



ASSIGNMENT C1

Software Setup for CS4DS

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Answer to the question no. 1

Clone the project from https://github.com/sgra64/C1_order_system.git and setup the project on my local pyCharm environment. After solving all the question I uploaded the code on my github repository github.com.

Answer to the question no. 2

There are three dataset in the codebase. They are Coustomer, stock, and orders dataset.

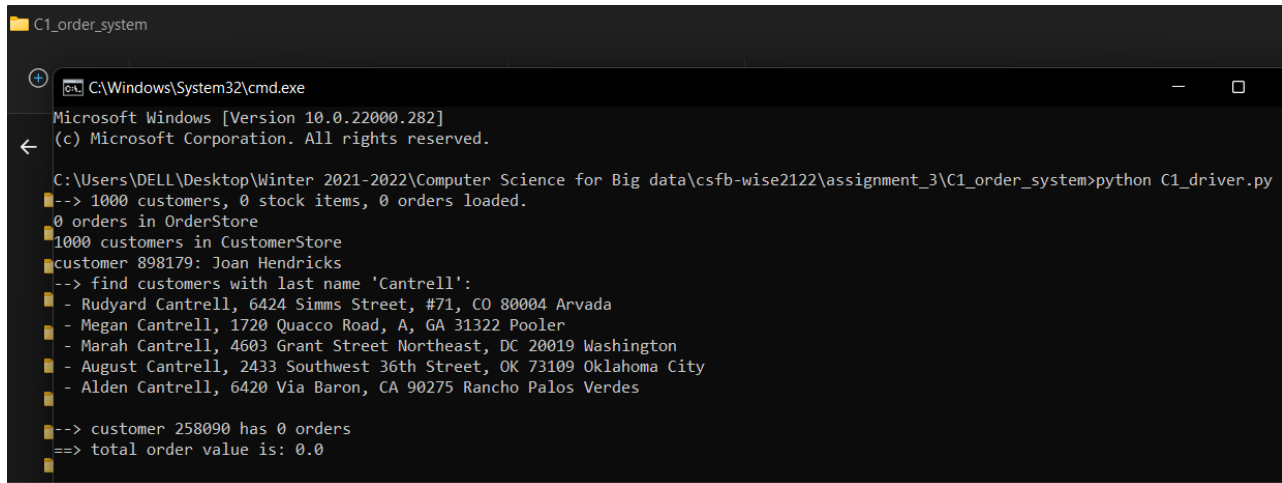
1. **Customer Dataset:** Its contains a list of customer data. Each element of the list is a tuple which contains customer_id, name, address, and phone. Customer_id is act as a primary key of each element.
2. **Stock Dataset:** Its contains a list of stock data. Each element of the list is a tuple which contains stock_id, description, unit price, units_in_stock, and product category. Stock_id is the primary key of this dataset.
3. **Order Dataset:** This contains the order data of the system. Each elements of the list contains a tuple and each tuple defined a single order. An order contains order_id, customer_id, stock_id, units_ordered, and description. Order_id the unique identifier of the dataset and customer_id and stock_id are represent the foreign key of customer dataset and stock dataset respectively.

Answer to the question no. 3

- a) As this project is based on singleton principle. So, the objects are exist whenever the DataSore remains loaded. Because the instance will not become eligible for garbage collection until the class 'DataStore' remains loaded.
- b) No global reference variable was used for DataFactory because it is imported and implemented as chainable functionalitiy.
- c) DataFactory's import functions enables all the initializations of data from data model.

Answer to the question no. 4

I have run the code in terminal and it is running without any bug. The screen short is given bellow:



