LAB I

1. Login to the default folder (directory) and see if the folder **Yroll** (where roll stands for your roll number) exists. If the folder **Yroll** does not exist than create the folder **Yroll** in the default folder. Next move to the **Yroll** folder and write the following C programs in the **Yroll** folder.

2. Create a new file **io.c** using gedit. Write C statement(s) in **io.c** which produces the following output $\Big($You may edit the same file **io.c** for each case by commenting the previous statement(s)$\Big)$.

   a. Good day!

   b. Good /\ day!

   c. He shared his "wisdom" with me

   d. Hello
      world! (using a single **printf** statement)

   e. Hello
      world! (using a single **printf** statement that has no blank space)

   f. How are you?
      I am OK.

   g. How are you?
      I am OK. (using two **printf** statements which have no blank spaces)

   h. How are you?
      I am OK. (using a single **printf** statement that has no blank space)

   i. Something has gone crazy (with a beep sound)

   j. Bank interest is 10% in the year 2001.

3. Write a C program **pri.c** that produces the following output

```
*********
*       *
*       *
*       *
*       *
*       *
*       *
*       *
*       *
*********
```

4. Write a C program **intrst.c** that calculates the total interest income on amount Rupees 5 lakhs in a period of 10 years. Show the results for simple interest, compounded interest when the compounding is done annually, semi-annually, quarterly, monthly and daily. Assume that the interest rate is 3.5% per year.

   Expected output:

```
Simple interest on Rs. 500000.00 in 10 years = Rs. 175000.00
Interest on Rs. 500000.00 in 10 years compounded annually = Rs. 205299.38
Interest on Rs. 500000.00 in 10 years compounded semi-annually = Rs. 207389.10
Interest on Rs. 500000.00 in 10 years compounded quarterly = Rs. 208454.42
Interest on Rs. 500000.00 in 10 years compounded monthly = Rs. 209172.41
Interest on Rs. 500000.00 in 10 years compounded daily = Rs. 209521.87
```

5. Write a C program **cmi.c** that accepts a distance in inches and prints the corresponding value in cms. Note that 1 inch = 2.54 cm.

   Test data and expected output:

   ```
   Enter the distance in inches:3
   Distance 3.00 inches is = 7.62 cms
   ```

6. Write a C program **swp.c** that reads two values from the keyboard, swaps their values and prints out the result.

   Test data and expected output:

   ```
   Enter two real values to be swapped:2.4 5.7
   Values entered are a=2.400000  and b=5.700000
   Values after swap are a=5.700000  and b=2.400000
   ```

7. Write a C program **temp.c** that accepts a temperature in Fahrenheit and prints the corresponding temperature in Celsius.

   $$\Big(C/5 = (F - 32)/9\Big)$$

   Test data and expected output:

   ```
   Enter temp in Farenheit:98.4
   Temp 98.40 in Farenheit = 36.89 Centigrade
   ```