

ASSIGNMENT # 1

1. Check Number either positive, negative or zero

Write a Rust program to check if a number is positive, negative or zero

Output 1:

Enter Number: -1 (Negative Number Entered)

Output 2:

Integer: 3 (Positive Number Entered)

2. Calculate Volume of a sphere

Write a Rust program to get the volume of a sphere, please take the radius as input from user

Output:

Enter Radius of Sphere: 1

Volume of the Sphere with Radius 1 is 4.18

Volume = $\frac{4}{3}(\pi r^3)$

3. Copy string n times

Write a Rust program to get a string which is n (non-negative integer) copies of a given string.

Output:

Enter String: Hi

How many copies of String you need: 4

4 Copies of Hi are HiHiHiHi

4. Euclidean distance

Write a Rust program to compute the distance between the points (x1, y1) and (x2, y2).

Program Console Output :

Enter Co-ordinate for x1: 2

Enter Co-ordinate for x2: 4

Enter Co-ordinate for y1: 4

Enter Co-ordinate for y2: 4

Distance between points (2, 4) and (4, 4) is 2

$$X = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}.$$

5. Digits Sum of a Number

Write a Rust program to calculate the sum of the digits in an integer

Program Console Sample:

Enter a number: 1234

Sum of 1 + 2 + 3 + 4 is 10

6. Binary to Decimal Converter

Write a program to convert binary number to Decimal number

Program Console Sample 1:

Enter a Binary number: 1101
Decimal Representation of 1101 is 13

7. Vowel and Consonants Counter

Input a text and count the occurrences of vowels and consonant
Program Console Sample 1:
Enter text: QuickBrownFoxJumpsovertheDog
Vowels: 9 , Consonants: 19

8. Palindrome tester

Write a program to check whether given input is palindrome or not
Program Console Sample 1:
Enter text: AHA
Text AHA is Palindrome
Program Console Sample 2:
Enter text: Hello
Text Hello is not a Palindrome