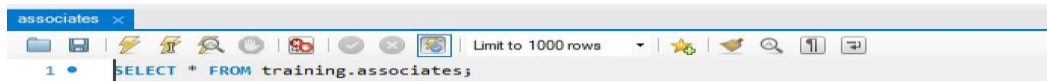


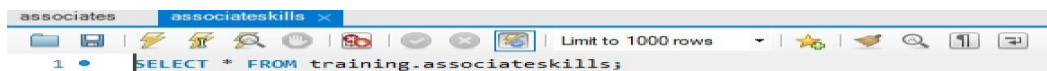
Capstone Screenshots

1. Tables before insertions of Data



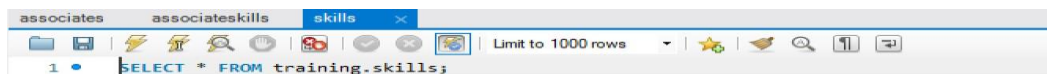
The screenshot shows the 'associates' table result grid. The toolbar includes a 'Filter Rows' field, 'Edit' icons, 'Export/Import' options, and a 'Wrap Cell Content' checkbox. The table has the following columns:

| | Id | Name | Age | BusinessUnit | Email | Location | CreatedTime | UpdatedTime |
|---|------|------|------|--------------|-------|----------|-------------|-------------|
| • | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL |



The screenshot shows the 'associateskills' table result grid. The toolbar includes a 'Filter Rows' field, 'Export' options, and a 'Wrap Cell Content' checkbox. The table has the following columns:

| | AssociateID | SkillID |
|--|-------------|---------|
|--|-------------|---------|



The screenshot shows the 'skills' table result grid. The toolbar includes a 'Filter Rows' field, 'Edit' icons, 'Export/Import' options, and a 'Wrap Cell Content' checkbox. The table has the following columns:

| | Id | Name | Description | Category | Experience |
|---|------|------|-------------|----------|------------|
| • | NULL | NULL | NULL | NULL | NULL |

2. Add Associate / View Associate / View All Associates

```
SkillTrackerAppMain.java
1 package com.indium.skilltrackerapp;
2
3 import java.time.LocalDate;
4
14
15 public class SkillTrackerAppMain {
16     private static Scanner in;
17     private static SkillsServiceImpl service;
18
19     public static void main(String[] args) throws SkillsExcept
20
21         in = new Scanner(System.in);
22         service = new SkillsServiceImpl();
23         ExecutorService executor = Executors.newCachedThreadPo
24
25         System.out.print("Welcome to Skills Tracker App!");
26
27         while (true) {
28
29             System.out.println("\n");
30             System.out.println("1. Add an Associate");
31             System.out.println("2. View an Associate");
32             System.out.println("3. Update an Associate");
33             System.out.println("4. Delete an Associate");
34             System.out.println("5. Add Skills");
35             System.out.println("6. Edit Skill");
36             System.out.println("7. Delete Skill");
37             System.out.println("8. Search an Associate");
38             System.out.println("9. Print Statistics");
39             System.out.println("10. View All Associates");
40             System.out.println("11. Exit");
41
42             System.out.print("Enter the option: ");
43             int option = 0;
44             // Get option from user
45             try {
46                 option = Integer.parseInt(in.next());
47             } catch (NumberFormatException e) {
48                 System.out.println("Invalid option. Please ent
49                 continue;
50             }
51             try {
52                 Associate associate = null;
53                 switch (option) {
54                     case 1:
55                         addAssociate();
56                         break;
57                     case 2:
58                         System.out.print("Enter associate id: ");
59
Console
<terminated> SkillTrackerAppMain [Java Application] E:\eclipse-jee-2022-09-R-win32-x86_64\eclipse\plugins\org.eclipse.justj
Welcome to Skills Tracker App!
1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 1
Enter associate Name: Stella
Enter associate Age: 27
Enter Business Unit: Digital
Enter Email: stella@gmail.com
Enter Location: Chennai
Enter Skill Name: Mendix
Enter skill Description: Lowcode
Enter skill category: Primary
Enter skill Experience in months: 9
Connection created successfully. com.mysql.cj.jdbc.ConnectionImpl@3de8f619
Associate has been added successfully!
1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 1
Enter associate Name: Steffy
Enter associate Age: 27
Enter Business Unit: Digital
Enter Email: steffy@gmail.com
Enter Location: Chennai
Enter Skill Name: Mendix
Enter skill Description: Lowcode
Enter skill category: Primary
```

```
SkillTrackerAppMain.java
1 package com.indium.skilltrackerapp;
2
3 import java.time.LocalDate;
4
14
15 public class SkillTrackerAppMain {
16     private static Scanner in;
17     private static SkillsServiceImpl service;
18
19     public static void main(String[] args) throws SkillsExcept
20
21         in = new Scanner(System.in);
22         service = new SkillsServiceImpl();
23         ExecutorService executor = Executors.newCachedThreadPo
24
25         System.out.print("Welcome to Skills Tracker App!");
26
27         while (true) {
28
29             System.out.println("\n");
30             System.out.println("1. Add an Associate");
31             System.out.println("2. View an Associate");
32             System.out.println("3. Update an Associate");
33             System.out.println("4. Delete an Associate");
34             System.out.println("5. Add Skills");
35             System.out.println("6. Edit Skill");
36             System.out.println("7. Delete Skill");
37             System.out.println("8. Search an Associate");
38             System.out.println("9. Print Statistics");
39             System.out.println("10. View All Associates");
40             System.out.println("11. Exit");
41
42             System.out.print("Enter the option: ");
43             int option = 0;
44             // Get option from user
45             try {
46                 option = Integer.parseInt(in.next());
47             } catch (NumberFormatException e) {
48                 System.out.println("Invalid option. Please ent
49                 continue;
50             }
51             try {
52                 Associate associate = null;
53                 switch (option) {
54                     case 1:
55                         addAssociate();
56                         break;
57                     case 2:
58                         System.out.print("Enter associate id: ");
59
Console
<terminated> SkillTrackerAppMain [Java Application] E:\eclipse-jee-2022-09-R-win32-x86_64\eclipse\plugins\org.eclipse.justj
Welcome to Skills Tracker App!
1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 2
Enter associate id: 1
AssociateId      Name      Age      BU      Skill Name      Skill C
1              Stella      27      Digital      Mendix          Pi
1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 10
AssociateId      Name      Age      BU      Skill Name      Skill C
1              Stella      27      Digital      Mendix          Pi
2              Steffy      27      Digital      Mendix          Pi
1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 3
Enter associate id to update: 3
```