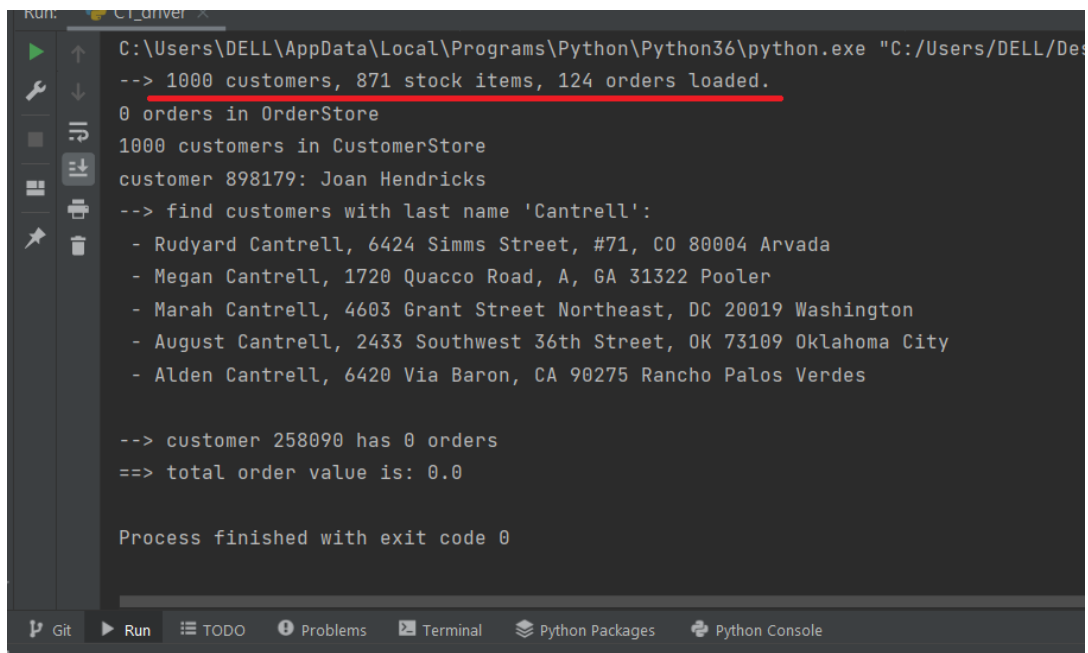
```
C1_order_system
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.22000.282]
(c) Microsoft Corporation. All rights reserved.

C:\Users\DELL\Desktop\Winter 2021-2022\Computer Science for Big data\csfb-wise2122\assignment_3\C1_order_system>python C1_driver.py
--> 1000 customers, 0 stock items, 0 orders loaded.
0 orders in OrderStore
1000 customers in CustomerStore
customer 898179: Joan Hendricks
--> find customers with last name 'Cantrell':
- Rudyard Cantrell, 6424 Simms Street, #71, CO 80004 Arvada
- Megan Cantrell, 1720 Quacco Road, A, GA 31322 Pooler
- Marah Cantrell, 4603 Grant Street Northeast, DC 20019 Washington
- August Cantrell, 2433 Southwest 36th Street, OK 73109 Oklahoma City
- Alden Cantrell, 6420 Via Baron, CA 90275 Rancho Palos Verdes

--> customer 258090 has 0 orders
==> total order value is: 0.0
```

Answer to the question no. 5

I have completed all the necessary code segments for question number 5 and then run the code. The output screen-short are given bellow:



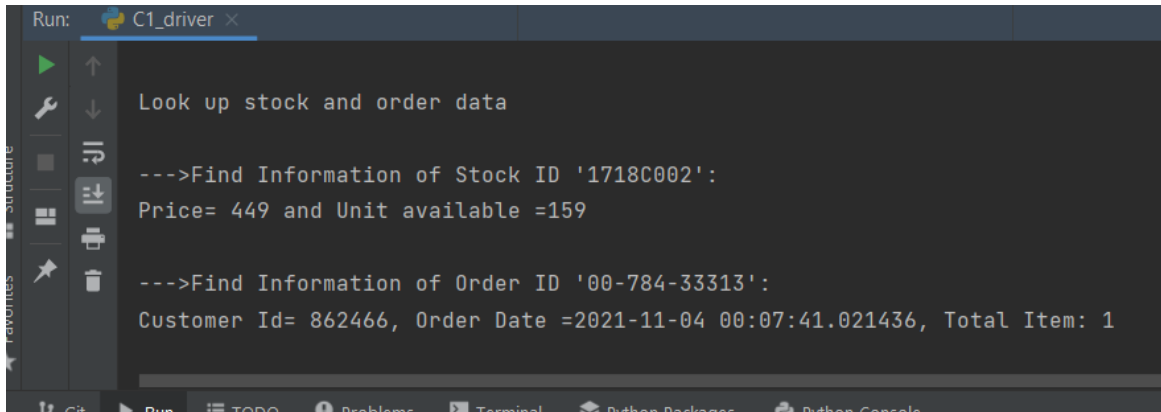
```
Run: C1_driver
C:\Users\DELL\AppData\Local\Programs\Python\Python36\python.exe "C:/Users/DELL/De
--> 1000 customers, 871 stock items, 124 orders loaded.
0 orders in OrderStore
1000 customers in CustomerStore
customer 898179: Joan Hendricks
--> find customers with last name 'Cantrell':
- Rudyard Cantrell, 6424 Simms Street, #71, CO 80004 Arvada
- Megan Cantrell, 1720 Quacco Road, A, GA 31322 Pooler
- Marah Cantrell, 4603 Grant Street Northeast, DC 20019 Washington
- August Cantrell, 2433 Southwest 36th Street, OK 73109 Oklahoma City
- Alden Cantrell, 6420 Via Baron, CA 90275 Rancho Palos Verdes

--> customer 258090 has 0 orders
==> total order value is: 0.0

Process finished with exit code 0
```

