Skill3: java
Availability: Evening
Years of experience: 4
Contact: 6578953685
```

EXECUTION:

- Program starts and runs Register_User().
- Takes user details and saves them to the database.
- Then, user logs in using login_user().
- If login is successful, it runs find_partner().
- User gives required skills and availability.
- Program searches database and shows matching partners.

FINAL OUTPUT:




Thank
you!