OOP Project 2 Report:

Hospital System

Students:

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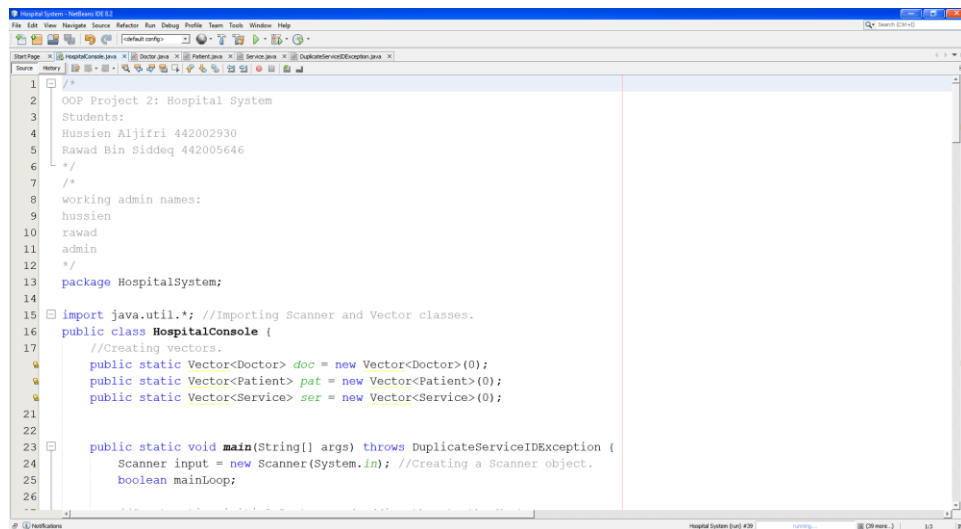Instructor: محمد احمد احمد

Details:

Package name: HospitalSystem

Number of classes: 6 (5 + 1 ConsoleColors):

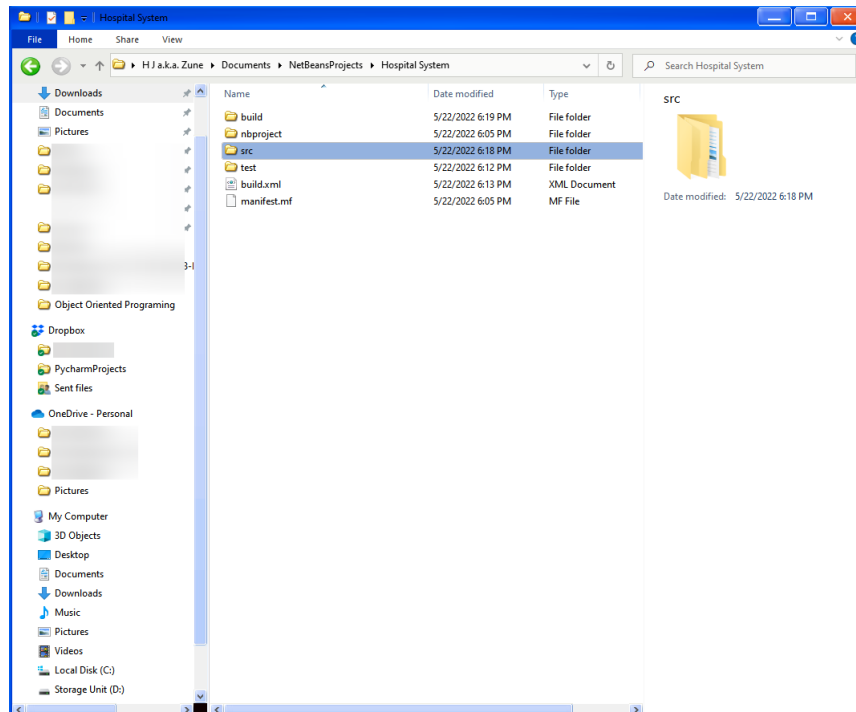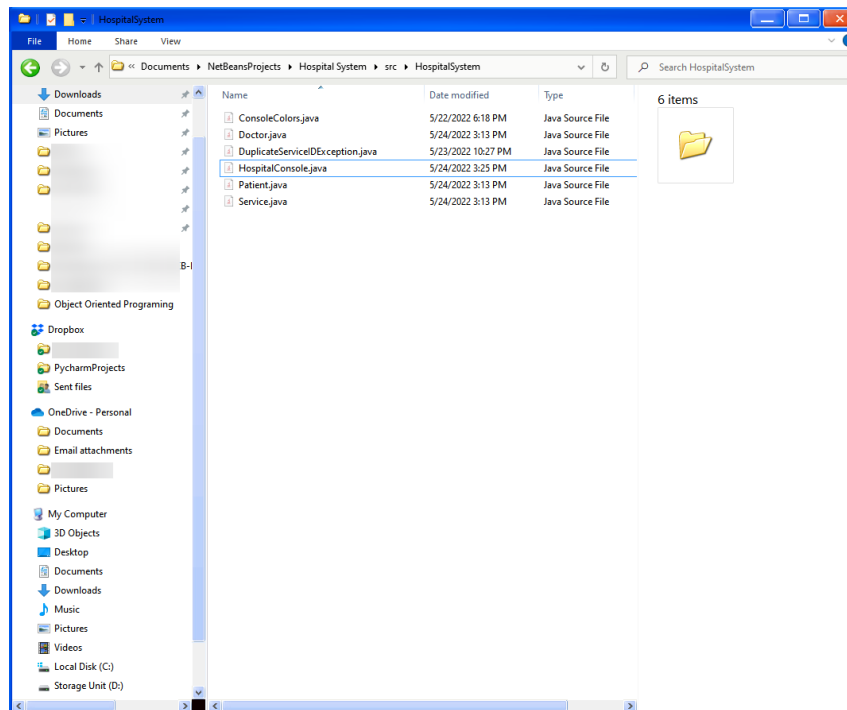HospitalConsole (main) - Doctor – Patient – Service - DuplicateServiceIDException