Answer to the question no. 6

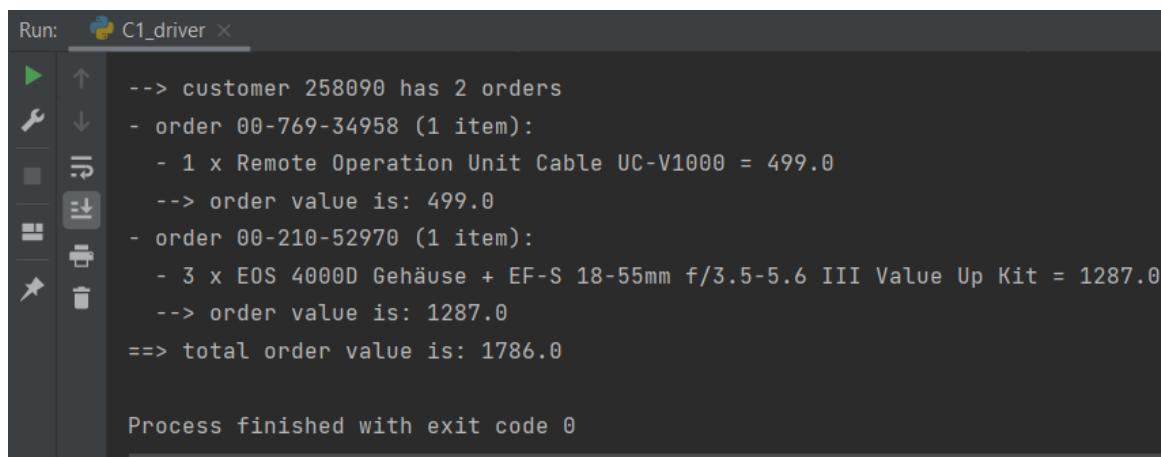
I have completed the implementation of Order.py and Customer.py class. After successfully running the code I got the following results.



```
Run: C1_driver ×
Look up stock and order data
--->Find Information of Stock ID '1718C002':
Price= 449 and Unit available =159
--->Find Information of Order ID '00-784-33313':
Customer Id= 862466, Order Date =2021-11-04 00:07:41.021436, Total Item: 1
```

Answer to the question no. 7

I have completed the implementation of print_orders, and print_order_items. After successfully run the code I found the following output:



```
Run: C1_driver ×
--> customer 258090 has 2 orders
- order 00-769-34958 (1 item):
  - 1 x Remote Operation Unit Cable UC-V1000 = 499.0
  --> order value is: 499.0
- order 00-210-52970 (1 item):
  - 3 x EOS 4000D Gehäuse + EF-S 18-55mm f/3.5-5.6 III Value Up Kit = 1287.0
  --> order value is: 1287.0
==> total order value is: 1786.0
Process finished with exit code 0
```

Answer to the question no. 8

I have uncommented all the print statements and run the code. After the successful run the:

```
C1_driver x
--> customer 258090 has 2 orders
- order 00-769-34958 (1 item):
  - 1 x Remote Operation Unit Cable UC-V1000 = 499.0
--> order value is: 499.0
- order 00-210-52970 (1 item):
  - 3 x EOS 4000D Gehäuse + EF-S 18-55mm f/3.5-5.6 III Value Up Kit = 1287.0
--> order value is: 1287.0
==> total order value is: 1786.0

--> customer 368075 has 1 orders
- order 00-609-44671 (1 item):
  - 5 x Schutzfilter 82mm = 595.0
--> order value is: 595.0
==> total order value is: 595.0

--> customer 986973 has 1 orders
- order 00-200-46326 (4 item):
  - 1 x EF 35mm f/2 IS USM = 599.0
  - 4 x Speedlite 270 EX II = 876.0
  - 1 x EF-S 18-135mm f/3.5-5.6 IS USM = 549.0
  - 1 x Schutzfilter 72mm = 59.0
--> order value is: 2083.0
==> total order value is: 2083.0
```

```
--> customer 193667 has 4 orders
- order 00-532-44167 (1 item):
  - 3 x IXUS 185 - Silber Essentials Kit = 357.0
--> order value is: 357.0
- order 00-554-82798 (1 item):
  - 1 x XA11 BP-820 Power Kit = 1549.0
--> order value is: 1549.0
- order 00-423-97519 (1 item):
  - 3 x Augenkorrekturlinsen EOS Ed mit Augenmuschel Ed . 4 Dioptrien = 177.0
--> order value is: 177.0
- order 00-564-57334 (1 item):
  - 1 x BP-820Akku = 119.0
--> order value is: 119.0
==> total order value is: 2202.0

--> customer 973407 has 0 orders
==> total order value is: 0.0

--> customer 333333 has 0 orders
==> total order value is: 0.0

--> customer -1 has 0 orders
==> total order value is: 0.0

Process finished with exit code 0
```