**CMSC203 Assignment 2 Design**

Class: CMSC203 32422

 Program: Assignment #2

Instructor: Professor Grinberg

 Summary of Description: In this program, a patient can get a summary of their procedures, the total cost, and an overview of themselves.

 Due Date: 02/20/2025

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

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

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

**Patient Class**

**DECLARE PRIVATE STRING firstName**

**DECLARE PRIVATE STRING middleName**

**DECLARE PRIVATE STRING lastName**

**DECLARE PRIVATE STRING streetAddress**

**DECLARE PRIVATE STRING city**

**DECLARE PRIVATE STRING state**

**DECLARE PRIVATE STRING zipCode**

**DECLARE PRIVATE STRING phoneNumber**

**DECLARE PRIVATE STRING emergencyName**

**DECLARE PRIVATE STRING emergencyPhoneNumber**

**FUNCTION Constructor that accepts no parameters**

**SET firstName TO ""**

**SET middleName TO ""**

**SET lastName TO ""**

**SET streetAddress TO ""**

**SET city TO ""**

**SET state TO ""**

**SET zipCode TO ""**

**SET phoneNumber TO ""**

**SET emergencyName TO ""**

**SET emergencyPhoneNumber TO ""**

**END FUNCTION**

**FUNCTION Constructor that accepts STRING theFirstName, STRING theMiddleName, STRING theLastName**

**SET firstName TO theFirstName**

**SET middleName TO theMiddleName**

**SET lastName TO theLastName**

**END FUNCTION**

**FUNCTION Constructor that accepts STRING theFirstName, STRING theMiddleName, STRING theLastName, STRING theAddress, STRING theCity, STRING theStreet, STRING zip, STRING phone, STRING theEmergencyName, STRING theEmergencyPhoneNumber, STRING theState**

