Python Program Solution (18-oct-2025)

QUESTION.1 Write a program to calculate area and parameter of a triangle by creating a function.

```
def triangle_area_perimeter(a, b, c):
    perimeter = a + b + c
   s = perimeter / 2
   area = (s * (s - a) * (s - b) * (s - c)) ** 0.5
   return area, perimeter
a = float(input("Enter side a: "))
b = float(input("Enter side b: "))
c = float(input("Enter side c: "))
area, perimeter = triangle_area_perimeter(a, b, c)
print("Perimeter of Triangle:", perimeter)
print("Area of Triangle:", area)
```

Input:

Enter side a: 3
Enter side b: 4
Enter side c: 5

Output:

Perimeter of Triangle: 12.0
Area of Triangle: 6.0

QUESTION.2 Write a program to calculate factorial of a number by creating a function.

```
def factorial(n):
   fact = 1
   for i in range(1, n + 1):
      fact *= i
   return fact
num = int(input("Enter a number: "))
if num < 0:
   print("Factorial is not defined for negative numbers.")
else:
   result = factorial(num)
   print(f"Factorial of {num} is {result}")
```

Example:

Input: 5
Output: Factorial of 5 is 120

QUESTION.3 Write a program to calculate speed of a vehical whose distance and time has been given using a function

```
def calculate_speed(distance, time):
   speed = distance / time
   return speed
distance = float(input("Enter distance travelled (in km): "))
time = float(input("Enter time taken (in hours): "))
if time == 0:
   print("Time cannot be zero!")
else:
   speed = calculate_speed(distance, time)
   print("Speed of the vehicle is:", speed, "km/hr")
```

Example:

Input:
distance = 120
time = 2

Output:
Speed of the vehicle is: 60.0 km/hr

QUESTION.4 Write a program to convert temperature form Celsius to Fahrenheit by creating a function.

```
def celsius_to_fahrenheit(c):
    f = (c * 9/5) + 32
    return f
celsius = float(input("Enter temperature in Celsius: "))
fahrenheit = celsius_to_fahrenheit(celsius)
print("Temperature in Fahrenheit:", fahrenheit)
```

Example:
Input: 37
Output: Temperature in Fahrenheit: 98.6