



**Department of Electrical,
Computer, & Biomedical Engineering**
Faculty of Engineering & Architectural Science

Course Title:	Fundamentals of Data Engineering
Course Number:	COE 848
Semester/Year (e.g.F2016)	W2021

Instructor:	Dr. Faezeh Ensan
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<i>Assignment/Lab Number:</i>	5
<i>Assignment/Lab Title:</i>	Database Programming

<i>Submission Date:</i>	March 30, 2021
<i>Due Date:</i>	March 30, 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>

The Lab5 project should be compiled in run in a Java IDE as it was developed in NetBeans.

Open the project library and run lab5.java. The JDBC driver was used to connect the Amazon.db to the Java application and access the queries.

To run the queries, simply first run the lab5.java. The output window will then ask for the user to enter a number from 1 to 10 (each number assigned to each query). Upon entering any of the 10 numbers, the program will output the selected query from the Amazon.db database.

The following values and data types were built in conjunction with labs 1, 2 and 3.

Queries Selection:

```
run:
Opened DataBase Successfully

1. Products offered on the company website, their description, their category and their manufacturer.
2. Products listed by their ratings.
3. Are highly rated products built by the same manufacturer?
4. The products that are bought by the customers on a daily basis.
5. In the event of a sale/discount day, which products are the least bought?
6. What products are offered through the company warehouse and not from the manufacturer?
7. What products are out of stock and in customer demand?
8. Products that offer a subscription service in lieu of a one-time purchase.
9. Products that are released 1 day before the stat holidays.
10. The products associated with concerning reviews and high rating.
Enter Selection:
```

Figure 1: Query Selection Interface

The 10 queries:

```
3. Are highly rated products built by the same manufacturer?
4. The products that are bought by the customers on a daily basis.
5. In the event of a sale/discount day, which products are the least bought?
6. What products are offered through the company warehouse and not from the manufacturer?
7. What products are out of stock and in customer demand?
8. Products that offer a subscription service in lieu of a one-time purchase.
9. Products that are released 1 day before the stat holidays.
10. The products associated with concerning reviews and high rating.
Enter Selection:
1

Product ID: 1. Product Name: Greenlights. Product Description: From the Academy Awards-winning actor, an unconventional memoir filled with raucous stories, outlaw wisdom, and lessons learned the hard way about living with greater satisfaction..
Product ID: 2. Product Name: Grand Theft Auto V. Product Description: Grand Theft Auto V Premium Online Edition - PlayStation 4 Standard Edition. Department: Video Games. Company: Rockstar Games
Product ID: 3. Product Name: After Hours. Product Description: The Weeknd's latest chapter After Hours which features the global hit Blinding Lights.. Department: Music. Company: The Weeknd
Product ID: 4. Product Name: SAMSUNG 27-inch M5 Smart Monitor. Product Description: Monitor with Mobile Connectivity, HDR, Remote Access, Office 365 (L527AN00000002A). Black. Department: Electronics. Company: Samsung
Product ID: 5. Product Name: CALVIN KLEIN CKIN2U. Product Description: Eau De Toilette For Him 50ML. Department: Health & Beauty. Company: Calvin Klein
Product ID: 6. Product Name: McCafe K-Cup pod. Product Description: McCafe Premium Roast Medium Dark Single Serve Keurig Certified Recyclable K-Cup pods for Keurig Brewers, 48 Count. Department: Grocery. Company: McDonalds
Product ID: 7. Product Name: Flannel Shirt. Product Description: Amazon Essentials Men's Slim-Fit Long-Sleeve Flaid Flannel Shirt. Department: Men's Clothing. Company: Amazon Essentials
Product ID: 8. Product Name: Golf Balls. Product Description: Prinsports Practice Golf Balls, Foam, 12-Count, Yellow. Department: Sports. Company: Prinsports
Product ID: 9. Product Name: Michelin Tires. Product Description: Michelin Anakee III Radial Tire - 120/70R19 60V. Department: Automotive. Company: Michelin
Product ID: 10. Product Name: Samsung Ear Buds. Product Description: Samsung Galaxy Buds Live - Black, SM-R100NEXAAXAC. Department: Electronics. Company: Samsung
Enter Selection:
```

Figure 2: Query #1: Products offered on the company website, their description, their category and their manufacturer.

1. Products offered on the company website, their description, their category and their manufacturer.
2. Products listed by their ratings.
3. Are highly rated products built by the same manufacturer?
4. The products that are bought by the customers on a daily basis.
5. In the event of a sale/discount day, which products are the least bought?
6. What products are offered through the company warehouse and not from the manufacturer?
7. What products are out of stock and in customer demand?
8. Products that offer a subscription service in lieu of a one-time purchase.
9. Products that are released 1 day before the stat holidays.
10. The products associated with concerning reviews and high rating.

