Project: Skill Tracker App

Main Menu:

- **Add new Associate**:
- This option allows you to add a new associate to the system. You'll be prompted to provide details such as name, age, business unit, email, location, and skills.
- **List Associates**:
- This option lists all associates currently in the system, along with their details and skills.
- **Edit Associate**:
- This option provides sub-menu choices for editing an existing associate's details:
- **Edit Name**: Change the associate's name.
- **Edit Age**: Change the associate's age.
- **Edit Business Unit**: Modify the business unit of the associate.
- **Edit Email**: Update the associate's email.
- **Edit Location**: Change the associate's location.
- **View all Skills**: Lists all skills associated with the selected associate.
- **Add Skill**: Allows you to add new skills to the associate.
- **Edit Skill**: Modify an existing skill associated with the associate.
- **Delete Skill**: Remove a skill from the associate.
- **Back to Main Menu**: Return to the main menu.
- **Delete Associate**:
- Use this option to delete an associate from the system. You'll need to provide the associate's ID, and the associated skills will also be deleted.
- **Search Associate**:
- This option provides various ways to search for associates based on name, ID, location, or skills.
- **Show Key Metrics**:
- Here, you can access key metrics and statistics related to the associates and their skills. This includes the total number of associates, associates with more than a certain number of skills, and more. Sub-menu options include:
- **Total Number of Associates**: Displays the count of all associates.
- **Associates with More Than N Skills**: Counts associates with more than a specified number of skills.
- **List of Associate IDs with More Than N Skills**: Lists associate IDs with more than a specified number of skills.
- **Total Number of Associates with Specific Skills**: Counts associates with specific skills.
- **Associate-wise Skill Count (Primary and Secondary)**: Provides a breakdown of primary and secondary skills for each associate.
- **Business Unit-wise Associate Count**: Lists the count of associates in each business unit.
- **Location-wise Skill Count**: Displays the count of skill in each location.
- **Skill-wise Associate Count**: Lists the count of associates for each skill.

- **Skill-wise Average Associate Experience**: Shows the average experience for each skill.
- **Back to Main Menu**: Return to the main menu.
- **Exit**:
- Choosing this option will exit the Skill Tracker App.

Output: App Main Menu

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

Option 1: Add Associate:

```
1
Enter Associate Name:
vijay
Enter Associate Age:
23
Enter Business Unit:
app-eng
Enter Email:
vijay@gmail.com
Enter Location:
hyd
Enter Skill (or type 'stop' to finish adding skills):
stop
Please enter atlist one skill
Enter Skill (or type 'stop' to finish adding skills):
java
Enter Skill Description:
1 year exper
Select Skill Category
1]Primary
2]Secondary
Enter your choice
1
Enter Skill Experience (in months):
12
Enter Skill (or type 'stop' to finish adding skills):
stop
Associate added successfully with ID: 6
Associate added successfully!
```

Explanation: while adding the associate we need to enter the atlist one skill   then we can add the new associate

Option 2: List Associate

```
ID: 3
Name: shemu
Age: 25
Business Unit: it
Email: shemu.com
Location: hyd
Create Time: 2023-09-26 17:42:21
Update Time: 2023-09-26 17:42:21
Skills:
  Skill ID: 4
  Skill Name: java
  Skill Description: ok
  Skill Category: Primary
  Skill Experience: 25 months
----------------------------------------
ID: 4
Name: balaji k
Age: 30
Business Unit: app-eng
Email: balaji@gmail.com
Location: chennai
Create Time: 2023-09-27 17:00:26
Update Time: 2023-09-27 17:22:42
Skills:
  Skill ID: 6
  Skill Name: java
  Skill Description: java programer
  Skill Category: Primary
  Skill Experience: 30 months
  Skill ID: 11
  Skill Name: html
  Skill Description: hello html
  Skill Category: Primary
  Skill Experience: 35 months
----------------------------------------
```

Explanation: while getting all associates we can get their skills also.

Option 3: Edit Associate

```
3
Enter the ID of the associate you want to edit:
3
Editing Associate: shemu
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
```

Explanation: Edit associate has sub menu we can choose option for edit.

Option a): Edit name

```
10. Back to Main Menu
1
Enter the new name:
shemu B
1]Continue Edit
2]Submit
Enter your choice
```

Explanation: After entering name it's asking you want continue for edit or submit. It's had for all fields.   finally we need to click submit then only we can edit associate.

