**CMSC203 Assignment 2 Implementation (Documentation)**

Class: CMSC203 CRN 21575

 Program: Assignment #2

Instructor: Grigoriy Grinberg

 Summary of Description: (Give a brief description for each Program)

 Due Date: 09/25/2023

 Integrity Pledge: I pledge that I have completed the programming assignment independently.

 I have not copied the code from a student or any source.

Name: Ema Gomez

**Part1: Pseudo Code:** Here is a pseudo code for Assignment 2 program:

**Patient.java**

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**\* Class: CMSC203**

**\* Instructor: Grigoriy Grinberg**

**\* Description: (Give a brief description for each Class)**

**\* Due: 09/25/2023**

**\* Platform/compiler: Eclipse**

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**\* from a student or any source. I have not given my code**

**\* to any student. Print your Name here: Ema Gomez**

**\*/**

**Make a String variable named firstName**

**Make a String variable named middleName**

**Make a String variable named lastName**

**Make a String variable named streetAddress**

**Make a String variable named city**

**Make a String variable named state**

**Make a String variable named zipCode**

**Make a String variable named phoneNumber**

**Make a String variable named emergencyContact**

**Make a String variable named emergencyPhone**

**Make a no-arg constructor**

**Make a constructor with the parameters String firstName, String middleName, and String lastName**

**Make a constructor with all the parameters including String firstName, String middleName, String lastName, String streetAddress, String city, String state, String zipCode, String phoneNumber, String emergencyContact, and String emergencyPhone.**

**Create an accessor for firstName**

**Create an accessor for middleName**

**Create an accessor for lastName**

**Create an accessor for streetAddress**

**Create an accessor for city**

**Create an accessor for state**

**Create an accessor for zipCode**

**Create an accessor for phoneNumber**

**Create an accessor for emergencyContact**

**Create an accessor for emergencyPhone**

**Create an mutator for firstName**

**Create an mutator for middleName**

**Create an mutator for lastName**

**Create an mutator for streetAddress**

**Create an mutator for city**

**Create an mutator for state**

**Create an mutator for zipCode**

**Create an mutator for phoneNumber**

**Create an mutator for emergencyContact**

**Create an mutator for emergencyPhone**

**Create a public String method called buildFullName**

**Returns firstName + “ ” + middleName + “ ” + lastName**

**Create a public String method called buildAddress**

**Returns streetAddress + “ ” + city + “ ” + state + “ ” + zipCode**

**Create a public String method called buildEmergencyContact**

**Returns emergencyContact + “ ” + emergencyPhone**

**Create a toString method**

**Print full name using buildFullName method**

**Print full address using buildAddress method**

**Print phoneNumber**

**Print emergency contact information using buildEmergencyContact method**

**Procedure.java**

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**\*/**

**Make a String variable named procedureName**

**Make a String variable named procedureDate**

**Make a String variable named practitioner**

**Make a double variable named charge**

**Make a constructor with the parameters String procedureName and String procedureDate**

**Make a constructor with the parameters String procedureName, String procedureDate, String practitioner, and double charge.**

