

Course Title:	Fundamental of Data Engineering
Course Number:	COE848
Semester/Year (e.g.F2016)	W2022

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<i>Assignment/Lab Number:</i>	5
<i>Assignment/Lab Title:</i>	Database Programming

<i>Submission Date :</i>	March 28. 2021
<i>Due Date:</i>	March 28. 2021

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*By signing above you attest that you have contributed to this written lab report and confirm that all work you have contributed to this lab report is your own work. Any suspicion of copying or plagiarism in this work will result in an investigation of Academic Misconduct and may result in a "0" on the work, an "F" in the course, or possibly more severe penalties, as well as a Disciplinary Notice on your academic record under the Student Code of Academic Conduct, which can be found online at: <http://www.ryerson.ca/senate/current/pol60.pdf>

To start the system, cd to the base folder, lab5, in the command window and then enter the command as following:

```
(base) E:\COURSE\COE848\lab5>java -classpath ".;sqlite-jdbc-3.34.0.jar" lab5
```

Figure 1. Start of the system

The figure below shows the main window of the system, the system requires the user to only enter a digit for selecting a query. In the main window, users can type a digit, 1- 10, to see whatever they want. Figure 2- 12 are the screenshots of each option provided to the user.

```
(base) E:\COURSE\COE848\lab5>java -classpath ".;sqlite-jdbc-3.34.0.jar" lab5
Welcome to Rick's video game database application, select one of the queries you would like to see
To see the total number of the played time, type 1
To see the list of character from a video game, type 2
The name of the video game Rick played the most, type 3
The type of video game Rick played the most?, type 4
The total amount of money Rick spent on the video game, type 5
The list of OS required for a video game, type 6
The most expensive video game Rick have bought, type 7
The number of video games Rick have played on PC, type 8
The video game has the highest rating, type 9
The video games developed by a certain company, type 10
Terminate the system, type -1
```

Figure 2. The main window of the system

```
(base) E:\COURSE\COE848\lab5>java -classpath ".;sqlite-jdbc-3.34.0.jar" lab5
Welcome to Rick's video game database application, select one of the queries you would like to see
To see the total number of the played time, type 1
To see the list of character from a video game, type 2
The name of the video game Rick played the most, type 3
The type of video game Rick played the most?, type 4
The total amount of money Rick spent on the video game, type 5
The list of OS required for a video game, type 6
The most expensive video game Rick have bought, type 7
The number of video games Rick have played on PC, type 8
The video game has the highest rating, type 9
The video games developed by a certain company, type 10
Terminate the system, type -1
1
```

```
The total played time is: 721 hrs
```

Figure 3. Query 1, user input 1

```
Welcome to Rick's video game database application, select one of the queires you would like to see
To see the total number of the played time, type 1
To see the list of character from a video game, type 2
The name of the video game Rick played the most, type 3
The type of video game Rick played the most?, type 4
The total amount of money Rick spent on the video game, type 5
The list of OS required for a video game, type 6
The most expensive video game Rick have bought, type 7
The number of video games Rick have played on PC, type 8
The video game has the highest rating, type 9
The video games developed by a certain company, type 10
Terminate the system, type -1
2

1. Dark Souls 3
2. Arknights
3. Azur Lane
4. Genshin Impact
5. Total War: Three Kingdoms
6. Sekiro
7. Nier: Automata
8. Granblue Fantasy: Versus
9. Red Read Redemption 2
10. Hollow Knight
Enter the index of the game you would like to check
1
The characters in this game are:
1. charcter: Siegward
2. charcter: Patches
3. charcter: Prince Lothric
```

Figure 4. Query 2, user input 2

```
Welcome to Rick's video game database application, select one of the queires you would like to see
To see the total number of the played time, type 1
To see the list of character from a video game, type 2
The name of the video game Rick played the most, type 3
The type of video game Rick played the most?, type 4
The total amount of money Rick spent on the video game, type 5
The list of OS required for a video game, type 6
The most expensive video game Rick have bought, type 7
The number of video games Rick have played on PC, type 8
The video game has the highest rating, type 9
The video games developed by a certain company, type 10
Terminate the system, type -1
3

The video game is: Dark Souls 3
```

Figure 5. Query 3, user input 3

```
Welcome to Rick's video game database application, select one of the queires you would like to see  
To see the total number of the played time, type 1  
To see the list of character from a video game, type 2  
The name of the video game Rick played the most, type 3  
The type of video game Rick played the most?, type 4  
The total amount of money Rick spent on the video game, type 5  
The list of OS required for a video game, type 6  
The most expensive video game Rick have bought, type 7  
The number of video games Rick have played on PC, type 8  
The video game has the highest rating, type 9  
The video games developed by a certain company, type 10  
Terminate the sytem, type -1  
4
```

```
The type of video game Rick played the most is: ARPG
```