3. Tables after insertions of Data

associates | associateskills | skills

1 • `SELECT * FROM training.associates;`

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: ☐

| | Id | Name | Age | BusinessUnit | Email | Location | CreatedTime | UpdatedTime |
|---|------|--------|------|--------------|------------------|----------|---------------------|---------------------|
| ▶ | 1 | Stella | 27 | Digital | stella@gmail.com | Chennai | 2023-09-29 00:00:00 | 2023-09-29 00:00:00 |
| | 2 | Steffy | 27 | Digital | steffy@gmail.com | Chennai | 2023-09-29 00:00:00 | 2023-09-29 00:00:00 |
| • | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL |

associates | associateskills | skills

1 • `SELECT * FROM training.associateskills;`

Result Grid | Filter Rows: | Export: | Wrap Cell Content: ☐

| | AssociateID | SkillID |
|---|-------------|---------|
| ▶ | 1 | 1 |
| | 2 | 2 |

associates | associateskills | skills

1 • `SELECT * FROM training.skills;`

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: ☐

| | Id | Name | Description | Category | Experience |
|---|------|--------|-------------|-----------|------------|
| ▶ | 1 | Mendix | Lowcode | Primary | 9 |
| | 3 | C++ | Programming | Secondary | 20 |
| | 5 | Java | Program | Primary | 29 |
| | 6 | Java | HH | Primary | 8 |
| • | NULL | NULL | NULL | NULL | NULL |

4. Update Associate / Delete Associate

```
SkillTrackerAppMain.java
1 package com.indium.skilltrackerapp;
2
3 import java.time.LocalDate;
4
14
15 public class SkillTrackerAppMain {
16     private static Scanner in;
17     private static SkillsServiceImpl service;
18
19     public static void main(String[] args) throws SkillsException {
20
21         in = new Scanner(System.in);
22         service = new SkillsServiceImpl();
23         ExecutorService executor = Executors.newCachedThreadPool();
24
25         System.out.println("Welcome to Skills Tracker App!");
26
27         while (true) {
28
29             System.out.println("\n");
30             System.out.println("1. Add an Associate");
31             System.out.println("2. View an Associate");
32             System.out.println("3. Update an Associate");
33             System.out.println("4. Delete an Associate");
34             System.out.println("5. Add Skills");
35             System.out.println("6. Edit Skill");
36             System.out.println("7. Delete Skill");
37             System.out.println("8. Search an Associate");
38             System.out.println("9. Print Statistics");
39             System.out.println("10. View All Associates");
40             System.out.println("11. Exit");
41
42             System.out.print("Enter the option: ");
43             int option = 0;
44             // Get option from user
45             try {
46                 option = Integer.parseInt(in.next());
47             } catch (NumberFormatException e) {
48                 System.out.println("Invalid option. Please enter valid opt");
49                 continue;
50             }
51             try {
52                 Associate associate = null;
53                 switch (option) {
54                     case 1:
```

```
Console
SkillTrackerAppMain [Java Application] E:\eclipse-jee-2022-09-R-win32-x86_64\ eclipse\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win
Welcome to Skills Tracker App!

1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 3
Enter associate id to update: 1
Enter associate Name: Uma
Enter associate Age: 55
Enter Business Unit: Digital
Enter Email: uma@gmail.com
Enter Location: Chennai
Connection created successfully. com.mysql.cj.jdbc.ConnectionImpl@c430e6c
Associate has been updated successfully!

1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 10

AssociateId      Name      Age      BU      Skill Name      Skill Category
1               Uma      55      Digital      Mendix      Primary
3               Uma      55      Digital      Java      Primary
4               Juli      22      Gaming      C++      Secondary
4               Davies    55      Digital      Java      Primary
```

```
SkillTrackerAppMain.java
1 package com.indium.skilltrackerapp;
2
3 import java.time.LocalDate;
4
14
15 public class SkillTrackerAppMain {
16     private static Scanner in;
17     private static SkillsServiceImpl service;
18
19     public static void main(String[] args) throws SkillsException {
20
21         in = new Scanner(System.in);
22         service = new SkillsServiceImpl();
23         ExecutorService executor = Executors.newCachedThreadPool();
24
25         System.out.println("Welcome to Skills Tracker App!");
26
27         while (true) {
28
29             System.out.println("\n");
30             System.out.println("1. Add an Associate");
31             System.out.println("2. View an Associate");
32             System.out.println("3. Update an Associate");
33             System.out.println("4. Delete an Associate");
34             System.out.println("5. Add Skills");
35             System.out.println("6. Edit Skill");
36             System.out.println("7. Delete Skill");
37             System.out.println("8. Search an Associate");
38             System.out.println("9. Print Statistics");
39             System.out.println("10. View All Associates");
40             System.out.println("11. Exit");
41
42             System.out.print("Enter the option: ");
43             int option = 0;
44             // Get option from user
45             try {
46                 option = Integer.parseInt(in.next());
47             } catch (NumberFormatException e) {
48                 System.out.println("Invalid option. Please enter valid");
49                 continue;
50             }
51             try {
52                 Associate associate = null;
53                 switch (option) {
54                     case 1:
55                         addAssociate();
56                         break;
57                     case 2:
58                         System.out.print("Enter associate id: ");
```

```
Console
SkillTrackerAppMain [Java Application] E:\eclipse-jee-2022-09-R-win32-x86_64\ eclipse\plugins\or
<terminated> SkillTrackerAppMain [Java Application] E:\eclipse-jee-2022-09-R-win32-x86_64\ eclipse\plugins\or

1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 5
Enter the associate id to add skill: 1
Enter Skill Name: Java
Enter skill Description: Program
Enter skill category: Secondary
Enter skill Experience in months: 21
Skill added successfully

1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 4
Enter associate id to delete: 2
Deleted Successfully

1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
```