File size on disk: ~140KB

Image of IDE:

Images of file on disk:

Results:

Starting Screen:

```
run:
        *************************************
                Hospital Console
                Made by:
                Hussien Aljifri, 442002930
                        &
                Rawad Bin Siddeq, 442005646
        *************************************
Please enter an administrator name:
```

Selection Screen:

```
run:
        *************************************
                Hospital Console
                Made by:
                Hussien Aljifri, 442002930
                        &
                Rawad Bin Siddeq, 442005646
        *************************************
Please enter an administrator name:
admin
----------------------------------------
Choose a number between 1 and 9:
----------------------------------------
1- Add a Doctor.
2- Add a service.
3- Add a patient.
4- Show Doctor list.
5- Show patient list.
6- View Doctor information.
7- View patient information.
8- View patient bill.
9- Exit.
```

Showing initial doctor list:

```
1- Add a Doctor.
2- Add a service.
3- Add a patient.
4- Show Doctor list.
5- Show patient list.
6- View Doctor information.
7- View patient information.
8- View patient bill.
9- Exit.
4
Doctor: 1   Name: Hussien Aljifri   Rank: Owner   specialty: Opthomologist   Number of patients: 0
Doctor: 2   Name: Rawad Bin Siddeq   Rank: Owner   specialty: Opthomologist   Number of patients: 0
--------------------------------------
Choose a number between 1 and 9:
--------------------------------------
1- Add a Doctor.
2- Add a service.
3- Add a patient.
4- Show Doctor list.
5- Show patient list.
6- View Doctor information.
7- View patient information.
8- View patient bill.
9- Exit.
```

Adding a doctor:

```
1
Please enter the doctors first name:
Ahmad
Please enter the doctors last name:
Jifri
Please enter the doctors E-mail:
123@gmail.com
Please enter the doctors rank:
Resident
Please enter the doctors specialty:
Radiologist
Please enter the doctors phone number:
123456789
Please enter the doctors salary:
100000
Successfully added doctor!
Doctor ID: 3
```

Adding a patient:

```
3
Please enter the patients first name:
Saul
Please enter the patients last name:
Goodman
Please enter the patients E-mail:
1234@gmail.com
Please enter the patients type A, B or C:
A
Please enter the patients phone number:
123456788
Please enter the ID of the doctor treating the patient:
3
Successfully added patient!
Patient ID: 1

3
Please enter the patients first name:
Edmund
Please enter the patients last name:
Roland
Please enter the patients E-mail:
edmund367@hotmail.com
Please enter the patients type A, B or C:
B
Please enter the patients phone number:
123456777
Please enter the ID of the doctor treating the patient:
3
Successfully added patient!
Patient ID: 2
```

Adding Services:

```
Please enter the service ID:
23
Please enter the patient ID:
1
Please enter the service name:
X-Ray
Please enter the service price:
200
Successfully added service!
Service ID: 23


2
Please enter the service ID:
1
Please enter the patient ID:
2
Please enter the service name:
Check-up
Please enter the service price:
150
Successfully added service!
Service ID: 1



2
Please enter the service ID:
3
Please enter the patient ID:
2
Please enter the service name:
Dentisry
Please enter the service price:
600
Successfully added service!
Service ID: 3
```

