Classes and objects Assignment

1. Create a class that captures students. Each student has a first name, last name, class year, and major. Create two examples of students.

2. Create a class that captures planets. Each planet has a name, a distance from the sun, and its gravity relative to Earth's gravity. For distance and gravity, use the type double which captures real numbers. Make objects for Earth and your favorite non-earth planet.

3. Create classes that capture bank customers and bank accounts. A customer has a first and last name. An account has a customer and a balance. Make objects for two accounts held by the same customer.

4. Create a class that captures airline tickets. Each ticket lists the departure and arrival cities, a flight number, and a seat assignment. A seat assignment has both a row and a letter for the seat within the row (such as 12F). Make two examples of tickets.

5. Design a class 'Complex 'with data members for real and imaginary part. Provide default and Parameterized constructors. Write a program to perform arithmetic operations of two complex numbers.

6. Create a class "Room" which will hold the "height", "width" and "breadth" of the room in three fields(variables). This class also has a method "volume()" to calculate the volume of this room.

7. Write a program to implement a class "student" with the following members. Name of the student. Marks of the student obtained in three subjects. Function to assign initial values. Function to compute total average. Function to display the student's name and the total marks. Write an appropriate main() function to demonstrate the functioning of the above.

8. Write a class "Box" that with three member-variables "height", "width" and "breadth". Write suitable constructors to initialize them. Add functions like "getVolume" and "getArea" that will return volume and surface area respectively. Create object of boxes and then print their volume and surface area.