Enter Selection:

2

Product ID: 3. Product Name: After Hours. Product Average Ratings: 5.0
 Product ID: 4. Product Name: SAMSUNG 27-inch M5 Smart Monitor. Product Average Ratings: 5.0
 Product ID: 6. Product Name: McCafe K-Cup pod. Product Average Ratings: 5.0
 Product ID: 9. Product Name: Michelin Tires. Product Average Ratings: 5.0
 Product ID: 10. Product Name: Samsung Ear Buds. Product Average Ratings: 5.0
 Product ID: 1. Product Name: Greenlights. Product Average Ratings: 4.0
 Product ID: 2. Product Name: Grand Theft Auto V. Product Average Ratings: 4.0
 Product ID: 5. Product Name: CALVIN KLEIN CKIN2U. Product Average Ratings: 4.0
 Product ID: 7. Product Name: Flannel Shirt. Product Average Ratings: 3.0
 Product ID: 8. Product Name: Golf Balls. Product Average Ratings: 3.0
 Enter Selection:

Figure 3: Query #2: Products listed by their ratings.

Enter Selection:

3

Product ID: 3. Product Name: After Hours. Product Average Ratings: The Weeknd. Company: 5.0
 Product ID: 4. Product Name: SAMSUNG 27-inch M5 Smart Monitor. Product Average Ratings: Samsung. Company: 5.0
 Product ID: 6. Product Name: McCafe K-Cup pod. Product Average Ratings: McDonalds. Company: 5.0
 Product ID: 9. Product Name: Michelin Tires. Product Average Ratings: Michelin. Company: 5.0
 Product ID: 10. Product Name: Samsung Ear Buds. Product Average Ratings: Samsung. Company: 5.0
 Product ID: 1. Product Name: Greenlights. Product Average Ratings: Matthew McConaughey. Company: 4.0
 Product ID: 2. Product Name: Grand Theft Auto V. Product Average Ratings: Rockstar Games. Company: 4.0
 Product ID: 5. Product Name: CALVIN KLEIN CKIN2U. Product Average Ratings: Calvin Klein. Company: 4.0
 Product ID: 7. Product Name: Flannel Shirt. Product Average Ratings: Amazon Essentials. Company: 3.0
 Product ID: 8. Product Name: Golf Balls. Product Average Ratings: PrideSports. Company: 3.0
 Enter Selection:

Figure 4: Query #3: Are highly rated products built by the same manufacturer?

```

Opened DataBase Successfully

1. Products offered on the company website, their description, their category and their manufacturer.
2. Products listed by their ratings.
3. Are highly rated products built by the same manufacturer?
4. The products that are bought by the customers on a daily basis.
5. In the event of a sale/discount day, which products are the least bought?
6. What products are offered through the company warehouse and not from the manufacturer?
7. What products are out of stock and in customer demand?
8. Products that offer a subscription service in lieu of a one-time purchase.
9. Products that are released 1 day before the stat holidays.
10. The products associated with concerning reviews and high rating.
Enter Selection:
4

Product ID: 1. Product Name: Greenlights. Product Subscription: Yes
Product ID: 3. Product Name: After Hours. Product Subscription: Yes
Product ID: 5. Product Name: CALVIN KLEIN CKIN2U. Product Subscription: Yes
Product ID: 6. Product Name: McCafe K-Cup pod. Product Subscription: Yes
Enter Selection:

```

Figure 5: Query #4: The products that are bought by the customers on a daily basis.

```

run:
Opened DataBase Successfully

1. Products offered on the company website, their description, their category and their manufacturer.
2. Products listed by their ratings.
3. Are highly rated products built by the same manufacturer?
4. The products that are bought by the customers on a daily basis.
5. In the event of a sale/discount day, which products are the least bought?
6. What products are offered through the company warehouse and not from the manufacturer?
7. What products are out of stock and in customer demand?
8. Products that offer a subscription service in lieu of a one-time purchase.
9. Products that are released 1 day before the stat holidays.
10. The products associated with concerning reviews and high rating.
Enter Selection:
5

Product ID: 5. Product Name: CALVIN KLEIN CKIN2U. Product Selling Performance: Worse-Seller
Enter Selection:

```

Figure 6: Query #5: In the event of a sale/discount day, which products are the least bought?

Opened DataBase Successfully

```
1. Products offered on the company website, their description, their category and their manufacturer.
2. Products listed by their ratings.
3. Are highly rated products built by the same manufacturer?
4. The products that are bought by the customers on a daily basis.
5. In the event of a sale/discount day, which products are the least bought?
6. What products are offered through the company warehouse and not from the manufacturer?
7. What products are out of stock and in customer demand?
8. Products that offer a subscription service in lieu of a one-time purchase.
9. Products that are released 1 day before the stat holidays.
10. The products associated with concerning reviews and high rating.
Enter Selection:
6
```

```
Product ID: 1. Product Name: Greenlights. Warehouse Availability: Yes
Product ID: 4. Product Name: SAMSUNG 27-inch M5 Smart Monitor. Warehouse Availability: Yes
Product ID: 7. Product Name: Flannel Shirt. Warehouse Availability: Yes
Product ID: 8. Product Name: Golf Balls. Warehouse Availability: Yes
Enter Selection:
.
```

