**Object Oriented Programming (Java)**

**Year 1 - Semester 2**

**Worksheet 05**

1. Write a program that will read a Student’s mark (0-100) as a keyboard input and reports what grade is obtained. Use if statement.
   1. “Distinction”
   2. “Honors”
   3. “Merit”
   4. “Pass”

0-39 “Fail”

Any other value "Invalid value Entered"

1. Write program that takes a year between 1800 and 3000 as a keyboard input and then reports whether it is a leap year. A leap year is an integer greater than 1584 that is either divisible by 400 OR is divisible by 4 but not 100.
2. Write a program that reads account balance from the keyboard and then outputs the updated balance. The class should have a separate method to calculate the new account balance once the existing balance is given.

Updating of the account balance should be as follows:

* If the balance is greater than 50,000 Rupees, 8% is added to the balance.
* If the balance is greater than 25,000 and less than or equal 50,000 Rupees, 5% is added to the balance.
* If the balance is greater than 10,000 and less than or equal 25,000 Rupees, 2% is added to the balance.
* No addition for the accounts having balances less than 10,000 Rupees.

1. Write a program that runs iteratively to read three (3) real values and display the mean value of them. Additionally users are allowed to decide the termination point by typing “Exit”.

Note: The class should have a separate method to calculate the mean value once three real values are given.