Checking Doctor list:

```
4
Doctor: 1   Name: Hussien Aljifri   Rank: Owner    specialty: Opthomologist   Number of patients: 0
Doctor: 2   Name: Rawad Bin Siddeq   Rank: Owner    specialty: Opthomologist   Number of patients: 0
Doctor: 3   Name: Ahmad Jifri   Rank: Resident    specialty: Radiologist   Number of patients: 2
```

Checking Patient list:

```
5
Patient: 1   Name: Saul Goodman   Type: A   Phone: 123456788   Number of services: 1
Patient: 2   Name: Edmund Roland   Type: B   Phone: 123456777   Number of services: 2
```

Checking specific Doctor details:

```
6
Please enter doctor ID:
3
Full Name: Ahmad Jifri
E-Mail: 123@gmail.com
Rank: Resident
Specialty: Radiologist
Phone: 123456789
Salary: 100000.0
Patients: 1, 2,
```

Checking specific Patient details:

```
7
Please enter patient ID:
2
Full Name: Edmund Roland
E-Mail: edmund367@hotmail.com
Type: B
Phone: 123456777
Doctor: 3
Services: 1, 3,

7
Please enter patient ID:
1
Full Name: Saul Goodman
E-Mail: 1234@gmail.com
Type: A
Phone: 123456788
Doctor: 3
Services: 23,
```

Checking Patient bill:

```
8
Please enter patient ID:
1
The Total Bill for the patient is: 120.0

8
Please enter patient ID:
2
The Total Bill for the patient is: 600.0
```

Exiting Program:

```
---------------------------------------
Choose a number between 1 and 9:
---------------------------------------
1- Add a Doctor.
2- Add a service.
3- Add a patient.
4- Show Doctor list.
5- Show patient list.
6- View Doctor information.
7- View patient information.
8- View patient bill.
9- Exit.
9
Exiting from the program...
Goodbye!
```

Errors:

Invalid Patient ID option 2:

```
Please enter the service ID:
43
Please enter the patient ID:
3
ERROR: There is no patient with that ID.
```

Invalid Doctor ID option 3:

```
3
Please enter the patients first name:
firstname
Please enter the patients last name:
lastname
Please enter the patients E-mail:
email
Please enter the patients type A, B or C:
c
Please enter the patients phone number:
123
Please enter the ID of the doctor treating the patient:
4
ERROR: There is no doctor with that ID.
```

Invalid Doctor ID option 6:

```
6
Please enter doctor ID:
0
ERROR: There is no doctor with that ID.
```

Invalid Patient ID option 7:

```
7
Please enter patient ID:
14
ERROR: There is no patient with that ID.
```

Invalid Patient ID option 8:

```
8
Please enter patient ID:
-12
ERROR: There is no patient with that ID.
```

Duplicate Service ID Exception being thrown:

```
--------------------------------------
Choose a number between 1 and 9:
--------------------------------------
1- Add a Doctor.
2- Add a service.
3- Add a patient.
4- Show Doctor list.
5- Show patient list.
6- View Doctor information.
7- View patient information.
8- View patient bill.
9- Exit.
2
Please enter the service ID:
1
Please enter the patient ID:
1
Please enter the service name:
1
Please enter the service price:
1
Exception in thread "main" HospitalSystem.DuplicateServiceIDException: The Service ID you entered (1) has been used before
        at HospitalSystem.HospitalConsole.main(HospitalConsole.java:107)
C:\Users\hmaji\AppData\Local\NetBeans\Cache\8.2\executor-snippets\run.xml:53: Java returned: 1
BUILD FAILED (total time: 23 minutes 40 seconds)
```

Assumptions:

As per your request I did not use try-catch on the exception you requested I just threw it.

We did not use everything we learned in the course as we found some of the things unnecessary.

We used Vectors instead of Arrays in all locations as it removes the upper capacity limit problem.

All IDs are sequential apart from the Service ID as per your request.

We only implemented the administrative staff in the form of log in names that are available in comments at the top of the main class.

Patients are limited to one Doctor who is selected when adding the patient and every time you add a service you select what patient it goes to.

We started quite late on the project as the time was tight due to having a lot of tests in the past few weeks.

We used EasyUML to create the UML diagram as recommended to us at the end of the slides.

We removed the ConsoleColors class from the UML to reduce clutter, however we kept the custom Exception.

I also included the EasyUML project file from the netbeans folder if you have easyUML and would like to see it.