Figure 6. Query 4, user input 4

```
Welcome to Rick's video game database application, select one of the queires you would like to see  
To see the total number of the played time, type 1  
To see the list of character from a video game, type 2  
The name of the video game Rick played the most, type 3  
The type of video game Rick played the most?, type 4  
The total amount of money Rick spent on the video game, type 5  
The list of OS required for a video game, type 6  
The most expensive video game Rick have bought, type 7  
The number of video games Rick have played on PC, type 8  
The video game has the highest rating, type 9  
The video games developed by a certain company, type 10  
Terminate the sytem, type -1  
5
```

```
The total amount of money Rick spent on the video game: 402 $
```

Figure 7. Query 5, user input 5

```
Welcome to Rick's video game database application, select one of the queires you would like to see
To see the total number of the played time, type 1
To see the list of character from a video game, type 2
The name of the video game Rick played the most, type 3
The type of video game Rick played the most?, type 4
The total amount of money Rick spent on the video game, type 5
The list of OS required for a video game, type 6
The most expensive video game Rick have bought, type 7
The number of video games Rick have played on PC, type 8
The video game has the highest rating, type 9
The video games developed by a certain company, type 10
Terminate the system, type -1
6

1. Dark Souls 3
2. Arknights
3. Azur Lane
4. Genshin Impact
5. Total War: Three Kingdoms
6. Sekiro
7. Nier: Automata
8. Granblue Fantasy: Versus
9. Red Dead Redemption 2
10. Hollow Knight
Enter the index of the game you would like to check
1
The OS requirements of this game are:
1. Intel Core i3 2100
2. AMD FX 6300
```

Figure 8. Query 6, user input 6

```
Welcome to Rick's video game database application, select one of the queires you would like to see
To see the total number of the played time, type 1
To see the list of character from a video game, type 2
The name of the video game Rick played the most, type 3
The type of video game Rick played the most?, type 4
The total amount of money Rick spent on the video game, type 5
The list of OS required for a video game, type 6
The most expensive video game Rick have bought, type 7
The number of video games Rick have played on PC, type 8
The video game has the highest rating, type 9
The video games developed by a certain company, type 10
Terminate the system, type -1
7
```

The most expensive game Rick have brought is: Sekiro

Figure 9. Query 7, user input 7

```
Welcome to Rick's video game database application, select one of the queires you would like to see  
To see the total number of the played time, type 1  
To see the list of character from a video game, type 2  
The name of the video game Rick played the most, type 3  
The type of video game Rick played the most?, type 4  
The total amount of money Rick spent on the video game, type 5  
The list of OS required for a video game, type 6  
The most expensive video game Rick have bought, type 7  
The number of video games Rick have played on PC, type 8  
The video game has the highest rating, type 9  
The video games developed by a certain company, type 10  
Terminate the system, type -1  
8  
  
choose a platoform you would like to check: PC, PS4 or mobile (case sensitive)  
mobile  
  
· The total number of video game Rick have played on platform, mobile, is 2
```

Figure 10. Query 8, user input 8

```
Welcome to Rick's video game database application, select one of the queires you would like to see  
To see the total number of the played time, type 1  
To see the list of character from a video game, type 2  
The name of the video game Rick played the most, type 3  
The type of video game Rick played the most?, type 4  
The total amount of money Rick spent on the video game, type 5  
The list of OS required for a video game, type 6  
The most expensive video game Rick have bought, type 7  
The number of video games Rick have played on PC, type 8  
The video game has the highest rating, type 9  
The video games developed by a certain company, type 10  
Terminate the sytem, type -1  
9
```

```
The highest rating video game is: Dark Souls 3
```

Figure 11. Query 9, user input 9

Welcome to Rick's video game database application, select one of the queires you would like to see
To see the total number of the played time, type 1
To see the list of character from a video game, type 2
The name of the video game Rick played the most, type 3
The type of video game Rick played the most?, type 4
The total amount of money Rick spent on the video game, type 5
The list of OS required for a video game, type 6
The most expensive video game Rick have bought, type 7
The number of video games Rick have played on PC, type 8
The video game has the highest rating, type 9
The video games developed by a certain company, type 10
Terminate the system, type -1
10

1. Team Cherry Games
2. Yostar
3. HyperGryph
4. miHOYO
5. Cygames
6. SquareEnix
7. BANDAI NAMCO
8. CD PROJEKT RED
9. Rockstar Games
10. SEGA

Enter the index of the company you would like to check
2

The video games developed by this company are:

1. Azur Lane

Figure 12. Query 10, user input 10