

## Practical 2 - Variables

1. Type in the following program, *include comments*, compile and run it

```
/*Practical 2 - Question 1
Author: Clare Doherty
Date: 14th/12/2020
Program to add any 2 numbers */

import java.util.*;

public class AddNumbers
{
    public static void main(String []args)
    {
        Scanner keyboardIn = new Scanner(System.in);
        //declare variables
        int number1, number2, result;
        //Assign values from keyboard
        System.out.print("Please enter number 1:");
        number1 = keyboardIn.nextInt();
        System.out.print("Please enter number 2:");
        number2 = keyboardIn.nextInt();
        result = number1 + number2;
        System.out.print("The result of the 2 numbers added
        is " +result);
    }
}
```

Include appropriate comments for the remainder of the programs

2. Write a program that asks a user to enter an amount of money in Euros and the daily conversion rate and which then converts it to Sterling and displays the Sterling amount.  
sterling = euro \* conversion
3. Write a program that will ask a user to input a number in feet, convert it to metres and display the metres  
metres = feet \* 0.305
4. Write a program that will prompt the user to enter the price of three different products in a sale where a discount of 10% is applied. Display the gross amount of the 3 items, the discount earned, and the total amount due
5. Write a program that will ask a user to enter their name and the year they were born. The program should then calculate their age and display this along with the person's age  
age = 2020 - year born

6. Write a program that will ask a user to enter their age in years and which will compute and display that age as a number of days. Assume each year has 365 days.

$\text{days} = \text{age} * 365$

7. Write a program that asks a user to enter the radius and the height of a cylinder and which then computes and displays the volume of the cylinder.

$\text{volume} = \pi * \text{radius} * \text{radius} * \text{height}$ . Use a constant value of 3.14 for pi.

8. Write a program which will ask the user to enter their height in inches, and which will then calculate and display their height in feet and inches. Note that there are 12 inches in a foot.

*(Hint: Use modulus operator %)*

9. Write a program that will ask a user to enter the diameter of a circle and which will then compute and display the area and circumference of the circle. Use a constant value of 3.14 for pi

$\text{radius} = \text{diameter} / 2$

$\text{circumference} = 2 * \pi * \text{radius}$

$\text{area} = \pi * \text{radius} * \text{radius}$

10. Write a program that will ask a user to input the length and width of a room in metres; calculate the square metres of the room and calculate how much it will cost to floor the room if flooring costs €6.50 per square metre
- $\text{area} = \text{length} * \text{width}$