Figure 7: Query #6: What products are offered through the company warehouse and not from the manufacturer?

```
1. Products offered on the company website, their description, their category and their manufacturer.
2. Products listed by their ratings.
3. Are highly rated products built by the same manufacturer?
4. The products that are bought by the customers on a daily basis.
5. In the event of a sale/discount day, which products are the least bought?
6. What products are offered through the company warehouse and not from the manufacturer?
7. What products are out of stock and in customer demand?
8. Products that offer a subscription service in lieu of a one-time purchase.
9. Products that are released 1 day before the stat holidays.
10. The products associated with concerning reviews and high rating.
Enter Selection:
7

Product ID: 1. Product Name: Greenlights. Product Availability: No. Rating Stars: 4.0. Comment Sentiment: Good
Product ID: 3. Product Name: After Hours. Product Availability: No. Rating Stars: 5.0. Comment Sentiment: Good
Product ID: 4. Product Name: SAMSUNG 27-inch M5 Smart Monitor. Product Availability: No. Rating Stars: 5.0. Comment Sentiment: Good
Product ID: 6. Product Name: McCafe K-Cup pod. Product Availability: No. Rating Stars: 5.0. Comment Sentiment: Good
Product ID: 9. Product Name: Michelin Tires. Product Availability: No. Rating Stars: 5.0. Comment Sentiment: Good
Enter Selection:
```

Figure 8: Query #7: What products are out of stock and in customer demand?

5. In the event of a sale/discount day, which products are the least bought?
6. What products are offered through the company warehouse and not from the manufacturer?
7. What products are out of stock and in customer demand?
8. Products that offer a subscription service in lieu of a one-time purchase.
9. Products that are released 1 day before the stat holidays.
10. The products associated with concerning reviews and high rating.

Enter Selection:

8

```
Product ID: 1. Product Name: Greenlights. Subscription Option: Yes
Product ID: 2. Product Name: Grand Theft Auto V. Subscription Option: No
Product ID: 3. Product Name: After Hours. Subscription Option: Yes
Product ID: 4. Product Name: SAMSUNG 27-inch M5 Smart Monitor. Subscription Option: No
Product ID: 5. Product Name: CALVIN KLEIN CKIN2U. Subscription Option: Yes
Product ID: 6. Product Name: McCafe K-Cup pod. Subscription Option: Yes
Product ID: 7. Product Name: Flannel Shirt. Subscription Option: No
Product ID: 8. Product Name: Golf Balls. Subscription Option: No
Product ID: 9. Product Name: Michelin Tires. Subscription Option: No
Product ID: 10. Product Name: Samsung Ear Buds. Subscription Option: No
Enter Selection:
```

Figure 9: Query #8: Products that offer a subscription service in lieu of a one-time purchase.

run:

Opened DataBase Successfully

1. Products offered on the company website, their description, their category and their manufacturer.
2. Products listed by their ratings.
3. Are highly rated products built by the same manufacturer?
4. The products that are bought by the customers on a daily basis.
5. In the event of a sale/discount day, which products are the least bought?
6. What products are offered through the company warehouse and not from the manufacturer?
7. What products are out of stock and in customer demand?
8. Products that offer a subscription service in lieu of a one-time purchase.
9. Products that are released 1 day before the stat holidays.
10. The products associated with concerning reviews and high rating.

Enter Selection:

9

```
Product ID: 2. Product Name: Grand Theft Auto V. Listing Date: 2020-12-24
```

Figure 10: Query #9: Products that are released 1 day before the stat holidays.

```

5. In the event of a sale/discount day, which products are the least bought?
6. What products are offered through the company warehouse and not from the manufacturer?
7. What products are out of stock and in customer demand?
8. Products that offer a subscription service in lieu of a one-time purchase.
9. Products that are released 1 day before the stat holidays.
10. The products associated with concerning reviews and high rating.
Enter Selection:
10

Product ID: 1. Product Name: Greenlights. Rating Stars: 4.0. Comment Sentiment: Good
Product ID: 2. Product Name: Grand Theft Auto V. Rating Stars: 4.0. Comment Sentiment: Moderate
Product ID: 3. Product Name: After Hours. Rating Stars: 5.0. Comment Sentiment: Good
Product ID: 4. Product Name: SAMSUNG 27-inch M5 Smart Monitor. Rating Stars: 5.0. Comment Sentiment: Good
Product ID: 5. Product Name: CALVIN KLEIN CKIN2U. Rating Stars: 4.0. Comment Sentiment: Moderate
Product ID: 6. Product Name: McCafe K-Cup pod. Rating Stars: 5.0. Comment Sentiment: Good
Product ID: 7. Product Name: Flannel Shirt. Rating Stars: 3.0. Comment Sentiment: Moderate
Product ID: 8. Product Name: Golf Balls. Rating Stars: 3.0. Comment Sentiment: Bad
Product ID: 9. Product Name: Michelin Tires. Rating Stars: 5.0. Comment Sentiment: Good
Product ID: 10. Product Name: Samsung Ear Buds. Rating Stars: 3.0. Comment Sentiment: Moderate
Enter Selection:

```

Figure 11: Query #10: The products associated with concerning reviews and high rating.