5. Add Skill / Edit Skill / Delete Skill

```
1 package com.indium.skilltrackerapp;
2
3 import java.time.LocalDate;
4
5 public class SkillTrackerAppMain {
6     private static Scanner in;
7     private static SkillsServiceImpl service;
8
9     public static void main(String[] args) throws SkillsException {
10         in = new Scanner(System.in);
11         service = new SkillsServiceImpl();
12         ExecutorService executor = Executors.newCachedThreadPool();
13
14         System.out.print("Welcome to Skills Tracker App!");
15
16         while (true) {
17             System.out.println("\n");
18             System.out.println("1. Add an Associate");
19             System.out.println("2. View an Associate");
20             System.out.println("3. Update an Associate");
21             System.out.println("4. Delete an Associate");
22             System.out.println("5. Add Skills");
23             System.out.println("6. Edit Skill");
24             System.out.println("7. Delete Skill");
25             System.out.println("8. Search an Associate");
26             System.out.println("9. Print Statistics");
27             System.out.println("10. View All Associates");
28             System.out.println("11. Exit");
29
30             System.out.print("Enter the option: ");
31             int option = 0;
32             // Get option from user
33             try {
34                 option = Integer.parseInt(in.next());
35             } catch (NumberFormatException e) {
36                 System.out.println("Invalid option. Please enter valid continue;");
37             }
38             try {
39                 Associate associate = null;
40                 switch (option) {
41                     case 1:
42                         addAssociate();
43                         break;
44                     case 2:
45                         System.out.print("Enter associate id: ");
46                 }
47             }
48         }
49     }
50 }
51
52 private void addAssociate() {
53     System.out.print("Enter the option: ");
54     int option = 0;
55     // Get option from user
56     try {
57         option = Integer.parseInt(in.next());
58     } catch (NumberFormatException e) {
59         System.out.println("Invalid option. Please enter valid continue;");
60     }
61     try {
62         Associate associate = null;
63         switch (option) {
64             case 1:
65                 addAssociate();
66                 break;
67             case 2:
68                 System.out.print("Enter associate id: ");
69             }
70         }
71     }
72 }
73
74 private void editSkill() {
75     System.out.print("Enter the option: ");
76     int option = 0;
77     // Get option from user
78     try {
79         option = Integer.parseInt(in.next());
80     } catch (NumberFormatException e) {
81         System.out.println("Invalid option. Please enter valid continue;");
82     }
83     try {
84         Associate associate = null;
85         switch (option) {
86             case 1:
87                 addAssociate();
88                 break;
89             case 2:
90                 System.out.print("Enter associate id: ");
91             }
92         }
93     }
94 }
95
96 private void deleteSkill() {
97     System.out.print("Enter the option: ");
98     int option = 0;
99     // Get option from user
100    try {
101        option = Integer.parseInt(in.next());
102    } catch (NumberFormatException e) {
103        System.out.println("Invalid option. Please enter valid continue;");
104    }
105    try {
106        Associate associate = null;
107        switch (option) {
108            case 1:
109                addAssociate();
110                break;
111            case 2:
112                System.out.print("Enter associate id: ");
113            }
114        }
115    }
116 }
```

