

Netaji Subhash Engineering College
Department of Computer Science & Engineering
B. Tech CSE 2nd Year 3rd Semester
2021-2022

Name of the Course: IT Workshop

Course Code: PCC-CS393

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Class Roll No.: 150

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▪ **Assignment No.: 1**

Problem Statement: Write a program to convert temperature from degree Celsius to degree Fahrenheit.

Python Code:

```
temp = float(input("Enter the temperature in degree Celsius\t"))  
fahr = (temp * (9/5))+32  
print("The Temperature from degree Celsius to degree Farenheight is : ",fahr)
```

Sample Output(s):

```
PS D:\Python Codes> python -u "d:\Python Codes\assignment1.py"  
Enter the temperature in degree Celsius 32  
The Temperature from degree Celsius to degree Farenheight is : 89.6  
PS D:\Python Codes> █
```

- **Assignment No.: 2**

Problem Statement: Write a program to calculate the area and perimeter of a rectangle.

Python Code:

```
import math
length = float(input("Enter the length of the rectangle\t"))
width = float(input("Enter the width of the rectangle\t"))
area = length * width
perimeter = 2 * (length + width)
print("The area of the circle is ",round(area,2))
print("The perimeter of the circle is ",round(perimeter,2))
```

Sample Output(s):

```
PS D:\Python Codes> python -u "d:\Python Codes\assignment2.py"
Enter the length of the rectangle      12
Enter the width of the rectangle       20
The area of the circle is  240.0
The perimeter of the circle is  64.0
PS D:\Python Codes> █
```

- **Assignment No.: 3**

Problem Statement: Write a program to swap the value of two variables using a third variable and without using a third variable.

Python Code:

```
var1 = int(input("Enter Variable 1\t"))
var2 = int(input("Enter Variable 2\t"))

print("Before swapping Variable Values are ",var1 ,var2)

x = var1
var1 = var2
var2 = x

print("Swapped Variable Values using third value are ",var1 ,var2)

print("Before swapping Variable Values are ",var1 ,var2)

var1=var1+var2
var2=var1-var2
var1=var1-var2

print("Swapped Variable Values without using third value are ",var1 ,var2)
```

Sample Output(s):

```
PS D:\Python Codes> python -u "d:\Python Codes\assignment3.py"
Enter Variable 1      3
Enter Variable 2      5
Before swapping Variable Values are  3 5
Swapped Variable Values using third value are  5 3
Before swapping Variable Values are  5 3
Swapped Variable Values without using third value are  3 5
PS D:\Python Codes> █
```

- **Assignment No.: 4**

Problem Statement: Write a program to swap two numbers using bitwise operators.

Python Code:

```
var1 = int(input("Enter Variable 1\t"))
var2 = int(input("Enter Variable 2\t"))

print("Before swapping Variable Values are ",var1 ,var2)

var1 = var1 ^ var2
var2 = var1 ^ var2
var1 = var1 ^ var2

print("Swapped Variable Values are ",var1 ,var2)
```

Sample Output(s):

```
PS D:\Python Codes> python -u "d:\Python Codes\assignment4.py"
Enter Variable 1      50
Enter Variable 2      70
Before swapping Variable Values are  50 70
Swapped Variable Values are  70 50
PS D:\Python Codes> 
```

- **Assignment No.: 5**

Problem Statement: Write a program to rotate the value of x, y, z such that x has the value of y, y has the value of z and z has the value of x.

Python Code:

```
x = int(input("Enter the value of x\t"))
y = int(input("Enter the value of y\t"))
z = int(input("Enter the value of z\t"))

print("Before Swapping X Y Z is ",x ,y ,z)

temp = x
x = y
y = z
z = temp

print("After Swapping X Y Z is ",x ,y ,z)
```

Sample Output(s):

```
PS D:\Python Codes> python -u "d:\Python Codes\assignment5.py"
Enter the value of x    5
Enter the value of y    7
Enter the value of z    9
Before Swapping X Y Z is  5 7 9
After Swapping X Y Z is  7 9 5
PS D:\Python Codes> █
```

- **Assignment No.: 6**

Problem Statement: Write a program to display the following numbers: 5678, 678, 78, 8, where the given number is 5678.

Python Code:

```
num = int(input("Enter the number\t"))
num1 = num%1000
num2 = num%100
num3 = num%10

print(num1)
print(num2)
print(num3)
```

Sample Output(s):

```
PS D:\Python Codes> python -u "d:\Python Codes\assignment6.py"
Enter the number      5678
678
78
8
PS D:\Python Codes> 
```

- **Assignment No.: 7**

Problem Statement: Write a program to add two complex numbers by reading the numbers from the user.

Python Code:

```
num1 = complex(input('Enter number\t'))
num2 = complex(input('Enter number\t'))
sum = num1 + num2
print( "Addition is : ", sum)
```

Sample Output(s):

```
PS D:\Python Codes> python -u "d:\Python Codes\assignment7.py"
Enter number 5+3j
Enter number 7+9j
Addition is : (12+12j)
PS D:\Python Codes> █
```

- **Assignment No.: 8**

Problem Statement: Write a program to accept the principal amount, rate of interest, and duration from the user, hence, to display interest amount and the total amount (principal +interest).

Python Code:

```
pa = int(input("Enter the principal Amount\t"))
roi = float(input("Enter the Rate of interst\t"))
duration = int(input("Enter the duration\t"))

interest = (pa *roi * duration) /100

print("Interest amount is ",interest)
print("total amount is ",interest+pa)
```

Sample Output(s):

```
PS D:\Python Codes> python -u "d:\Python Codes\assignment8.py"
Enter the principal Amount      50000
Enter the Rate of interst      10.5
Enter the duration              5
Interest amount is  26250.0
total amount is  76250.0
PS D:\Python Codes> █
```