Object Oriented Programming CSC-205
Major Assignment

you have to develop an information system for a Employee. Points are added to the Employee depending on the purchases made. The Employees are grouped based on the number of points.

1. Create a class called **Employee** that includes attributes: **empid**, **name**, **points**, **group**, and avg with data types: "**int**", "**String**", "**double**", "**String**", and "**double**" respectively.
2. Include a constructor with parameters: **empid** and **name**.
3. Include another constructor to assign default values to the attributes.
4. Include a function called **addPoints** that is used to add a given amount to the value of the attribute **points**.
5. Include a function called **upgradePoints** that is used to increase the value of the attribute points by a given percentage.
6. Include a function called **removePoints** that is used to reduce a given amount from the value of the attribute points. If the resultant value is negative then the value of the attribute should be set into zero.
7. Include a function called **computeGroup** that assigns a value to the attribute group based on the value of the attribute points as given in the following table.

points	group
points < 100	Silver
100 ≤ points < 500	Gold
500 < points ≤ 2000	Platinum
2000 < points	Diamond

8. Include a function called **display** to display the values of all the attributes of a Employee object.
9. Include a static function called **getBest** that returns the value of the attribute id of the Employee with maximum number of points.
10. Create an array in main function that holds five Employee objects. Assign the objects given in the following table to each array element using the parameterized constructor.

Attribute	Obj[0]	Obj[1]	bOj[2]	Obj[3]	Obj[4]

id	1543	6561	6954	3485	8546
name	Adil	Waseem	Ayesha	Adnan	Wajid

11. Use the function **addPoints** to add following points respectively to each Employee object created above.

129	785	3258	59	1652

12. Add extra 1000 points to the third employee using the function **addPoints**.
13. Increase the points of the second employee by 2% using the function **upgradePoints**.
14. Include a function called display to the that displays all the attributes of each Employee. Each set of attributes should be separated by a sequence of dots. The part of output for the first Employee is given below.

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Employee: 1

ID: 1543

Name: Nimal

Points: 129.0

Group: null

Average: 0.0

15. Call the function display,
16. Compute the group of each Employee using the function **computeGroup**. You should use a loop.
17. Again, call the function display.
18. Display the value of the attribute id of the Employee with highest number of points using the function **getBest**.
19. Create a reference variable called emp of type Employee.
20. Assign fifth Employee object to the reference variable emp. You should use the object you have already created.

21. Reduce 2000 points from the fifth Employee using the function **removePoints**. You should call the function using the reference variable emp.
22. Call the function display of the class Employee using the array element c[4] to display the values of attributes of the fifth Employee.
23. Update the group of the fifth Employee invoking the function **computeGroup**.
24. Create a Employee object with default values to its attributes by using the appropriate constructor. The object should be assigned to the reference variable emp.
25. Copy the values of the attributes of the fourth Employee to the corresponding attributes of the object pointed by the reference variable emp.
26. Create another reference variable called emp1 of type Employee.
27. Assign the object pointed by the reference variable emp to emp1 as well.