**EXPERIMENT NO 7**

**1) Write a program to calculate the electricity bill (accept number of unit from user) according to the following criteria:**

**Unit                                      Price**

**First 100 units            Rs 3 per unit**

**Next 100 units           Rs 5 per unit**

**After 200 units          Rs 10 per unit**

no\_of\_units = int(input("enter the unites : "))

if no\_of\_units < 100 :

  print("total bill is" , 3\*no\_of\_units)

elif  200>no\_of\_units>100 :

  print("total bill is ", (no\_of\_units-100)\*5+300)

elif 200<no\_of\_units:

  print("total bill is ",(no\_of\_units-200)\*10+500+300)

**Output :**

enter the unites : 150

total bill is 550

**2. Write a program to accept the cost price of a bike and display the road tax to be paid according to the following criteria :**

**Cost price (in Rs)                    Tax**

**> 100000                                 15%**

**> 50000 and <= 100000         10%**

**<= 50000                                   5%**

bike\_cost = int(input("enter the cost of bike : "))

if bike\_cost > 100000 :

  x=bike\_cost\*0.15

  print(" total tax cost is " ,x )

elif  100000>bike\_cost>50000 :

      x=bike\_cost\*0.1

      print("total tax cost is ",x)

elif bike\_cost<=50000:

  x=bike\_cost\*0.05

  print("total tax cost is ",x)

print("total cost of bike is " , bike\_cost+x)

**Output :**  
 enter the cost of bike : 150000

total tax cost is 22500.0

total cost of bike is 172500.0

**3). Accept any city from the user and display monument of that city.**

**City           Monument Red Fort**

**Delhi       Red Fort**

**Agra         Taj Mahal**

**Jaipur      Jal Mahal**

city = (input("enter the city: "))

u=city.lower()

a="delhi"

b="agra"

c="jaipur"

if(u==a):

    print("monument of that city is red fort")

elif(u==b):

    print("monument of that city is taj mahal")

elif(u==c):

    print("monument of that city is jal mahal")

else :

    print("city not found")

**Output:**

enter the city: delhi

monument of that city is red fort

**4) Write a program using FOR loop to display sum of odd numbers and even numbers that fall between 12 and 37 (including both numbers)**

sum\_even = 0

sum\_odd = 0

for number in range(12, 38):

        if number % 2 == 0:

            sum\_even += number

        else:

            sum\_odd += number

print(f"The sum of even numbers between 12 and 37 is: {sum\_even}")

print(f"The sum of odd numbers between 12 and 37 is: {sum\_odd}")

**Output :**

The sum of even numbers between 12 and 37 is: 312

The sum of odd numbers between 12 and 37 is: 325

**5) Write a program to reverse the number accepted from user using while loop**

num = int(input("Enter a number to reverse: "))

reversed\_num = 0

while num > 0:

        remainder = num % 10

        reversed\_num = (reversed\_num \* 10) + remainder

        num = num // 10

print(f"Reversed number: {reversed\_num}")

**Output :**   
 Enter a number to reverse: 123456

Reversed number: 654321

**6) Write a program to add first n terms of the following series using a for loop:**

**1/1! + 1/2! + 1/3! +…+ 1/n!**

n=int(input("enter the number of terms : "))

sum = 0

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

        fact=1

        for j in range(1,i+1):

                fact=fact\*j

                sum +=1/fact

                print(sum)

print("sum of series is " ,sum)

**Output :**

enter the number of terms : 5

sum of series is 7.591666666666669

**7)write a program to display all even numbers that falls between two numbers (exclusive both numbers) entered from the.**

num1=int(input("enter the number 1:" ))

num2=int(input("enter the number 2:" ))

for i in range(num1+num2):

    if i%2==0:

        print(i)

    else:

        continue

**Output:**

enter the number 1:1

enter the number 2:10

0 2 4 6 8 10

**8) Print following pattern using for loop**

1

2 2

3 3 3

4 4 4 4

for i in range(0,5):

    for j in range(0,i):

        print(i,end=" ")

    print("\n")

**Output :**

1

2 2

3 3 3

4 4 4 4