# Assignment : Java concepts

## Time : Two weeks

*(You may use java and database connection to check insertion, deletion and modification of records **if only if you are comfortable with it**. Otherwise simply avoid database connection without hesitation.)*

Develop the below programs with Java basic concepts mentioned below wherever applicable.

➢ Basic Input and Output

➢ Class and Object

➢ Inheritance

➢ Polymorphism

Problems

1. Write a program to take Name and Roll-Number as input for N students and print those on console.

2. Write a program to design a Student class having Name, Age, Department and Year as data members. It also should contain member functions like ReadData(), PrintData().

3. Write a program to design classes for Student and Professor. Each of these Classes should contain information below. Make sure proper class hierarchy is designed following the principle of inheritance.

   Student: Name, Age, Gender, Dept, Year
   Professor: Name, Age, Gender, Dept, Course Load, Salary

   Provide a mechanism to display the profile/detail of various kind of Object of these class.

   **Once problem 1, 2 and 3 are completed, then attempt problem 4.**

4. A plot is broken into different geometric shapes like Triangle, Rectangle and Circle of different size of arbitrary number. Write a program that provides a mechanism to sum up total area covered by these shapes.