Thapar Institute of Engineering and Technology, Patiala

Department of Mechanical Engineering,

Python Programming (URA302)

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Wrok Sheet 1: Introduction to Python

Setting up a Python environment, writing and running basic Python programs, and using Jupyter Notebooks/VS Code/Google Colab.

1. Write a Python program to print the following string in a specific format (see the output). Sample String : "Twinkle, twinkle, little star, How I wonder what you are! Up above the world so high, Like a diamond in the sky. Twinkle, twinkle, little star, How I wonder what you are".
2. Write a Python program that accepts the user's first and last name and prints them in reverse order with a space between them.
3. Write a Python program that calculates the area of a circle based on the radius entered by the user.
4. Write a Python program to display the first and last colors from the following list.
   color_list = ["Red","Green","White" ,"Black"]
5. Write a Python program that accepts an integer (n) and computes the value of n+nn+nnn.

Sample value of n is 5

6. Write a Python program that accepts a sequence of comma-separated numbers from the user and generates a list and a tuple of those numbers. Sample data : 3, 5, 7, 23
7. Write a program that will convert celsius value to Fahrenheit.
8. User will input (2numbers). Write a program to swap the numbers. Add incrementally in any one variable.
9. Write a program that will tell whether the number entered by the user is odd or even.
10. Write a program that will tell whether the given year is a leap year or not.
11. Write a program to find the euclidean distance between two coordinates.
12. Write a program that take a user input of three angles and will find out whether it can form a triangle or not.
13. WAP to find compound interest for given values.
14. Given a positive integer N, the task is to write a Python program to check if the number is Prime or not in Python.

15. Given a positive integer N. The task is to find $1^2 + 2^2 + 3^2 + ….. + N^2$.