**SET firstName TO theFirstName**

**SET middleName TO theMiddleName**

**SET lastName TO theLastName**

**SET streetAddress TO theAddress**

**SET city TO theCity**

**SET state TO theState**

**SET zipCode TO zip**

**SET phoneNumber TO phone**

**SET emergencyName TO theEmergencyName**

**SET emergencyPhoneNumber TO theEmergencyPhoneNumber**

**END FUNCTION**

**FUNCTION getFirstName that returns STRING**

**RETURN firstName**

**END FUNCTION**

**FUNCTION getMiddleName that returns STRING**

**RETURN middleName**

**END FUNCTION**

**FUNCTION getLastName that returns STRING**

**RETURN lastName**

**END FUNCTION**

**FUNCTION getStreetAddress that returns STRING**

**RETURN streetAddress**

**END FUNCTION**

**FUNCTION getCity that returns STRING**

**RETURN city**

**END FUNCTION**

**FUNCTION getState that returns STRING**

**RETURN state**

**END FUNCTION**

**FUNCTION getZipCode that returns STRING**

**RETURN zipCode**

**END FUNCTION**

**FUNCTION getPhoneNumber that returns STRING**

**RETURN phoneNumber**

**END FUNCTION**

**FUNCTION getEmergencyName that returns STRING**

**RETURN emergencyName**

**END FUNCTION**

**FUNCTION getEmergencyPhoneNumber that returns STRING**

**RETURN emergencyPhoneNumber**

**END FUNCTION**

**FUNCTION setFirstName that accepts STRING name**

**SET firstName TO name**

**END FUNCTION**

**FUNCTION setMiddleName that accepts STRING name**

**SET middleName TO name**

**END FUNCTION**

**FUNCTION setLastName that accepts STRING name**

**SET lastName TO name**

**END FUNCTION**

**FUNCTION setStreetAddress that accepts STRING theAddress**

**SET streetAddress TO theAddress**

**END FUNCTION**

**FUNCTION setCity that accepts STRING theCity**

**SET city TO theCity**

**END FUNCTION**

**FUNCTION setState that accepts STRING theState**

**SET state TO theState**

**END FUNCTION**

**FUNCTION setZipCode that accepts STRING zip**

**SET zipCode TO zip**

**END FUNCTION**

**FUNCTION setPhoneNumber that accepts STRING phone**

**SET phoneNumber TO phone**

**END FUNCTION**

**FUNCTION setEmergencyName that accepts STRING theEmergencyName**

**SET emergencyName TO theEmergencyName**

**END FUNCTION**

**FUNCTION setEmergencyPhoneNumber that accepts STRING theEmergencyPhoneNumber**

**SET emergencyPhoneNumber TO theEmergencyPhoneNumber**

**END FUNCTION**

**FUNCTION buildFullName that returns STRING**

**RETURN firstName + " " + middleName + " " + lastName**

**END FUNCTION**

**FUNCTION buildAddress that returns STRING**

**RETURN streetAddress + " " + city + “ " + state + " " + zipCode**

**END FUNCTION**

**FUNCTION buildEmergencyContact that returns STRING**

**RETURN emergencyName + " " + emergencyPhoneNumber**

**END FUNCTION**

**FUNCTION toString that returns STRING**

**RETURN "\tPatient Information:\n" +**

**"\t Name: " + buildFullName() + "\n" +**

**"\t Address: " + buildAddress() + "\n" +**

**"\t Phone Number: " + phoneNumber + "\n" +**

**"\t Emergency Contact: " + buildEmergencyContact()**

**END FUNCTION**

**END Patient Class**

**Procedure Class**

**DECLARE PRIVATE STRING procedureName**

**DECLARE PRIVATE STRING procedureDate**

**DECLARE PRIVATE STRING practitionerName**

**DECLARE PRIVATE DOUBLE procedureCharge**

**FUNCTION Constructor that accepts no parameters**

**SET procedureName TO ""**

**SET procedureDate TO ""**

**SET practitionerName TO ""**

**SET procedureCharge TO 0**

**END FUNCTION**

**FUNCTION Constructor that accepts STRING name, STRING date**

**SET procedureName TO name**

**SET procedureDate TO date**

**END FUNCTION**

**FUNCTION Constructor that accepts STRING name, STRING date, STRING practitioner, DOUBLE charge**

**SET procedureName TO name**

**SET procedureDate TO date**

**SET practitionerName TO practitioner**

**SET procedureCharge TO charge**

**END FUNCTION**

**FUNCTION getProcedureName that returns STRING**

**RETURN procedureName**

**END FUNCTION**

**FUNCTION getProcedureDate that returns STRING**

**RETURN procedureDate**

**END FUNCTION**

**FUNCTION getPractitionerName that returns STRING**

**RETURN practitionerName**

**END FUNCTION**

**FUNCTION getProcedureCharge that returns DOUBLE**

**RETURN procedureCharge**

**END FUNCTION**

**FUNCTION setProcedureName that accepts STRING name**

**SET procedureName TO name**

**END FUNCTION**

**FUNCTION setProcedureDate that accepts STRING date**

**SET procedureDate TO date**

**END FUNCTION**

**FUNCTION setPractitionerName that accepts STRING practitioner**

**SET practitionerName TO practitioner**

**END FUNCTION**

**FUNCTION setProcedureCharge that accepts DOUBLE charge**

**SET procedureCharge TO charge**

**END FUNCTIO**

**FUNCTION toString that returns STRING**

**RETURN "\t\t Procedure Information:\n" +**

**"\t\t Procedure Name: " + procedureName + "\n" +**

**"\t\t Date: " + procedureDate + "\n" +**

**"\t\t Practitioner: " + practitionerName + "\n" +**

**"\t\t Charge: $" + procedureCharge**

**END FUNCTION**

**END Procedure Class**

**IMPORT Scanner**

**PatientDriverApp Class**

**DECLARE PRIVATE PROCEDURE procedureOne**

**DECLARE PRIVATE PROCEDURE procedureTwo**

**DECLARE PRIVATE PROCEDURE procedureThree**

**DECLARE PRIVATE PATIENT patient**

**FUNCTION main**

**DECLARE and SET SCANNER input TO NEW SCANNER(Keyboard Input)**

**DISPLAY “Enter your first name:”**

**DECLARE and SET STRING fName TO STRING input**

**DISPLAY “Enter your middle name:”**

**DECLARE and SET STRING mName TO STRING input**

**DISPLAY “Enter your last name:”**

**DECLARE and SET STRING lName TO STRING input**

**DISPLAY “Enter your address:”**

**DECLARE and SET STRING address TO STRING input**

**DISPLAY “Enter your city:”**

**DECLARE and SET STRING city TO STRING input**

**DISPLAY “Enter your state:”**

**DECLARE and SET STRING state TO STRING input**

**DISPLAY “Enter your zip code:”**

**DECLARE and SET STRING zip TO STRING input**

**DISPLAY “Enter your phone number:”**

**DECLARE and SET STRING phoneNumber TO STRING input**

**DISPLAY “Enter your emergency contact’s name:”**

**DECLARE and SET STRING emergencyName TO STRING input**

**DISPLAY “Enter your emergency contact’s phone number:”**

**DECLARE and SET STRING emergencyPhoneNumber TO STRING input**

**SET patient TO NEW PATIENT(fName, mName, lName, addres, city, state, zip, phoneNumber, emergencyName, emergencyPhoneNumber)**

**DISPLAY “Enter the procedure name:”**

**DECLARE and SET STRING pName TO STRING input**

**DISPLAY “Enter the procedure date:”**

**DECLARE and SET STRING pDate TO STRING input**

**DISPLAY “Enter the practitioner:”**

**DECLARE and SET STRING practitioner TO STRING input**

**DISPLAY “Enter the procedure charge:”**

**DECLARE and SET STRING pCharge TO STRING input**

**SET procedureOne TO NEW PROCEDURE(pName, pDate, practitioner, pCharge)**

**DISPLAY “Enter the procedure name:”**

**SET STRING pName TO STRING input**

**DISPLAY “Enter the procedure date:”**

**SET STRING pDate TO STRING input**

**DISPLAY “Enter the practitioner:”**

**SET STRING practitioner TO STRING input**

**DISPLAY “Enter the procedure charge:”**

**SET DOUBLE pCharge TO DOUBLE input**

**SET procedureTwo TO NEW PROCEDURE(pName, pDate, practitioner, pCharge)**

**DISPLAY “Enter the procedure name:”**

**SET STRING pName TO STRING input**

**DISPLAY “Enter the procedure date:”**

**SET STRING pDate TO STRING input**

**DISPLAY “Enter the practitioner:”**

**SET STRING practitioner TO STRING input**

**DISPLAY “Enter the procedure charge:”**

**SET STRING pCharge TO STRING input**

**SET procedureThree TO NEW PROCEDURE(pName, pDate, practitioner, pCharge)**

**END FUNCTION**

**FUNCTION displayPatient(PATIENT patient)**

**DISPLAY patient.toString()**

**END FUNCTION**

**FUNCTION displayProcedure(PROCEDURE procedure)**

**DISPLAY procedure.toString()**

**END FUNCTION**

**FUNCTION calculateTotalCharges(PROCCEDURE p1, PROCCEDURE p2, PROCCEDURE p3)**

**Return p1.getProcedureCharge() + p2. getProcedureCharge() + p3.getProcedureCharge()**

**END FUNCTION**

**END PatientDriverApp Class**