**OBJECT ORIENTED PROGRAMMING WEEK – I**

**WEEK-1: JAVA BASICS**

1. Write a java program that prints all real solutions to the quadratic equation ax2+bx+c=0. Read in a, b, c and use the quadratic formula.
2. The Fibonacci sequence is defined by the following rule. The first two values in the sequence are 1 and 1. Every subsequent value is the sum of the two values preceding it. Write a java program that uses both recursive and non recursive functions.

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| S.No | Problem Statement |
| 1 | Write a Java program that prints all real solutions to the quadratic equation ax2+bx+c=0. Read in a, b, c and use the quadratic formula. |
| 2 | Write a Java program to find largest of the three given number. |
| 3 | Write a Java program to find smallest of the three given number. |
| 4 | Write a Java program to find the given two numbers are equal or less than the other or greater than the other. |
| 5 | An electricity board charges the following rates for the use of electricity: For the first 200 units: 80 per unit  For the next 100 units: 90per unit Beyond 300 units: Rs.1.00 per unit  All users are charged a minimum of Rs. 100 as meter charge. If the total amount is more than Rs.400, then an additional surcharge of 15% of total amount is  charged. Write a Java program to read the name of user and number of units consumed and print out the charges with names. |
| 6 | Admission to a professional course is subjects to the following conditions:   1. Marks in Mathematics>=60 2. Marks in Physics>=50 3. Marks in Chemistry>=40 4. Total in all three subjects>=200 or Total in Mathematics and Physics>=150   Given the marks in the three subjects, write a Java program to process the  applications to list the eligible candidates. |

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| 7 | Write a Java program to find whether given triangle is scalene or isosceles or  equilateral. |
| 8 | Write a Java program to grades of a student if the marks are given between 0 and  100. |
| 9 | The Fibonacci sequence is defined by the following rule. The first two values in  the sequence are 1 and 1. Every subsequent value is the sum of the two values preceding it. Write a java program that uses non - recursive function. |
| 10 | The Fibonacci sequence is defined by the following rule. The first two values in the sequence are 1 and 1. Every subsequent value is the sum of the two values preceding it. Write a java program that uses recursive function. |