CSE212: SOFTWARE DEVELOPMENT METHODOLOGIES

YEDITEPE UNIVERSITY

SPRING 2023

ASSIGNMENT 9 – DUE DATE MAY 9TH, 2023

Below, you can find the description of your ninth assignment, which also includes its output in the *Application Walkthrough* section.

In this assignment, you are expected to improve your existing <u>Hotel Reservation System</u> by incorporating couple of exception handling mechanisms.

When the application starts, it should prompt the user with the existing menu structure as before:

```
1. Create new Reservation with Room Type
2. Display all Reservations
3. List the reservations for a specific city
4. Add extra services to a reservation
5. Calculate total cost for each service
6. Display the total cost of every customer
7. Add an employee
8. Add a bill
9. Get monthly balance
10. List all Services sorted based on cost
11. List all Reservations sorted based on hotel names
12. Exit
```

However, now if the user selects a non-existing menu items – i.e. enters a number that does not existing in the menu structure – the system should response with an error (*System.err*) output stating that user has entered an invalid menu option as shown below.

You entered an invalid menu option. Enter again.

You newly improved system should now check for user errors as part of its interaction with the Hotel Reservation System. Accordingly, this improves application should be able to catch at least some of the user's intentional or unintentional mistakes.

Therefore, during reservation creation, if the user enters a non-existing room type or misspells it then the system should react and state that the *Room type* entered is invalid. Furthermore, while entering reservation details, the system

should prevent users entering text based information as the *Reservation Start* and *End* values. The same control mechanism should be also valid when creating a *Laundry* request and adding the number of clothing, booking for *Spa* days, adding an *Employee* and checking whether the salary is provided in the right format and adding new bills to the system.

All of the above exceptions could be checked using existing Exception classes. However, to evaluate room type errors you should implement your own exception called *RoomTypeException*. This exception should be thrown when a room type input mismatch is detected.

Application Walkthrough

```
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12. Exit
1

ROOM INFOS:

Room Type: Single, Daily Cost: 100, Room Size: 15, Has Bath: false
Room Type: Double, Daily Cost: 180, Room Size: 30, Has Bath: false
Room Type: Club, Daily Cost: 250, Room Size: 45, Has Bath: true
Room Type: Family, Daily Cost: 400, Room Size: 50, Has Bath: false
Room Type: Family With View, Daily Cost: 450, Room Size: 50, Has Bath: true
Room Type: Suite, Daily Cost: 650, Room Size: 80, Has Bath: true

Hotel Name: Hilton Istanbul
Room Type: Famly

Room Type is not valid!

Room Type: Family
Reservation Month: June
Reservation Start: One
Reservation Start must be a numeric value!

Reservation Start: 1
Reservation End: Two
Reservation End must be a numeric value!
Reservation End:
2
```

Reservation ID: 1 is created!

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12. Exit
13

You entered an invalid menu option. Enter again.

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12. Exit

4

Please select one of the extra services from below:
1. Laundry Service
2. Spa Service
1

Type the reservation ID to credit this service:
1
How many pieces of clothing?
six
Clothing count must be a numeric value!

How many pieces of clothing?
6

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9. Get monthly balance

```
10. List all Services sorted based on cost
11. List all Reservations sorted based on hotel names
12. Exit
4

Please select one of the extra services from below:
1. Laundry Service
2. Spa Service
2

Type the reservation ID to credit this service:
1
How many days?
two
Day count must be a numeric value!
How many days?

2

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8

Type:
Water
Amount:
sixty
Bill Amount must be a numeric value!

Amount:
60
Month:
May

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12. Exit
7
```

```
Name:
Joe
Surname:
Black
ID:
321
Monthly Payment:
Thousand
Monthly Payment must be a numeric value!

Monthly Payment:
1000

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12. Exit
12

Exiting, Goodbye!
```

Submit your assignments in a zip file, which has your student number as name, through the YULEARN (https://yulearn.yeditepe.edu.tr) latest by the end of Tuesday, May 9st, 2023.