

Objectives:

To familiarize students with the concepts of:

- a. Classes and Objects
 - b. Reference Variables
 - c. Constructors
 - d. This keyword
 - e. Methods
1. 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' without any parameter in its constructor
 2. Create a class Vehicle. The class should have two fields-no_of_seats and no_of_wheels. Create two objects-Motorcycle and Car for this class. Your output should show the descriptions for Car and Motorcycle.
 3. Print the average of three numbers entered by user by creating a class named 'Average' having a method to calculate and print the average.
 4. Write a program to print the area of a rectangle by creating a class named 'Area' taking the values of its length and breadth as parameters of its constructor and having a method named 'returnArea' which returns the area of the rectangle. Length and breadth of rectangle are entered through keyboard.
 5. 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
 6. Write a program by creating an 'Employee' class having the following methods and print the final salary.
 - 1 - 'getInfo()' which takes the salary, number of hours of work per day of employee

as parameter

2 - 'AddSal()' which adds \$10 to salary of the employee if it is less than \$500.

3 - 'AddWork()' which adds \$5 to salary of employee if the number of hours of work per day is more than 6 hours.

7. Create a class called 'Matrix' containing constructor that initializes the number of rows and number of columns of a new Matrix object. The Matrix class has the following information:

1 - number of rows of matrix

2 - number of columns of matrix

3 - elements of matrix in the form of 2D array

8. Extension to Task 6

The Matrix class has methods for each of the following:

1 - get the number of rows

2 - get the number of columns

3 - set the elements of the matrix at given position (i,j)

4 - adding two matrices. If the matrices are not addable, "Matrices cannot be added" will be displayed.

5 - multiplying the two matrices