**Netaji Subhash Engineering College**

**Department of Computer Science & Engineering**

**B. Tech CSE 2nd Year 3rd Semester**

**2023-2024**

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**Course Code: PCC-CS393**

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**Class Roll No.: 158**

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**Date of Experiment: 4th July 2023**

**Date of Submission: 11th August 2023**

**Assignment No : 9**

**Problem Statement :**  Write a program to sort three numbers using if-elif-else.

**Python Code :**

print("Enter three numbers")

x = int(input("Enter First Number"))

y = int(input("Enter Second Number"))

z = int(input("Enter Third Number"))

if x>y:

    if y > z :

        print(x , y , z , sep='>')

    else :

        print(x , z , y , sep = '>')

else:

    if y > z :

        if z > x :

            print(y , z , x , sep = '>')

        else:

            print(y , x , z , sep='>')

    else :

        print(z , y , x, sep='>')

**Sample Output :**

Enter three numbers

Enter First Number 80

Enter Second Number 278

Enter Third Number 85

278>85>80

Enter three numbers

Enter First Number 56

Enter Second Number 43

Enter Third Number 8

56>43>8

**Assignment No : 10**

**Problem Statement :**  Write a program to calculate simple interest with the following conditions:

* If the principal amount is less than 2,00,000 the interest rate is 10%.
* If the principal amount is 2,00,000 -10,00,000 the interest rate is 12%.
* If the principal amount is greater than 10,00,000 the interest rate is 15%.

**Python Code :**

def calculate\_simple\_interest(principal\_amount):

    if principal\_amount < 200000:

        interest\_rate = 10

    elif principal\_amount >= 200000 and principal\_amount <= 1000000:

        interest\_rate = 12

    else:

        interest\_rate = 15

    interest = (principal\_amount \* interest\_rate) / 100

    return interest

# Taking input from the user

principal = float(input("Enter the principal amount: "))

# Calculate and display the interest

interest\_amount = calculate\_simple\_interest(principal)

print(f"Simple Interest: {interest\_amount}")

**Sample Output :**

Enter the principal amount: 35000

Simple Interest: 3500.0

Enter the principal amount: 950070

Simple Interest: 114008.4

**Assignment No : 11**

**Problem Statement :** 11. Write a program to print the following patterns:  
a) 1  
     2 , 3  
     4, 5, 6  
     7 , 8, 9, 10  
     11, 12, 13, 14, 15  
  
b) \* \* \* \* \* \* \* \* \*  
      \* \* \* \* \* \* \*  
        \* \* \* \* \*  
           \* \* \*  
              \*

**Python Code : a)**

num = 1

rows = int(input("Enter The Row No : "))

for i in range(1, rows + 1):

    for j in range(i):

        print(num, end=" ")

        num += 1

    print()

Enter The Row No : 6

1

2 3

4 5 6

7 8 9 10

11 12 13 14 15

16 17 18 19 20 21

**Sample Output :**

Enter The Row No : 5

1

2 3

4 5 6

7 8 9 10

11 12 13 14 15

**Python Code : b)**

rows = int(input("Enter The Row No : "))

for i in range(1, rows + 1):

    print(" " \* (i - 1) \* 2, end="")

    print("\* " \* (rows - i + 1))

**Assignment No : 12**

**Problem Statement :**  Write a program using a loop to print all the odd numbers within a given range.

**Python Code :**

n1 = int(input("Enter the Starting : "))

n2 = int(input("Enter The Last Range : "))

start , end = n1, n2

for num in range(start , end + 1 ) :

    if num %2 !=0 :

        print( num , end=" ")

**Sample Output :**

Enter the Starting : 5

Enter The Last Range : 30

5 7 9 11 13 15 17 19 21 23 25 27 29

Enter the Starting : 101

Enter The Last Range : 145

101 103 105 107 109 111 113 115 117 119 121 123 125 127 129 131 133 135 137 139 141 143 145

**Assignment No : 13**

**Problem Statement :**  Write a program using a while loop to print all the odd numbers within a given range.

**Python Code :**

n1 = int(input("Enter a number : "))

n2= int(input("Enter a number : "))

rem = n1 % n2

while rem!=0 :

    n1 = n2

    n2 = rem

    rem = n1 % n2

print ( "GCD of Given Number is %d" % (n2))

**Sample Output :**

Enter a number : 45

Enter a number : 34

GCD of Given Number is 1

**Assignment No : 14**

**Problem Statement :** Write a program to print the decimal equivalents of 1/2, 1/3, 1/4,. ........................... , 1/10 using for loop.

**Python Code :**

for i in range(1 , 11) :

    print( 1/i , end=", ")

**Sample Output :**

1.0, 0.5, 0.3333333333333333, 0.25, 0.2, 0.16666666666666666, 0.14285714285714285, 0.125, 0.1111111111111111, 0.1,