

Cap Stone Project: Skill Tracker Application

Objective: The Skill Tracker App helps organize and track people in a company and the skills they have. It's like a skill manager that makes it easy to keep things organized.

Features:

- Add new people and their details.
- See a list of all the people and what they do.
- Change details when needed.
- Connect skills to specific people so we know who has what skills.
- Change or remove skills as needed.
- Find out how many people have certain skills.

Flow:

Output: App Menu

```
===== Skill Tracker App Menu =====
1. Add Associate      4. Delete Associate
2. List Associates    5. Search Associate
3. Edit Associate     6. Show Metrics
7. Exit
```

Add Associate:

```
===== Skill Tracker App Menu =====
1. Add Associate      4. Delete Associate
2. List Associates    5. Search Associate
3. Edit Associate     6. Show Metrics
7. Exit
1
Enter Associate Name:
Arjun
Enter Associate Age:
22
Enter Business Unit:
BackEndDeveloper
Enter Email:
arjun@gmail.com
Enter Location:
Chennai
Enter Skill (or press '1' to finish adding skills): 1
Please enter at least one skill
Enter Skill (or press '1' to finish adding skills): Java
Enter Skill Description:
Exp in 3years
Select Skill Category
1. Primary
2. Secondary
Enter your choice
1
Enter Skill Experience (in months):
38
Enter Skill (or press '1' to finish adding skills): 1
Associate added successfully!
```

List Associate:

```
ID: 5
Name: Arjun
Age: 22
Business Unit: BackEndDeveloper
Email: arjun@gmail.com
Location: Chennai
Create Time: 2023-09-27 23:30:16
Update Time: 2023-09-27 23:30:16
Skills:
  Skill ID: 6
  Skill Name: Java
  Skill Description: Exp in 3years
  Skill Category: Primary
  Skill Experience: 38 months
```

DB details:

#	id	name	age	business_unit	email	location	create_time	update_time
1	3	vijaykumar	22	FullStackDev	vijay@bandi.com	Vellore	2023-09-27 16:43:39	2023-09-27 17:49:58
2	4	dinesh	21	testing	test@test.com	Chennai	2023-09-27 18:12:44	2023-09-27 18:12:44
3	5	Arjun	22	BackEndDeveloper	arjun@gmail.com	Chennai	2023-09-27 23:30:16	2023-09-27 23:30:16

#	id	name	description	category	experience	associate_id
1	2	java	1years exp	Primary	12	3
2	3	angular	1years of exp	Primary	12	3
3	5	white box testing	1years exp	Secondary	12	4
4	6	Java	Exp in 3years	Primary	38	5

Edit Associate menu:

```
===== Skill Tracker App Menu =====
1. Add Associate      4. Delete Associate
2. List Associates    5. Search Associate
3. Edit Associate     6. Show Metrics
7. Exit
3
Enter the Associate ID
5
Editing Associate: Arjun
1. Edit Name
2. Edit Age
3. Edit Business Unit
4. Edit Email
5. Edit Location
6. view all skills
7. Add Skill
8. Edit Skill
9. Delete Skill
10. Back to Main Menu
```

Edit operation:

Option 1:

```
===== Skill Tracker App Menu =====
1. Add Associate      4. Delete Associate
2. List Associates    5. Search Associate
3. Edit Associate     6. Show Metrics
7. Exit
3
Enter the Associate ID
5
Editing Associate: Arjun
1. Edit Name
2. Edit Age
3. Edit Business Unit
4. Edit Email
5. Edit Location
6. view all skills
7. Add Skill
8. Edit Skill
9. Delete Skill
10. Back to Main Menu
1
Enter the new name:
Seenu
1. Continue Edit
2. Submit
Enter your choice
1
```

Option 2:

```
2
Enter the new age:
23
1. Continue Edit
2. Submit
Enter your choice
1
```

