SCS 1209 - Object Oriented Programming

Tutorial 05

(1) Consider the following declaration of the Shape class and write a C++ program to satisfy the given requirements.

```
class Shape
{
protected:
        float width, height;
public:
void set_data (float a, float b)
{
        width = a; height = b;
}
};
```

Requirements:

a) Add a constructor to shape class that gives value to width and height.

b) Define two functions to calculate the followings.
Area of a Triangle = ½ x width x height
Area of a Rectangle= width x height

c) Write a main() function to display the areas of triangle and rectangle.

(2) Create a class named 'Student' with a string variable 'name' and an integer variable 'roll_no'. Assign the value of roll_no as '2' and that of name as "John" by creating an object of the class Student.

(3) Write a program to print the area and perimeter of a triangle having sides of 3, 4 and 5 units by creating a class named 'Triangle' with a function to print the area and perimeter.

(4) Write a program to print the area and perimeter of a triangle having sides of 3, 4 and 5 units by creating a class named 'Triangle' with the constructor having the three sides as its parameters.

(5) Write a program to print the area of a rectangle by creating a class named 'Area' having two functions. First function named as 'setDim' takes the length and breadth of the rectangle as parameters and the second function named as 'getArea' returns the area of the rectangle. Length and breadth of the rectangle are entered through keyboard.

(6) Write a program that would print the information (name, year of joining, salary, address) of three employees by creating a class named 'Employee'. The output should be as follows:

Name	**Year of joining**	**Address**
Robert	1994	64C- WallsStreat
Sam	2000	68D- WallsStreat
John	1999	26B- WallsStreat