**Create an accessor for procedureName**

**Create an accessor for procedureDate**

**Create an accessor for practitioner**

**Create an accessor for charge**

**Create an mutator for procedureName**

**Create an mutator for procedureDate**

**Create an mutator for practitioner**

**Create an mutator for charge**

**Create a toString method**

**Println procedureName**

**Println procedureDate**

**Println practitioner**

**Println charge**

**PatientDriverApp.java**

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**Create patient object**

**Create default procedure object**

**Create second constructor procedure object**

**Create third constructor procedure object**

**Create a displayPatient method**

**Print patient’s information**

**Create a displayProcedure method**

**Print procedure’s information**

**Create a public double calculateTotalCharges method**

**Return total charges of procedures**

**Part2: Comprehensive Test Plan**

A good test plan should be comprehensive. This means you should have a few test cases that test when the input is in and out of range, division by 0, incorrect Data type, etc. (Provide valid and invalid input)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Cases | Input | Expected Output | Actual Output | Did Test Pass? |
| Case 1 | "Sponge","Bob",  "Squarepants",  "124 Conch Street",  "Bikini Bottom",  "CA",  "12345",  "(123)456-7890",  "Patrick Star",  "(098)765-4321"  “Braces”  “09/15/2023”  “Ema Gomez”  1000.00  “Hip surgery”  “09/20/2023”  “Zain Ashraf”  10000.00  “CT Scan”  “09/30/2023”  “Snow Gomez”  0.00 | Patient info:  Name: Sponge Bob Squarepants  Address: 124 Conch Street Bikini Bottom CA 12345  Phone Number: (123)456-7890  Emergency Contact: Patrick Star (098)765-4321  Procedure: Braces  Procedure Date: 09/15/2023  Practitioner: Ema Gomez  Charge: 1000.0  Procedure: Hip surgery  Procedure Date: 09/20/2023  Practitioner: Zain Ashraf  Charge: 10000.0  Procedure: CT Scan  Procedure Date: 09/30/2023  Practitioner: Snow Gomez  Charge: 0.0  Total Charges: 11000.0  Student Name: Ema Gomez  MC#: M21074277  Due Date: 09/15/2023 | Patient info:  Name: Sponge Bob Squarepants  Address: 124 Conch Street Bikini Bottom CA 12345  Phone Number: (123)456-7890  Emergency Contact: Patrick Star (098)765-4321  Procedure: Braces  Procedure Date: 09/15/2023  Practitioner: Ema Gomez  Charge: 1000.0  Procedure: Hip surgery  Procedure Date: 09/20/2023  Practitioner: Zain Ashraf  Charge: 10000.0  Procedure: CT Scan  Procedure Date: 09/30/2023  Practitioner: Snow Gomez  Charge: 0.0  Total Charges: 11000.0  Student Name: Ema Gomez  MC#: M21074277  Due Date: 09/15/2023 | Yes |
| Case 2 | "Jane","Mary",  "Doe",  "1611 Elkon Road",  "Rockville",  "MD",  "20887",  "(240)920-9999",  "Joe Doe",  "(301)858-3352"  “Open-heart surgery”  “01/11/2023”  “Elizabeth Brown”  25000.12  “Knee Surgery”  “03/22/2023”  “Herald Wright”  10000.11  “Rhinoplasty”  “05/31/2023”  “Roberto Castillo”  4000.89 | Patient info:  Name: Jane Mary Doe  Address: 1611 Elkon Road Rockville MD 20887  Phone Number: (240)920-9999  Emergency Contact: Joe Doe (301)858-3352  Procedure: Open-heart surgery  Procedure Date: 01/11/2023  Practitioner: Elizabeth Brown  Charge: 25000.12  Procedure: Knee Surgery  Procedure Date: 03/22/2023  Practitioner: Herald Wright  Charge: 10000.11  Procedure: Rhinoplasty  Procedure Date: 05/31/2023  Practitioner: Roberto Castillo  Charge: 4000.89  Total Charges: 39001.119999999995  Student Name: Ema Gomez  MC#: M21074277  Due Date: 09/15/2023 | Patient info:  Name: Jane Mary Doe  Address: 1611 Elkon Road Rockville MD 20887  Phone Number: (240)920-9999  Emergency Contact: Joe Doe (301)858-3352  Procedure: Open-heart surgery  Procedure Date: 01/11/2023  Practitioner: Elizabeth Brown  Charge: 25000.12  Procedure: Knee Surgery  Procedure Date: 03/22/2023  Practitioner: Herald Wright  Charge: 10000.11  Procedure: Rhinoplasty  Procedure Date: 05/31/2023  Practitioner: Roberto Castillo  Charge: 4000.89  Total Charges: 39001.119999999995  Student Name: Ema Gomez  MC#: M21074277  Due Date: 09/15/2023 | Yes |
| Case 3 | "Sam",  "John",  "Riggs",  "123 Memory Lane", "Chicago", "Illinois", "60007",  "(312)553-3333",  "Daniel Buck", "(773)254-9921"  “Check-up”  “12/23/2022”  “Meredith Hanes”  50.00  “CT Scan”  “01/12/2023”  “Heather Fritz”  329.99  “Foot Surgery”  “02/06/2023”  “Josh Peck”  878.89 | Patient info:  Name: Sam John Riggs  Address: 123 Memory Lane Chicago Illinois 60007  Phone Number: (312)553-3333  Emergency Contact: Daniel Buck (773)254-9921  Procedure: Check-up  Procedure Date: 12/23/2022  Practitioner: Meredith Hanes  Charge: 50.0  Procedure: CT Scan  Procedure Date: 01/12/2023  Practitioner: Heather Fritz  Charge: 329.99  Procedure: Foot Surgery  Procedure Date: 02/06/2023  Practitioner: Josh Peck  Charge: 879.89  Total Charges: 1259.88  Student Name: Ema Gomez  MC#: M21074277  Due Date: 09/15/2023 | Patient info:  Name: Sam John Riggs  Address: 123 Memory Lane Chicago Illinois 60007  Phone Number: (312)553-3333  Emergency Contact: Daniel Buck (773)254-9921  Procedure: Check-up  Procedure Date: 12/23/2022  Practitioner: Meredith Hanes  Charge: 50.0  Procedure: CT Scan  Procedure Date: 01/12/2023  Practitioner: Heather Fritz  Charge: 329.99  Procedure: Foot Surgery  Procedure Date: 02/06/2023  Practitioner: Josh Peck  Charge: 879.89  Total Charges: 1259.88  Student Name: Ema Gomez  MC#: M21074277  Due Date: 09/15/2023 | Yes |
| Case 4 | "Wanny","Abeth",  "Gashmez",  "12000 Cherry Hill Rd",  "Silver Spring",  "MD",  "20904",  "(301) 586-0724",  "Snowflake Gashmez",  "(301)326-4090"  “Thumb Surgery”  “04/24/2023”  “William Jones”  0.00  “Stitches”  “05/08/2023”  “Matthew Jackson”  500.00  “Tonsillectomy”  “02/06/2023”  “Jay Maccaw”  0.99 | Patient info:  Name: Wanny Abeth Gashmez  Address: 12000 Cherry Hill Rd Silver Spring MD 20904  Phone Number: (301)586-0724  Emergency Contact: Snowflake Gashmez (301)326-4090  Procedure: Thumb Surgery  Procedure Date: 04/24/2023  Practitioner: William Jones  Charge: 0.0  Procedure: Stitches  Procedure Date: 05/08/2023  Practitioner: Matthew Jackson  Charge: 500.0  Procedure: Tonsillectomy  Procedure Date: 02/06/2023  Practitioner: Jay Maccaw  Charge: 0.99  Total Charges: 500.99  Student Name: Ema Gomez  MC#: M21074277  Due Date: 09/15/2023 | Patient info:  Name: Wanny Abeth Gashmez  Address: 12000 Cherry Hill Rd Silver Spring MD 20904  Phone Number: (301)586-0724  Emergency Contact: Snowflake Gashmez (301)326-4090  Procedure: Thumb Surgery  Procedure Date: 04/24/2023  Practitioner: William Jones  Charge: 0.0  Procedure: Stitches  Procedure Date: 05/08/2023  Practitioner: Matthew Jackson  Charge: 500.0  Procedure: Tonsillectomy  Procedure Date: 02/06/2023  Practitioner: Jay Maccaw  Charge: 0.99  Total Charges: 500.99  Student Name: Ema Gomez  MC#: M21074277  Due Date: 09/15/2023 | Yes |

