

# **LAB CYCLE-1**

## **PROGRAM-1**

### **AIM:**

**Program to print a message.**

### **SOURCE CODE:**

```
firstname=input("Enter your first name:")  
lastname=input("Enter your last name:")  
print(f"Greeting!!! {firstname} {lastname}")
```

### **OUTPUT:**

```
Enter your first name:Almas  
Enter your last name:N A  
Greeting!!! Almas N A
```

## **PROGRAM-2**

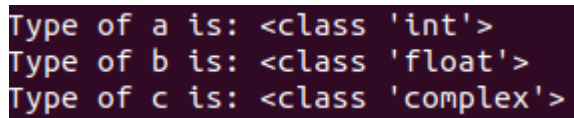
### **AIM:**

**Program to print different num datatypes.**

### **SOURCE CODE:**

```
a=5  
b=3.5  
c=2.08j  
print("Type of a is:",type(a))  
print("Type of b is:",type(b))  
print("Type of c is:",type(c))
```

### **OUTPUT:**

A screenshot of a terminal window showing the output of the Python program. The text is displayed on three lines: 'Type of a is: <class 'int'>', 'Type of b is: <class 'float'>', and 'Type of c is: <class 'complex'>'. The text is in a light blue font on a dark background.

```
Type of a is: <class 'int'>  
Type of b is: <class 'float'>  
Type of c is: <class 'complex'>
```

### **PROGRAM-3**

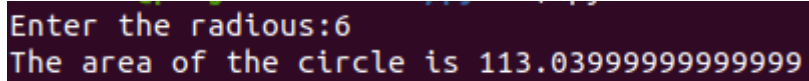
#### **AIM:**

**Program to find Area of circle.**

#### **SOURCE CODE:**

```
pi=3.14  
r=int(input("Enter the radius:"))  
area=pi*r*r  
print(f"The area of the circle is {area}")
```

#### **OUTPUT:**

A screenshot of a terminal window with a dark background and light-colored text. It shows the program's execution: the prompt 'Enter the radius:' is followed by the input '6'. The next line shows the output 'The area of the circle is 113.03999999999999'.

```
Enter the radius:6  
The area of the circle is 113.03999999999999
```

## **PROGRAM-4**

### **AIM:**

**Program to find Salary of an employee including HRA and TA.**

### **SOURCE CODE:**

```
Basic_salary=int(input("Enter the basic salary of the employee"))  
HRA=10*Basic_salary/100  
TA=5*Basic_salary/100  
Total_salary=Basic_salary+HRA+TA  
print("Total salary is:",Total_salary)
```

### **OUTPUT:**

```
Enter the basic salary of the employee:23000  
Total salary is: 26450.0
```

## **PROGRAM-5**

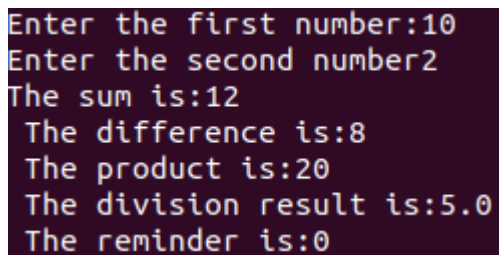
### **AIM:**

**Program to perform Arithmetic operations.**

### **SOURCE CODE:**

```
a=int(input("Enter the first number:"))
b=int(input("Enter the second number"))
sum=a+b
difference=a-b
product=a*b
div=a/b
mod=a%b
print(f"The sum is:{sum}\n The difference is:{difference}\n The product is:{product}\n The
division result is:{div}\n The reminder is:{mod}")
```

### **OUTPUT**

A screenshot of a terminal window with a dark purple background and light blue text. It shows the execution of the program with inputs 10 and 2, and the resulting arithmetic operations and their values.

```
Enter the first number:10
Enter the second number2
The sum is:12
The difference is:8
The product is:20
The division result is:5.0
The reminder is:0
```

