

Programming Assignment-1

1. Write a Python program to print “Hello Python”?

Ans. `print("Hello Python")`

2. Write a Python program to do arithmetical operations addition and division?

Ans.

```
num1 = 10
```

```
num2 = 5
```

```
addition = num1 + num2
```

```
print(f"Addition: {num1} + {num2} = {addition}")
```

```
division = num1 / num2
```

```
print(f"Division: {num1} / {num2} = {division}")
```

```
num3 = float(input("Enter first number: "))
```

```
num4 = float(input("Enter second number: "))
```

```
print(f"Addition of your numbers: {num3} + {num4} = {num3 + num4}")
```

```
print(f"Division of your numbers: {num3} / {num4} = {num3 / num4}")
```

3. Write a Python program to find the area of a triangle?

Ans.

```
base = float(input("Enter the base of the triangle: "))
```

```
height = float(input("Enter the height of the triangle: "))
```

```
area = 0.5 * base * height
```

```
print(f"The area of the triangle is: {area}")
```

```
def triangle_area_heron(a, b, c):  
    s = (a + b + c) / 2  
  
    area = (s * (s - a) * (s - b) * (s - c)) ** 0.5  
    return area  
  
side1, side2, side3 = 5, 6, 7  
area_heron = triangle_area_heron(side1, side2, side3)  
print(f"Area using Heron's formula: {area_heron}")
```

4. Write a Python program to swap two variables?

Ans.

```
x = 5  
y = 10  
  
print(f"Before swapping: x = {x}, y = {y}")  
  
temp = x  
x = y  
y = temp  
  
print(f"After swapping (Method 1): x = {x}, y = {y}")
```

5. Write a Python program to generate a random number?

Ans.

```
import random  
  
random_int = random.randint(1, 10)  
print(f"Random integer between 1 and 10: {random_int}")
```

```
random_float = random.random()

print(f"Random float between 0 and 1: {random_float}")
```

```
min_value = 1.0
max_value = 10.0
random_range = random.uniform(min_value, max_value)
print(f"Random float between {min_value} and {max_value}: {random_range}")
```

Choose a random element from a list

```
my_list = ['apple', 'banana', 'cherry', 'date']
random_choice = random.choice(my_list)
print(f"Randomly chosen fruit: {random_choice}")
```