**Part3: Screenshots related to the Test Plan:**

**Case 1**

**A screenshot of a computer program

Description automatically generated**

**Case 2**

**A screenshot of a computer

Description automatically generated**

**Case 3**

**A screenshot of a computer

Description automatically generated**

**Case 4**

**A screenshot of a computer

Description automatically generated**

**UML Diagram**

**A diagram of a patient procedure

Description automatically generated**

**Lessons Learned** <Provide answers to the questions listed above>**:**

Write about your Learning Experience, highlighting your lessons learned and learning experience from working on this project.

What have you learned?

I have learned how to create a UML diagram, how to create objects, how to use constructors, and how to execute test plans.

What did you struggle with?

I primarily struggled with making a UML diagram and executing the test plans as I have never created a UML diagram before, and I wasn’t exactly sure how to format my test plans.

What would you do differently on your next project?

I would break my projects into parts and schedule accordingly so that I’m not as concerned about the timing of my projects.

What parts of this assignment were you successful with, and what parts (if any) were you not successful with?

For the most part, I think I was successful with my entire assignment.

Provide any additional resources/links/videos you used to while working on this assignment/project.

<https://www.youtube.com/watch?v=GvbdMwfjB98>

<https://www.youtube.com/watch?v=xk4_1vDrzzo>

**Check List:** <Provide answers to the column Y/N or N/A >**:**

|  |  |  |  |
| --- | --- | --- | --- |
| **#** |  | **Y/N** | **Comments** |
|  | **Assignment files:** |  |  |
|  | * FirstInitialLastName\_ Assignment#\_Moss.zip | **Y** |  |
|  | * FirstInitialLastName\_Assignment#.docx/.pdf | **Y** |  |
|  | * Source java files | **Y** |  |
|  | **Program compiles** | **Y** |  |
|  | **Program runs with desired outputs related to a Test Plan** | **Y** |  |
|  | **Documentation file:** | **Y** |  |
|  | * Comprehensive Test Plan | **Y** |  |
|  | * Screenshots related to the Test Plan | **Y** |  |
|  | * Screenshots of your GitHub account with submitted Assignment# (if required) | **Y** |  |
|  | * UML Diagram (if required) | **Y** |  |
|  | * Algorithms/Pseudocode (if required) | **Y** |  |
|  | * Flowchart (if required) |  |  |
|  | * Lessons Learned | **Y** |  |
|  | * Checklist is completed and included in the Documentation | Y |  |