SWT 12031: Practical for Object Oriented Program
Lab Sheet No: 05
Class, Objects, Variables and Methods

Time: 09.30am – 12.30 pm **Submission Due: 2023-06-08**

Exercise 01:

1. Create your first java program that will print, "Hello, Welcome to Object Oriented Programming!".
    a. Make the name of the class as **'HelloWorld'**.
    b. Write the main method that will execute the print statement given.
    c. Save the program by giving the file name same as class class and with the .java extension.
    d. Compile the program you created.
    e. Execute the program you created.

2. Create a class to display the following.

    Name : Sam
    Subject: OOP
    Duration : 4 Months
    Grade : A+

Exercise 02:

1. Create a class called **Student**. Within this class,
    a. Define two variables namely **id** and **name.**
    b. Initialize **id** to **1** and **name** to **Kamal.**
    c. Create an object **s1**
    d. Access the objects through reference variable.

2. Modify the above program to bring the main method inside a separate class called **TestStudent.**
    a. Create an object **s1**
    b. Access the objects through reference variable.

3. Modify question 2 as per the following instructions:
    a. Create a method called **insertStudentRecord()** inside **Student** class to initialize id and name.
    b. Create another method **displayStudentDetails()** inside **Student** class to display the student information.
    c. Create another object **s2** inside **TestStudent.**
    d. Call the method **insertStudentRecord()** to enter student data and **displayStudentDetails()** method to display the details of the students.

Exercise 03:

1. Create a class called **Employee.** Within the class,
    a. Create the variables **empid**, **name** and **salary** (salary is a float value).
    b. Create a method called **insert()** to enter employee data.
    c. Next, creae another method **display()** to display the employee details.
2. Within the same program, create another class **TestEmployee** with the main method.
    a. Here, create three instances, **emp1**, **emp2** and **emp3**.
    b. Call the method **insert()** to enter employee data and **display()** method to display the employee details.

Exercise 04:

1. Create a class called MyName to print your name.
2. Create a class to display the following

    Java is an example for OOP
    It is a pure Object Oriented language

3.

- Create a class called **Rectangle.** Within the class,
    I. Create the variables **length** and **width**.
    II. Create a method called **insert()** to enter rectangle details.
    III. Next, creae another method **calculateArea()** to calculate the area of the given rectangle.
- Within the same program, create another class **TestRectangle** with the main method.
    I. Here, create two instances, **rect1** and **rect2**.
    II. Call the method **insert()** to enter length and width values of rectangle and **calculateArea()** method to display the area of the rectangles.

Discussion

- Object
- Class
- Instance Variables
- Stactic Variables
- Keyword
- Constructor
- Default Constructor
- The different ways to create an object in Java