Console

```
1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 5
Enter the associate id to add skill: 1
Enter Skill Name: Java
Enter skill Description: Program
Enter skill category: Secondary
Enter skill Experience in months: 21
Skill added successfully
1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 4
Enter associate id to delete: 2
Deleted Successfully
1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
```

SkillTrackerAppMain.java

```
1 package com.indium.skilltrackerapp;
2
3 import java.time.LocalDate;
4
5 public class SkillTrackerAppMain {
6     private static Scanner in;
7     private static SkillsServiceImpl service;
8
9     public static void main(String[] args) throws SkillsException {
10         in = new Scanner(System.in);
11         service = new SkillsServiceImpl();
12         ExecutorService executor = Executors.newCachedThreadPool();
13
14         System.out.print("Welcome to Skills Tracker App!");
15
16         while (true) {
17             System.out.println("\n");
18             System.out.println("1. Add an Associate");
19             System.out.println("2. View an Associate");
20             System.out.println("3. Update an Associate");
21             System.out.println("4. Delete an Associate");
22             System.out.println("5. Add Skills");
23             System.out.println("6. Edit Skill");
24             System.out.println("7. Delete Skill");
25             System.out.println("8. Search an Associate");
26             System.out.println("9. Print Statistics");
27             System.out.println("10. View All Associates");
28             System.out.println("11. Exit");
29
30             System.out.print("Enter the option: ");
31             int option = 0;
32             // Get option from user
33             try {
34                 option = Integer.parseInt(in.next());
35             } catch (NumberFormatException e) {
36                 System.out.println("Invalid option. Please enter valid continue;");
37             }
38             try {
39                 Associate associate = null;
40                 switch (option) {
41                     case 1:
42                         addAssociate();
43                         break;
44                     case 2:
45                         System.out.print("Enter associate id: ");
46                     case 3:
47                         editSkill();
48                         break;
49                     case 4:
50                         deleteSkill();
51                         break;
52                     case 5:
53                         addSkills();
54                         break;
55                     case 6:
56                         editSkill();
57                         break;
58                     case 7:
59                         deleteSkill();
60                         break;
61                     case 8:
62                         searchAssociate();
63                         break;
64                     case 9:
65                         printStatistics();
66                         break;
67                     case 10:
68                         viewAllAssociates();
69                         break;
70                     case 11:
71                         exit();
72                         break;
73                 }
74             }
75         }
76     }
77 }
78
79 private void addAssociate() {
80     System.out.print("Enter the option: ");
81     int option = 0;
82     // Get option from user
83     try {
84         option = Integer.parseInt(in.next());
85     } catch (NumberFormatException e) {
86         System.out.println("Invalid option. Please enter valid continue;");
87     }
88     try {
89         Associate associate = null;
90         switch (option) {
91             case 1:
92                 addAssociate();
93                 break;
94             case 2:
95                 System.out.print("Enter associate id: ");
96             }
97         }
98     }
99 }
100
101 private void editSkill() {
102     System.out.print("Enter the option: ");
103     int option = 0;
104     // Get option from user
105     try {
106         option = Integer.parseInt(in.next());
107     } catch (NumberFormatException e) {
108         System.out.println("Invalid option. Please enter valid continue;");
109     }
110     try {
111         Associate associate = null;
112         switch (option) {
113             case 1:
114                 addAssociate();
115                 break;
116             case 2:
117                 System.out.print("Enter associate id: ");
118             }
119         }
120     }
121 }
122
123 private void deleteSkill() {
124     System.out.print("Enter the option: ");
125     int option = 0;
126     // Get option from user
127     try {
128         option = Integer.parseInt(in.next());
129     } catch (NumberFormatException e) {
130         System.out.println("Invalid option. Please enter valid continue;");
131     }
132     try {
133         Associate associate = null;
134         switch (option) {
135             case 1:
136                 addAssociate();
137                 break;
138             case 2:
139                 System.out.print("Enter associate id: ");
140             }
141         }
142     }
143 }
144
145 private void addSkills() {
146     System.out.print("Enter the option: ");
147     int option = 0;
148     // Get option from user
149     try {
150         option = Integer.parseInt(in.next());
151     } catch (NumberFormatException e) {
152         System.out.println("Invalid option. Please enter valid continue;");
153     }
154     try {
155         Associate associate = null;
156         switch (option) {
157             case 1:
158                 addAssociate();
159                 break;
160             case 2:
161                 System.out.print("Enter associate id: ");
162             }
163         }
164     }
165 }
166
167 private void editSkill() {
168     System.out.print("Enter the option: ");
169     int option = 0;
170     // Get option from user
171     try {
172         option = Integer.parseInt(in.next());
173     } catch (NumberFormatException e) {
174         System.out.println("Invalid option. Please enter valid continue;");
175     }
176     try {
177         Associate associate = null;
178         switch (option) {
179             case 1:
180                 addAssociate();
181                 break;
182             case 2:
183                 System.out.print("Enter associate id: ");
184             }
185         }
186     }
187 }
188
189 private void deleteSkill() {
190     System.out.print("Enter the option: ");
191     int option = 0;
192     // Get option from user
193     try {
194         option = Integer.parseInt(in.next());
195     } catch (NumberFormatException e) {
196         System.out.println("Invalid option. Please enter valid continue;");
197     }
198     try {
199         Associate associate = null;
200         switch (option) {
201             case 1:
202                 addAssociate();
203                 break;
204             case 2:
205                 System.out.print("Enter associate id: ");
206             }
207         }
208     }
209 }
210
211 private void searchAssociate() {
212     System.out.print("Enter the option: ");
213     int option = 0;
214     // Get option from user
215     try {
216         option = Integer.parseInt(in.next());
217     } catch (NumberFormatException e) {
218         System.out.println("Invalid option. Please enter valid continue;");
219     }
220     try {
221         Associate associate = null;
222         switch (option) {
223             case 1:
224                 addAssociate();
225                 break;
226             case 2:
227                 System.out.print("Enter associate id: ");
228             }
229         }
230     }
231 }
232
233 private void printStatistics() {
234     System.out.print("Enter the option: ");
235     int option = 0;
236     // Get option from user
237     try {
238         option = Integer.parseInt(in.next());
239     } catch (NumberFormatException e) {
240         System.out.println("Invalid option. Please enter valid continue;");
241     }
242     try {
243         Associate associate = null;
244         switch (option) {
245             case 1:
246                 addAssociate();
247                 break;
248             case 2:
249                 System.out.print("Enter associate id: ");
250             }
251         }
252     }
253 }
254
255 private void viewAllAssociates() {
256     System.out.print("Enter the option: ");
257     int option = 0;
258     // Get option from user
259     try {
260         option = Integer.parseInt(in.next());
261     } catch (NumberFormatException e) {
262         System.out.println("Invalid option. Please enter valid continue;");
263     }
264     try {
265         Associate associate = null;
266         switch (option) {
267             case 1:
268                 addAssociate();
269                 break;
270             case 2:
271                 System.out.print("Enter associate id: ");
272             }
273         }
274     }
275 }
276
277 private void exit() {
278     System.out.print("Enter the option: ");
279     int option = 0;
280     // Get option from user
281     try {
282         option = Integer.parseInt(in.next());
283     } catch (NumberFormatException e) {
284         System.out.println("Invalid option. Please enter valid continue;");
285     }
286     try {
287         Associate associate = null;
288         switch (option) {
289             case 1:
290                 addAssociate();
291                 break;
292             case 2:
293                 System.out.print("Enter associate id: ");
294             }
295         }
296     }
297 }
```