Option b): Edit age

```
2
Enter the new age:
27
1]Continue Edit
2]Submit
Enter your choice
```

Option c): Edit Business Unit

```
3
Enter the new business unit:
app-eng
1]Continue Edit
2]Submit
Enter your choice
```

Option d): Edit Email

```
4
Enter the new email:
shemu.com
1]Continue Edit
2]Submit
Enter your choice
```

Option e): Edit Location

```
5
Enter the new location:
chennai
1]Continue Edit
2]Submit
Enter your choice
```

Option f): View All Skills

```
6
Skills for Associate shemu B:
+-----+--------------------+--------------------------------------+-----------+-----------------+
| ID  |        Name        |             Description               | Category  |   Experience    |
+-----+--------------------+--------------------------------------+-----------+-----------------+
| 4   | java               | ok                                   | Primary   | 25        months |
+-----+--------------------+--------------------------------------+-----------+-----------------+
```

Option g): Add Skill

```
7
Enter Skill (or type 'stop' to finish adding skills):
java
Skill  already exists for this associate. Please enter another skill.
Enter Skill (or type 'stop' to finish adding skills):
```

Note: we are trying to enter duplicate skill

```
Enter Skill (or type 'stop' to finish adding skills):
java
Skill  already exists for this associate. Please enter another skill.
Enter Skill (or type 'stop' to finish adding skills):
html
Enter Skill Description:
web page
Select Skill Category
1]Primary
2]Secondary
Enter your choice
1
Enter Skill Experience (in months):
12
skill added successfully
Enter Skill (or type 'stop' to finish adding skills):
stop
1]Continue Edit
2]Submit
Enter your choice
```

Option h): Edit Skill

```
8
Enter the skill's ID to edit:
8
Skill not found
1]Continue Edit
2]Submit
Enter your choice
```

Note: We try to enter wrong skill id or skill id exists but it's for another associate. Here skill id 8 is exists for another associate

All skills from db:

#	id	name	description	category	experience	associate_ic
1	4	java	ok	Primary	25	3
2	6	java	java programer	Primary	30	4
3	7	java	super knowledge	Primary	10	5
4	8	css	style	Primary	20	5
5	9	html	web page	Primary	20	5
6	10	js	creating js apps	Primary	20	5
7	11	html	hello html	Primary	35	4
8	12	java	1 year exper	Primary	12	6
9	13	html	web page	Primary	12	3
*	NULL	NULL	NULL	NULL	NULL	NULL

```
8
Enter the skill's ID to edit:
4
java
Enter Skill Description:
good knowledge
Select Skill Category
1]Primary
2]Secondary
Enter your choice
1
Enter Skill Experience (in months):
40
Skill updated successfully
1]Continue Edit
2]Submit
Enter your choice
```

Option i): Delete Skill

```
9
Enter the skill's ID to delete:
8
Skill not found
1]Continue Edit
2]Submit
Enter your choice
```

```
9
Enter the skill's ID to delete:
4
successfully deleted
1]Continue Edit
2]Submit
Enter your choice
```

```
9
Enter the skill's ID to delete:
16
1
This is the last skill for the associate. You cannot delete it.
1]Continue Edit
2]Submit
Enter your choice
```

Note: Associate have only one skill we con't delete

Option 4: Delete associate

```
Enter the associates's ID to delete:
3
Asscociate deleted successfully
```

Explanation: while deleting the associate skill also deleted.

All skill from db(check associate id 3)

#	id	name	description	category	experience	associate_ic
1	6	java	java programer	Primary	30	4
2	7	java	super knowledge	Primary	10	5
3	8	css	style	Primary	20	5
4	9	html	web page	Primary	20	5
5	10	js	creating js apps	Primary	20	5
6	11	html	hello html	Primary	35	4
7	12	java	1 year exper	Primary	12	6
*	NULL	NULL	NULL	NULL	NULL	NULL

Option 5: Search Associate
```
Search Options:
1. Search by Name
2. Search by ID
3. Search by Location
4. Search by Skill
5. Back to Main Menu
```
Option a): Search by Name
```
1
Enter the associate's name to search:
vijay
Associates with the name 'vijay':
ID: 6
Name: vijay
Age: 23
Business Unit: app-eng
Email: vijay@gmail.com
Location: hyd
Create Time: 2023-09-28 09:19:47
Update Time: 2023-09-28 09:19:47
Skills:
  Skill ID: 12
  Skill Name: java
  Skill Description: 1 year exper
  Skill Category: Primary
  Skill Experience: 12 months
```

Option b) Search by Id

```
2
Enter the associate's ID to search:
5
Associate with ID 5:
ID: 5
Name: balaji
Age: 26
Business Unit: it
Email: bala.com
Location: hyd
Create Time: 2023-09-27 17:13:53
Update Time: 2023-09-27 17:13:53
Skills:
  Skill ID: 7
  Skill Name: java
  Skill Description: super knowledge
  Skill Category: Primary
  Skill Experience: 10 months
  Skill ID: 8
  Skill Name: css
  Skill Description: style
  Skill Category: Primary
  Skill Experience: 20 months
  Skill ID: 9
  Skill Name: html
  Skill Description: web page
  Skill Category: Primary
  Skill Experience: 20 months
  Skill ID: 10
  Skill Name: js
  Skill Description: creating js apps
  Skill Category: Primary
  Skill Experience: 20 months
Search Options:
```

