Lab 2 –Primitive Data Types and Operations

Answer the following questions.

Use Scanner class for prompting the users for input.

Instructor-led Demo:

1. Write a program that reads a number in feet, converts it to meters, and displays the result. One foot is 0.305 meters.

Exercise:

1. Write a program that reads a Fahrenheit degree in double, then converts it to Celsius and displays the result on the console. The formula for the conversion is as follows:
   celsius = Fahrenheit – 32 * 5 / 9

2. Write a program that reads in the radius and length of a cylinder and computes volume using the following formulas:
   area = radius * radius * PI
   volume = area * length

3. Write a program that reads an integer between 0 and 1000 and adds all the digits in the integer. For example, if an integer is 943, the sum of all its digit is 16.

4. Write a program that converts an uppercase letter to a lowercase letter.

5. Write a program that receives an ASCII code (an integer between 0 and 128) and displays its character. For example, if the user enters 97, the program displays character 'a'.

6. Write a program that reads an integer and checks whether it is even. For example, if your input is 25, the output should be :
   Is 25 an even number? false
   If your input is 2500, the output should be:
   Is 2500 an even number? true

7. Write a program that prompts the user to enter an integer and determines whether it is divisible by 5 or 6, whether it is divisible by 5 or 6, and whether it is divisible by 5 or 6, but not both. For example, if your input is 10, the output should be:
   Is 10 divisible by 5 and 6? false
   Is 10 divisible by 5 or 6? true
   Is 10 divisible by 5 or 6, but not both? true

8. Write a program that reads in investment amount, annual interest rate, and number of years, and displays the future investment value using the following formula.
   futureInvestmentVal = investmentAmount x $(1 + \text{monthlyInterestRate})^{\text{numberOfYears}*12}$