Console

```
1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 10
AssociateId Name Age BU Skill Name Skill Category Experience
1 Stella 27 Digital Mendix Primary 9
2 Stella 27 Java Secondary 21
3 Juli 22 Gaming Java Primary 19
1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 6
Enter the associate id to edit skill: 3
Skills associated to the ID
SkillId Skill Name Skill Description Skill Category Experience
3 Java null Primary 19
Enter the skill id to edit skill: 3
Enter Skill Name: C++
Enter skill Description: Programming
Enter skill category: Secondary
Enter skill Experience in months: 20
Skill updated successfully
1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 10
AssociateId Name Age BU Skill Name Skill Category Experience
1 Stella 27 Digital Mendix Primary 9
2 Stella 27 Java Secondary 21
3 Juli 22 Gaming C++ Secondary 20
1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 7
Enter associate id to delete a skill: 1
Skills associated to the ID
SkillId Skill Name Skill Description Skill Category Experience
1 Java null Primary 9
Enter the skill id to delete: 4
Deleted Successfully
1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
```

6. Search Associate

```
1 package com.indium.skilltrackerapp;
2
3 import java.time.LocalDate;
4
5 public class SkillTrackerAppMain {
6     private static Scanner in;
7     private static SkillsServiceImpl service;
8
9     public static void main(String[] args) throws SkillsException {
10         in = new Scanner(System.in);
11         service = new SkillsServiceImpl();
12         ExecutorService executor = Executors.newCachedThreadPool();
13
14         System.out.println("Welcome to Skills Tracker App!");
15
16         while (true) {
17             System.out.println("\n");
18             System.out.println("1. Add an Associate");
19             System.out.println("2. View an Associate");
20             System.out.println("3. Update an Associate");
21             System.out.println("4. Delete an Associate");
22             System.out.println("5. Add Skills");
23             System.out.println("6. Edit Skill");
24             System.out.println("7. Delete Skill");
25             System.out.println("8. Search an Associate");
26             System.out.println("9. Print Statistics");
27             System.out.println("10. View All Associates");
28             System.out.println("11. Exit");
29
30             System.out.print("Enter the option: ");
31             int option = 0;
32             // Get option from user
33             try {
34                 option = Integer.parseInt(in.next());
35             } catch (NumberFormatException e) {
36                 System.out.println("Invalid option. Please enter valid continue;");
37             }
38             try {
39                 Associate associate = null;
40                 switch (option) {
41                     case 1:
42                         addAssociate();
43                         break;
44                     case 2:
45                         System.out.print("Enter associate id: ");