Option 3:

```
3
Enter the new business unit:
FrontEndDeveloper
```

Option 4:

```
4
Enter the new email:
seenu@test.com
```

Option 5:

```
5
Enter the new location:
Goa
```

Option 6:

```
6
Associate Skills

Skill ID: 6Skill Name: JavaSkill Description: Exp in 3years Skill Category: PrimarySkill Experience: 38
```

Option 7:

```
7
Enter Skill or press '1' to Stop
Angular
Enter Skill Description:
1year exp
Select Skill Category
1. Primary
2. Secondary
Enter your choice
2
Enter Skill Experience (in months):
12
Skill Added successfully
```

Option 8:

```
8
Enter the skill ID for edit:
6
Current Skill Details:
Skill ID: 6
Skill Name: Java
Skill Description: Exp in 3years
Skill Category: Primary
Skill Experience: 38 months
Enter Skill Description:
1year exp
Select Skill Category
1. Primary
2. Secondary
Enter your choice
2
Enter Skill Experience (in months):
12
Skill updated successfully!
```

Option 9:

```
9
Enter the skill's ID to delete:
6
Skill Successfully Deleted
1. Continue Edit
2. Submit
Enter your choice
2
Associate details updated successfully!
```

DB details:

#	id	name	age	business_unit	email	location	create_time	update_time
1	3	vijaykumar	22	FullStackDev	vijay@bandi.com	Vellore	2023-09-27 16:43:39	2023-09-27 17:49:58
2	4	dinesh	21	testing	test@test.com	Chennai	2023-09-27 18:12:44	2023-09-27 18:12:44
3	5	Seenu	23	FrontEndDeveloper	seenu@test.com	Goa	2023-09-27 23:30:16	2023-09-27 23:42:52

Delete Associate with Skills:

```
===== Skill Tracker App Menu =====
1. Add Associate      4. Delete Associate
2. List Associates    5. Search Associate
3. Edit Associate     6. Show Metrics
7. Exit
4
Enter the associates ID to delete
4
Associate Successfully Deleted
Skills associated with the Associate Successfully Deleted
```

DB details:

#	id	name	age	business_unit	email	location	create_time	update_time
1	3	vijaykumar	22	FullStackDev	vijay@bandi.com	Vellore	2023-09-27 16:43:39	2023-09-27 17:49:58
2	5	Seenu	23	FrontEndDeveloper	seenu@test.com	Goa	2023-09-27 23:30:16	2023-09-27 23:42:52

#	id	name	description	category	experience	associate_id
1	2	java	1years exp	Primary	12	3
2	3	angular	1years of exp	Primary	12	3
3	7	Angular	1year exp	Secondary	12	5

Search Options:

```
===== Skill Tracker App Menu =====
1. Add Associate      4. Delete Associate
2. List Associates    5. Search Associate
3. Edit Associate     6. Show Metrics
7. Exit
5
Search Options:
1. Search by Name
2. Search by ID
3. Search by Location
4. Search by Skill
5. Back to Main Menu
```

Option 1:

```
Search Options:
1. Search by Name
2. Search by ID
3. Search by Location
4. Search by Skill
5. Back to Main Menu
1
Enter the associate's name to search:
seenu
Associates with the name 'seenu':
ID: 5
Name: Seenu
Age: 23
Business Unit: FrontEndDeveloper
Email: seenu@test.com
Location: Goa
Create Time: 2023-09-27 23:30:16
Update Time: 2023-09-27 23:42:52
Skills:
  Skill ID: 7
  Skill Name: Angular
  Skill Description: 1year exp
  Skill Category: Secondary
  Skill Experience: 12 months
```

Option 2:

```
2
Enter the associate's ID to search:
5
Associate with ID 5:
ID: 5
Name: Seenu
Age: 23
Business Unit: FrontEndDeveloper
Email: seenu@test.com
Location: Goa
Create Time: 2023-09-27 23:30:16
Update Time: 2023-09-27 23:42:52
Skills:
  Skill ID: 7
  Skill Name: Angular
  Skill Description: 1year exp
  Skill Category: Secondary
  Skill Experience: 12 months
```