Option c): Search by Location

```
3
Enter the location to search:
hyd
Associates in the location 'hyd':
ID: 5
Name: balaji
Age: 26
Business Unit: it
Email: bala.com
Location: hyd
Create Time: 2023-09-27 17:13:53
Update Time: 2023-09-27 17:13:53
Skills:
  Skill ID: 7
  Skill Name: java
  Skill Description: super knowledge
  Skill Category: Primary
  Skill Experience: 10 months
  Skill ID: 8
  Skill Name: css
  Skill Description: style
  Skill Category: Primary
  Skill Experience: 20 months
  Skill ID: 9
  Skill Name: html
  Skill Description: web page
  Skill Category: Primary
  Skill Experience: 20 months
  Skill ID: 10
  Skill Name: js
  Skill Description: creating js apps
  Skill Category: Primary
  Skill Experience: 20 months
----------------------------------------
ID: 6
Name: vijay
Age: 23
Business Unit: app-eng
Email: vijay@gmail.com
Location: hyd
Create Time: 2023-09-28 09:19:47
Update Time: 2023-09-28 09:19:47
Skills:
  Skill ID: 12
  Skill Name: java
  Skill Description: 1 year exper
  Skill Category: Primary
  Skill Experience: 12 months
----------------------------------------
```

Option d): Search by Skill

```
4
Enter the skill to search :
java
Associates with the specified skills:
ID: 4
Name: balaji k
Age: 30
Business Unit: app-eng
Email: balaji@gmail.com
Location: chennai
Create Time: 2023-09-27 17:00:26
Update Time: 2023-09-27 17:22:42
Skills:
  Skill ID: 6
  Skill Name: java
  Skill Description: java programer
  Skill Category: Primary
  Skill Experience: 30 months
  Skill ID: 11
  Skill Name: html
  Skill Description: hello html
  Skill Category: Primary
  Skill Experience: 35 months
--------------------------------------
ID: 5
Name: balaji
Age: 26
Business Unit: it
Email: bala.com
Location: hyd
Create Time: 2023-09-27 17:13:53
Update Time: 2023-09-27 17:13:53
Skills:
  Skill ID: 7
  Skill Name: java
  Skill Description: super knowledge
  Skill Category: Primary
  Skill Experience: 10 months
  Skill ID: 8
  Skill Name: css
  Skill Description: style
  Skill Category: Primary
  Skill Experience: 20 months
  Skill ID: 9
  Skill Name: html
  Skill Description: web page
  Skill Category: Primary
  Skill Experience: 20 months
  Skill ID: 10
  Skill Name: js
  Skill Description: creating js apps
  Skill Category: Primary
  Skill Experience: 20 months
--------------------------------------
ID: 6
Name: vijay
Age: 23
Business Unit: app-eng
Email: vijay@gmail.com
Location: hyd
Create Time: 2023-09-28 09:19:47
Update Time: 2023-09-28 09:19:47
Skills:
  Skill ID: 12
  Skill Name: java
  Skill Description: 1 year exper
  Skill Category: Primary
  Skill Experience: 12 months
--------------------------------------
```

Option 6: Show Key Metrics

```
6

Key Metrics Options:
1. Total Number of Associates
2. Associates with More Than N Skills
3. List of Associate IDs with More Than N Skills
4. Total Number of Associates with Specific Skills
5. Associate-wise Skill Count (Primary and Secondary)
6. Business Unit-wise Associate Count
7. Location-wise skill Count
8. Skill-wise Associate Count
9. Skill-wise Average Associate Experience
10. Back to Main Menu
Enter your choice: 1
```

Option a): Total Number of Associates

```
Enter your choice: 1

Total Number of Associates: 3
```

Option b): Associates with More Than N Skills

```
Enter your choice: 2
Enter number
2

Associates with More Than 2 Skills: 2
```

Option c): List of Associate IDs with More Than N Skills

```
Enter your choice: 3
Enter number
2
Associate IDs with at least 2 skills:
4
5
```

Option d): Total Number of Associates with Specific Skills

```
Enter your choice: 4
Enter skill
java
Total Number of Associates with Specific Skills: 3
```

Option e): Associate-wise Skill Count (Primary and Secondary)

```
Enter your choice: 5
Associate Wise Skill Count:
Associate ID    | Associate Name    | Primary Skills      | Secondary Skills
4               | balaji k          | 2                   | 0
5               | balaji            | 4                   | 0
6               | vijay             | 1                   | 0
```

Option f): Business Unit-wise Associate Count

```
Enter your choice: 6
Business Unit Wise Associate Count:
app-eng 2
it      1
```

Option g): Location-wise skill Count

```
Enter your choice: 7
Location Wise Associate Count:
Location        Skill   Count
hyd             css     1       java    2       js      1       html    1
chennai         java    1       html    1
```

Option h): Skill-wise Associate Count

```
Enter your choice: 8
Skill Wise Associate Count:
css     1
java    3
js      1
html    2
```

Option i): Skill-wise Average Associate Experience

```
Enter your choice: 9
Skill Wise Average Associate Experience:
css     20.0
java    17.333333333333332
js      20.0
html    27.5
```

Option 7: Exit

```
7. Exit
7
Thank you for using the Skill Tracker App. Goodbye!
```