```

```
1 package com.indium.skilltrackerapp;
2
3 import java.time.LocalDate;
4
5 public class SkillTrackerAppMain {
6     private static Scanner in;
7     private static SkillsServiceImpl service;
8
9     public static void main(String[] args) throws SkillsException {
10         in = new Scanner(System.in);
11         service = new SkillsServiceImpl();
12         ExecutorService executor = Executors.newCachedThreadPool();
13
14         System.out.println("Welcome to Skills Tracker App!");
15
16         while (true) {
17             System.out.println("\n");
18             System.out.println("1. Add an Associate");
19             System.out.println("2. View an Associate");
20             System.out.println("3. Update an Associate");
21             System.out.println("4. Delete an Associate");
22             System.out.println("5. Add Skills");
23             System.out.println("6. Edit Skill");
24             System.out.println("7. Delete Skill");
25             System.out.println("8. Search an Associate");
26             System.out.println("9. Print Statistics");
27             System.out.println("10. View All Associates");
28             System.out.println("11. Exit");
29
30             System.out.print("Enter the option: ");
31             int option = 0;
32             // Get option from user
33             try {
34                 option = Integer.parseInt(in.next());
35             } catch (NumberFormatException e) {
36                 System.out.println("Invalid option. Please enter valid continue;");
37             }
38             try {
39                 Associate associate = null;
40                 switch (option) {
41                     case 1:
42                         addAssociate();
43                         break;
44                     case 2:
45                         System.out.print("Enter associate id: ");