Option 3:

```
3
Enter the location to search:
Goa
Associates in the location 'Goa':
ID: 5
Name: Seenu
Age: 23
Business Unit: FrontEndDeveloper
Email: seenu@test.com
Location: Goa
Create Time: 2023-09-27 23:30:16
Update Time: 2023-09-27 23:42:52
Skills:
  Skill ID: 7
  Skill Name: Angular
  Skill Description: 1year exp
  Skill Category: Secondary
  Skill Experience: 12 months
```

Option 4:

```
4
Enter the skill to search :
Angular
Associates with the specified skills:
ID: 3
Name: vijaykumar
Age: 22
Business Unit: FullStackDev
Email: vijay@bandi.com
Location: Vellore
Create Time: 2023-09-27 16:43:39
Update Time: 2023-09-27 17:49:58
Skills:
  Skill ID: 2
  Skill Name: java
  Skill Description: 1years exp
  Skill Category: Primary
  Skill Experience: 12 months
  Skill ID: 3
  Skill Name: angular
  Skill Description: 1years of exp
  Skill Category: Primary
  Skill Experience: 12 months
ID: 5
Name: Seenu
Age: 23
Business Unit: FrontEndDeveloper
Email: seenu@test.com
Location: Goa
Create Time: 2023-09-27 23:30:16
Update Time: 2023-09-27 23:42:52
Skills:
  Skill ID: 7
  Skill Name: Angular
  Skill Description: 1year exp
  Skill Category: Secondary
  Skill Experience: 12 months
```

Show Metrics:

```
===== Skill Tracker App Menu =====
1. Add Associate      4. Delete Associate
2. List Associates    5. Search Associate
3. Edit Associate     6. Show Metrics
7. Exit

6

=== Key Metrics Menu ===
1. Total Associates
2. Associates with Many Skills
3. List of Associate IDs who have more than N skills
4. Associates with Specific Skills
5. Skills per Associate (Primary, Secondary)
6. Associates by Business Unit
7. Skills by Location
8. Skill wise Associate Count
9. Average Experience per Skill
10. Back to Main Menu
Enter your choice:
```

Option 1:

```
Enter your choice: 1
Total Associates: 2
.. .. .
```

Option 2:

```
Enter your choice: 2
Enter minimum skills count: 2
Associates with at least 2 skills: 1
```

Option 3:

```
Enter your choice: 3
Enter minimum skills count: 2
Associate IDs with at least 2 skills : [3]
```

Option 4:

```
Enter your choice: 4
Enter skills (comma-separated): Angular
Associates with skills (Angular): 2
```

Option 5:

```
Enter your choice: 5
Associate ID: 3
Associate Name: vijaykumar
Primary Skill Count: 2
Secondary Skill Count: 0
-----
Associate ID: 5
Associate Name: Seenu
Primary Skill Count: 0
Secondary Skill Count: 1
```

Option 6:

```
Enter your choice: 6
Business Unit: FrontEndDeveloper
Associate Count: 1
-----
Business Unit: FullStackDev
Associate Count: 1
-----
```

Option 7:

```
Enter your choice: 7
Location: Vellore
Skill Count: {angular=1, java=1}
Location: Goa
Skill Count: {Angular=1}
```


Option 8:

```
Enter your choice: 8
Skill: angular
Associate Count: 1
Skill: java
Associate Count: 1
Skill: Angular
Associate Count: 1
```

Option 9:

```
Enter your choice: 9
Skill: angular
Average Experience: 12.0
Skill: java
Average Experience: 12.0
Skill: Angular
Average Experience: 12.0
```

Exit:

```
===== Skill Tracker App Menu =====
1. Add Associate      4. Delete Associate
2. List Associates   5. Search Associate
3. Edit Associate    6. Show Metrics
7. Exit
7
```

Thank you for using the Skill Tracker App. Goodbye!