



## Higher Diploma in Information Technology

### Introduction to Programming (C++)

Year 1 Semester 1 – 2024

#### Tutorial 02 – Elements in C++

1. Write a C++ Program to Display Number (Entered by the User).

**Sample Output:**

```
Enter an integer: 8
The Number entered is: 8
```

2. Write a C++ Program to find Addition of Two Numbers.

**Sample Output:**

```
Enter first number: 12
Enter second number: 34
Sum of two numbers: 46
```

3. Write a C++ program to calculate the perimeter of rectangle. The user can enter the length and the width respectively to calculate the perimeter of the rectangle.

The equation for Perimeter of the Rectangle follows:

$$\text{Perimeter of Rectangle} = 2 \times (\text{Length} + \text{Width})$$

**Sample Output:**

```
Enter length of Rectangle: 6.5
Enter width of Rectangle: 5
Perimeter of Rectangle: 23.0000
```

4. Write a C++ program to prompt the user to enter radius (r) , height(h) ,and calculate the volume of cone(V) as follows:

$$V = \frac{1}{3} \pi r^2 h$$

Consider  $\pi = 3.14$  (Constant value)

**Sample Output:**

```
Enter radius: 2
Enter height: 10
Volume of cone is: 41.87
```

5. Write a C++ program to prompt the user to enter Current(I) and Voltage(V), and calculate the Electric power (P) as follows:

$$P = I \times V$$

**Sample Output:**

```
Enter Current: 25
Enter Voltage: 4
Electric power is: 100
```