```

7. Print Statistics & Exit

```
SkillTrackerAppMain.java
1 package com.indium.skilltrackerapp;
2
3 import java.time.LocalDateTime;
14
15 public class SkillTrackerAppMain {
16     private static Scanner in;
17     private static SkillsServiceImpl service;
18
19     public static void main(String[] args) throws SkillsException {
20
21         in = new Scanner(System.in);
22         service = new SkillsServiceImpl();
23         ExecutorService executor = Executors.newCachedThreadPool();
24
25         System.out.print("Welcome to Skills Tracker App!");
26
27         while (true) {
28
29             System.out.println("\n");
30             System.out.println("1. Add an Associate");
31             System.out.println("2. View an Associate");
32             System.out.println("3. Update an Associate");
33             System.out.println("4. Delete an Associate");
34             System.out.println("5. Add Skills");
35             System.out.println("6. Edit Skill");
36             System.out.println("7. Delete Skill");
37             System.out.println("8. Search an Associate");
38             System.out.println("9. Print Statistics");
39             System.out.println("10. View All Associates");
40             System.out.println("11. Exit");
41
42             System.out.print("Enter the option: ");
43             int option = 0;
44             // Get option from user
45             try {
46                 option = Integer.parseInt(in.next());
47             } catch (NumberFormatException e) {
48                 System.out.println("Invalid option. Please enter valid");
49                 continue;
50             }
51             try {
52                 Associate associate = null;
53                 switch (option) {
54                     case 1:
55                         addAssociate();
56                         break;
57                     case 2:
58                         System.out.print("Enter associate id: ");
59
60                 }
61             }
62         }
63     }
64 }
```

```
Console
<terminated> SkillTrackerAppMain [Java Application] E:\eclipse-jee-2022-09-R-win32-x86_64\eclip
1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 9
a.Total No of associates
b.Total No of associates who has more than 1 skill
c.List of Associate IDs who has more than N skills
d.Total No of Associates who has given set of skills
e.Skill count based on Associates
f.Associate Count based on Business Unit
g.Associate Average experience based on Skills
h.Skills Count based on Location
Enter an option: a
Total associates count is : 3
1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 9
a.Total No of associates
b.Total No of associates who has more than 1 skill
c.List of Associate IDs who has more than N skills
d.Total No of Associates who has given set of skills
e.Skill count based on Associates
f.Associate Count based on Business Unit
g.Associate Average experience based on Skills
h.Skills Count based on Location
Enter an option: b
Total associates who has more than 1 skill is : 1
```

```
SkillTrackerAppMain.java
1 package com.indium.skilltrackerapp;
2
3 import java.time.LocalDateTime;
14
15 public class SkillTrackerAppMain {
16     private static Scanner in;
17     private static SkillsServiceImpl service;
18
19     public static void main(String[] args) throws SkillsException {
20
21         in = new Scanner(System.in);
22         service = new SkillsServiceImpl();
23         ExecutorService executor = Executors.newCachedThreadPool();
24
25         System.out.print("Welcome to Skills Tracker App!");
26
27         while (true) {
28
29             System.out.println("\n");
30             System.out.println("1. Add an Associate");
31             System.out.println("2. View an Associate");
32             System.out.println("3. Update an Associate");
33             System.out.println("4. Delete an Associate");
34             System.out.println("5. Add Skills");
35             System.out.println("6. Edit Skill");
36             System.out.println("7. Delete Skill");
37             System.out.println("8. Search an Associate");
38             System.out.println("9. Print Statistics");
39             System.out.println("10. View All Associates");
40             System.out.println("11. Exit");
41
42             System.out.print("Enter the option: ");
43             int option = 0;
44             // Get option from user
45             try {
46                 option = Integer.parseInt(in.next());
47             } catch (NumberFormatException e) {
48                 System.out.println("Invalid option. Please enter valid");
49                 continue;
50             }
51             try {
52                 Associate associate = null;
53                 switch (option) {
54                     case 1:
55                         addAssociate();
56                         break;
57                     case 2:
58                         System.out.print("Enter associate id: ");
59
60                 }
61             }
62         }
63     }
64 }
```

```
Console
<terminated> SkillTrackerAppMain [Java Application] E:\eclipse-jee-2022-09-R-win32-x86_64\plugins\org.eclipse.justi.openj
1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 9
a.Total No of associates
b.Total No of associates who has more than 1 skill
c.List of Associate IDs who has more than N skills
d.Total No of Associates who has given set of skills
e.Skill count based on Associates
f.Associate Count based on Business Unit
g.Associate Average experience based on Skills
h.Skills Count based on Location
Enter an option: b
Total associates who has more than 1 skill is : 1
1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 9
a.Total No of associates
b.Total No of associates who has more than 1 skill
c.List of Associate IDs who has more than N skills
d.Total No of Associates who has given set of skills
e.Skill count based on Associates
f.Associate Count based on Business Unit
g.Associate Average experience based on Skills
h.Skills Count based on Location
Enter an option: c
List of associate id's who has more than 1 skill
1
```



```
SkillTrackerAppMain.java
1 package com.indium.skilltrackerapp;
2
3 import java.time.LocalDate;
4
14 public class SkillTrackerAppMain {
15     private static Scanner in;
16     private static SkillsServiceImpl service;
17
18     public static void main(String[] args) throws SkillsException {
19         in = new Scanner(System.in);
20         service = new SkillsServiceImpl();
21         ExecutorService executor = Executors.newCachedThreadPool();
22
23         System.out.print("Welcome to Skills Tracker App!");
24
25         while (true) {
26             System.out.println("\n");
27             System.out.println("1. Add an Associate");
28             System.out.println("2. View an Associate");
29             System.out.println("3. Update an Associate");
30             System.out.println("4. Delete an Associate");
31             System.out.println("5. Add Skills");
32             System.out.println("6. Edit Skill");
33             System.out.println("7. Delete Skill");
34             System.out.println("8. Search an Associate");
35             System.out.println("9. Print Statistics");
36             System.out.println("10. View All Associates");
37             System.out.println("11. Exit");
38
39             System.out.print("Enter the option: ");
40             int option = 0;
41             // Get option from user
42             try {
43                 option = Integer.parseInt(in.next());
44             } catch (NumberFormatException e) {
45                 System.out.println("Invalid option. Please enter valid continue;");
46             }
47             try {
48                 Associate associate = null;
49                 switch (option) {
50                     case 1:
51                         addAssociate();
52                         break;
53                     case 2:
54                         System.out.print("Enter associate id: ");
55
56 Console
<terminated> SkillTrackerAppMain [Java Application] E:\eclipse-jee-2022-09-R-win32-x86_64\eclipse\plugins\org.eclips
Enter the option: 9
a.Total No of associates
b.Total No of associates who has more than 1 skill
c.List of Associate IDs who has more than N skills
d.Total No of Associates who has given set of skills
e.Skill count based on Associates
f.Associate Count based on Business Unit
g.Associate Average experience based on Skills
h.Skills Count based on Location
Enter an option: d
Mendix
Total No of associates with given skill: 1

1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 9
a.Total No of associates
b.Total No of associates who has more than 1 skill
c.List of Associate IDs who has more than N skills
d.Total No of Associates who has given set of skills
e.Skill count based on Associates
f.Associate Count based on Business Unit
g.Associate Average experience based on Skills
h.Skills Count based on Location
Enter an option: e
Associate: Stella
Primary Skills: 2
Secondary Skills: 0

Associate: Davies
Primary Skills: 1
Secondary Skills: 0

Associate: Juli
Primary Skills: 0
Secondary Skills: 1
```

```
SkillTrackerAppMain.java
1 package com.indium.skilltrackerapp;
2
3 import java.time.LocalDate;
4
14 public class SkillTrackerAppMain {
15     private static Scanner in;
16     private static SkillsServiceImpl service;
17
18     public static void main(String[] args) throws SkillsException {
19         in = new Scanner(System.in);
20         service = new SkillsServiceImpl();
21         ExecutorService executor = Executors.newCachedThreadPool();
22
23         System.out.print("Welcome to Skills Tracker App!");
24
25         while (true) {
26             System.out.println("\n");
27             System.out.println("1. Add an Associate");
28             System.out.println("2. View an Associate");
29             System.out.println("3. Update an Associate");
30             System.out.println("4. Delete an Associate");
31             System.out.println("5. Add Skills");
32             System.out.println("6. Edit Skill");
33             System.out.println("7. Delete Skill");
34             System.out.println("8. Search an Associate");
35             System.out.println("9. Print Statistics");
36             System.out.println("10. View All Associates");
37
38 Console
<terminated> SkillTrackerAppMain [Java Application] E:\eclipse-jee-2022-09-R-win32-x86_64\eclipse\plugins\org.e
1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 9
a.Total No of associates
b.Total No of associates who has more than 1 skill
c.List of Associate IDs who has more than N skills
d.Total No of Associates who has given set of skills
e.Skill count based on Associates
f.Associate Count based on Business Unit
g.Associate Average experience based on Skills
h.Skills Count based on Location
Enter an option: f
Business Unit: Digital
Associate Count: 2

Business Unit: Gaming
Associate Count: 1
```


