Assignment – 1

Python Basics and External Modules

1. Display the following statements.
   a. Hello World
   b. Use a single print statement to print the following pattern.
      Hint: Use sep
      ```
      *
      **
      ***
      ****
      *****
      ```
   c. Use three print statement to print "My name is Jane Doe.", "I am a Python Programmer" and "I love Python". Print all three statement in the same line.
      Hint: use end
   d. Print the following lines with exact format.
      ```
      Twinkle, twinkle, little star,
         How I wonder what you are!
               Up above the world so high,
               Like a diamond in the sky.
      ```

2. Write a python program to ask user to enter his/her name, roll number, branch and year. Display all the details.
3. Write a python program to accept two integer numbers and perform all arithmetic operation including exponent and floor division.
4. Write a python program to accept value for two variable and swap the variable value. Print the value of the variable before and after the swap.
5. Write a program in python that takes seconds as input, and display the total number of hours, minutes and seconds.
6. Write a python program to accept radius of circle and calculate the area and perimeter of the circle. Display the result up to two decimal process.
7. Write a program in python that accepts coordinates of two points A and B and prints out the distance between A and B.
8. Write a Python script to perform the following task using datetime and calendar module
   a. Display current date and time
   b. Display date separately in "dd/mm/yyyy" format
   c. Display time in 24 hour format

d. Display time in 12 hour format
e. Ask user to enter year and month number and display the calendar for that month.
9. Write a python program to perform the following task using random module.
   a. Generate a random number between 1 and 10
   b. Generate a random float number
   c. Generate a random float number between 10 and 100. Round the number to two decimal places.
   d. Generate a 6 digit OTP
   e. Generate a random alpha numeric string of length 4