LTCE

Experiment No. 2

Aim -

A 1) WAP to implement basic calculator using func^{+}.

Program -

```
def add (x, y):
    return x+y

def subtract (x, y):
    return x-y

def multiply (x, y):
    return x*y

def divide (x, y):
    return x/y

print ("select operation.")
print ("1 for Add")
print ("2 for Sub")
print ("3 for Multiply")
print ("4 for Divide)

while True:
    choice=input ("Enter you choice:")
    If choice in ('1', '2', '3', '4'):
        try:
            num1= float (input ("Enter 1st no.:"))
            num2 = float (input ("Enter 2nd no.:"))
        except ValueError:
```

```
        print("Invalid input. Please enter a no.")
        continue
    if choice == '1':
        print(num1, "+", num2, "=", add(num1,num2))

    elif choice == '2':
        print(num1, "-", num2, "=", subtract(num1,num2))

    elif choice == '3':
        print(num1, "*", num2, "=", multiply(num1, num2))

    elif choice == '4':
        print(num1, "/", num2, "=", divide(num1, num2))

    next_calculation = input("let's do next calculation? (yes/no): ")

    if next_calculation == "no":
        break
    else:
        print("invalid input")
```

Output ⇒ Select operation.

1 for Add
2 for Sub
3 for Multiply
4 for Divide
Enter your choice: 3
Enter 1st no.: 15
Enter 2nd no.: 14

15.0 * 14.0 = 210.0
Let's do next calculation ? (yes/No) : No

A 2) WAP to find factorial using function
Program -

```
def factorial (x):
    if x == 1:
        return 1
    else:
        return (x * factorial (x-1))

num = int (input ("Enter a no. for finding it's factorial : "))
result = factorial (num)
print ("The factorial of ", num, "is", result)
```

Output ⇒ Enter a no. for finding it's factorial :
5
The factorial of 5 is 120

A 3) WAP to find fibonacci series using function
Program -

```
def fibo (n):
    if n <= 1:
        return n
    else:
        return (fibo (n-1) + fibo (n-2))

nterms = int (input ("Enter a no. : \n"))
```

```
if nterms <= 0:
   print(" Enter a positive integer ")
else
   print(" Fibonacci series : ")
   for i in range(nterms):
      print(fibo(i))
```

Output ⇒ Enter a no. :
5
Fibonacci Series :
0
1
1
2
3

A 4) WAP to find largest no. in a list using function.

```
def myMax (list1):
    max = list1[0]
    for x in linst1:
      if x > max:
          max = x
    return max
list1 = [10, 20, 30, 40, 50]
print = (" Largest no. is : ", myMax(list1))
```

Output ⇒

Largest no. is: 50

B) WAP to print employee info(name, age, department, salary) using class & object.

Program -

```
class Employee:
    def __init__(self, name, age, dept, salary):
        self.name = name
        self.age = age
        self.dept = dept
        self.salary = salary

    def info(self):
        print(f"The name of employee is {self.name} and age is {self.age}. The employee work in department {self.dept} and salary is {self.salary}")

e1 = Employee("Akash", 18, "DS", 25000)
e2 = Employee("Sarvesh", 19, "DS", 28000)
e3 = Employee("Ajay", 20, "DS", 22000)
e4 = Employee("Krishna", 19, "DS", 28000)
e5 = Employee("Danish", 20, "DS", 28000)
e6 = Employee("Monish", 20, "DS", 30000)
e1.info()
e2.info()
e3.info()
e4.info()
e5.info()
e6.info()
```

Output ⇒

The name of employee is AKash and age is 18
The employee work in department DS & salary is 25000
The name of employee is Sarvesh and age is 19
The employee work in department DS & salary is 28000
The employee name is Ajay and age is 20
The employee work in department DS and salary is 22000
The name of employee is Krishna and age is 19
The employee work in department DS and salary is 28000
The name of employee is Danish and age is 20
The employee work in department DS & salary is 28000
The name of employee is Manish and age is 20
The employee work in department DS & salary is 30000