SkillTrackerAppMain.java

```

1 package com.indium.skilltrackerapp;
2
3 import java.time.LocalDateTime;
4
14 public class SkillTrackerAppMain {
15     private static Scanner in;
16     private static SkillsServiceImpl service;
17
18     public static void main(String[] args) throws SkillsException {
19
20         in = new Scanner(System.in);
21         service = new SkillsServiceImpl();
22         ExecutorService executor = Executors.newCachedThreadPool();
23
24         System.out.print("Welcome to Skills Tracker App!");
25
26         while (true) {
27
28             System.out.println("\n");
29             System.out.println("1. Add an Associate");
30             System.out.println("2. View an Associate");
31             System.out.println("3. Update an Associate");
32             System.out.println("4. Delete an Associate");
33             System.out.println("5. Add Skills");
34             System.out.println("6. Edit Skill");
35             System.out.println("7. Delete Skill");
36             System.out.println("8. Search an Associate");
37             System.out.println("9. Print Statistics");
38             System.out.println("10. View All Associates");
39             System.out.println("11. Exit");
40
41             System.out.print("Enter the option: ");
42             int option = 0;
43             // Get option from user
44             try {
45                 option = Integer.parseInt(in.next());
46             } catch (NumberFormatException e) {
47                 System.out.println("Invalid option. Please enter valid opt");
48                 continue;
49             }
50             try {
51                 Associate associate = null;
52                 switch (option) {
53                     case 1:
54                         addAssociate();
55                         break;
56                     case 2:
57                         System.out.print("Enter associate id: ");

```

Console

```

<terminated> SkillTrackerAppMain [Java Application] E:\eclipse-jee-2022-09-R-win32-x86_64\ eclipse\plugin
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 9
a.Total No of associates
b.Total No of associates who has more than 1 skill
c.List of Associate IDs who has more than N skills
d.Total No of Associates who has given set of skills
e.Skill count based on Associates
f.Associate Count based on Business Unit
g.Associate Average experience based on Skills
h.Skills Count based on Location
Enter an option: 8
Connection created successfully. com.mysql.cj.jdbc.ConnectionImpl@28dcca0c
Skill: Java
Average Experience: 18.5
Associates with this skill:
Associate Name      Experience
Stella              8
Davies              29
Skill: C++
Average Experience: 20.0
Associates with this skill:
Associate Name      Experience
Juli                20
Skill: Mendix
Average Experience: 9.0
Associates with this skill:
Associate Name      Experience
Stella              9

```

SkillTrackerAppMain.java

```

1 package com.indium.skilltrackerapp;
2
3 import java.time.LocalDateTime;
4
14 public class SkillTrackerAppMain {
15     private static Scanner in;
16     private static SkillsServiceImpl service;
17
18     public static void main(String[] args) throws SkillsException {
19
20         in = new Scanner(System.in);
21         service = new SkillsServiceImpl();
22         ExecutorService executor = Executors.newCachedThreadPool();
23
24         System.out.print("Welcome to Skills Tracker App!");
25
26         while (true) {
27
28             System.out.println("\n");
29             System.out.println("1. Add an Associate");
30             System.out.println("2. View an Associate");
31             System.out.println("3. Update an Associate");
32             System.out.println("4. Delete an Associate");
33             System.out.println("5. Add Skills");
34             System.out.println("6. Edit Skill");
35             System.out.println("7. Delete Skill");
36             System.out.println("8. Search an Associate");
37             System.out.println("9. Print Statistics");
38             System.out.println("10. View All Associates");
39             System.out.println("11. Exit");
40
41             System.out.print("Enter the option: ");
42             int option = 0;
43             // Get option from user
44             try {
45                 option = Integer.parseInt(in.next());
46             } catch (NumberFormatException e) {
47                 System.out.println("Invalid option. Please enter valid opt");
48                 continue;
49             }
50             try {
51                 Associate associate = null;
52                 switch (option) {
53                     case 1:
54                         addAssociate();
55                         break;
56                     case 2:

```

Console

```

<terminated> SkillTrackerAppMain [Java Application] E:\eclipse-jee-2022-09-R-win32-x86_64\ eclipse\plugin
Stella
9
1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 9
a.Total No of associates
b.Total No of associates who has more than 1 skill
c.List of Associate IDs who has more than N skills
d.Total No of Associates who has given set of skills
e.Skill count based on Associates
f.Associate Count based on Business Unit
g.Associate Average experience based on Skills
h.Skills Count based on Location
Enter an option: h
Location : Chennai
Associate Count: 2
Location : Bangalore
Associate Count: 1
1. Add an Associate
2. View an Associate
3. Update an Associate
4. Delete an Associate
5. Add Skills
6. Edit Skill
7. Delete Skill
8. Search an Associate
9. Print Statistics
10. View All Associates
11. Exit
Enter the option: 11
Thank you!!!

```