## **PROGRAM-6**

### **AIM:**

**Program to print copies of a string.**

### **SOURCE CODE:**

```
a=input("Enter the string:")  
n=int(input("Enter the number of times:"))  
copies=a*n  
print("The copies of entered string:",copies)
```

### **OUTPUT:**

```
Enter the string:Almas  
Enter the number of times:5  
The copies of entered string: AlmasAlmasAlmasAlmasAlmas
```

## **PROGRAM-7**

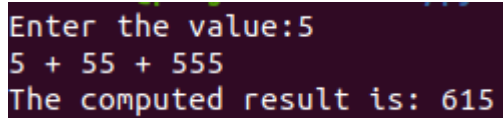
### **AIM:**

**Program to accept a integer and compute sum.**

### **SOURCE CODE:**

```
n=input("Enter the value:")
print(n,'+',n*2,'+',n*3)
sum=int(n)+int(n*2)+int(n*3)
print("The computed result is:",sum)
```

### **OUTPUT:**

A screenshot of a terminal window with a dark background and light-colored text. It shows the execution of the program with the input value 5. The output displays the input value, the calculation 5 + 55 + 555, and the final result 615.

```
Enter the value:5
5 + 55 + 555
The computed result is: 615
```



## **PROGRAM-8**

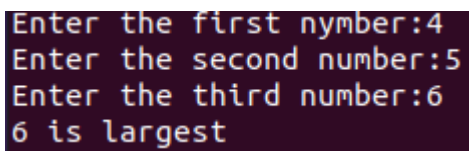
### **AIM:**

**Program to find largest of three numbers.**

### **SOURCE CODE:**

```
a=int(input("Enter the first nymber:"))
b=int(input("Enter the second number:"))
c=int(input("Enter the third number:"))
if a>b and a>c:
    print(f"{a} is largest")
elif b>a and b>c:
    print(f"{b} is largest")
else:
    print(f"{c} is largest")
```

### **OUTPUT:**

A screenshot of a terminal window showing the execution of the program. The text is as follows:

```
Enter the first nymber:4
Enter the second number:5
Enter the third number:6
6 is largest
```

## **PROGRAM-9**

### **AIM:**

**Program to check a year is leap year or not.**

### **SOURCE CODE:**

```
year=int(input("Enter the year:"))
if year%4==0 and year%100!=0 or year%400==0:
    print(f"{year} a leapyear")
else:
    print(f"{year} is not a leap year")
```

### **OUTPUT:**

```
Enter the year:1900
1900 is not a leap year
Enter the year:2024
2024 is a leapyear
Enter the year:2000
2000 is a leapyear
```

## PROGRAM-10

### AIM:

**Program to solve quadratic equations.**

### SOURCE CODE:

```
import math
a=int(input("Enter first number:"))
b=int(input("Enter second number:"))
c=int(input("Enter third number:"))
d=(b**2)-(4*a*c)
if d==0:
    print("Only one root\n")
    ansr=(-b)/(2*a)
    print("x=",ansr)
elif d>0:
    printf("Two Roots")
    sqrtvalue=math.sqrt(d)
    sol1=(-b+sqrtvalue)/2*a
    sol2=(-b-sqrtvalue)/2*a
    print("m=",sol1)
    print("n=",sol2)
else:
    print("Complex root\n")
    real=(-b)/2*a
    sqrtvalue=math.sqrt(abs(d))/(2*a)
    print(f"The roots are complex: {real}+{sqrtvalue}i")
```

### OUTPUT:

```
Enter first number:1
Enter second number:2
Enter third number:5
Complex root

The roots are complex:-1.0+2.0i
Enter first number:1
Enter second number:-2
Enter third number:1
Only one root

x= 1.0
```

```
Enter first number:1
Enter second number:-3
Enter third number:2
Two Roots
m= 2.0
n= 1.0
```

## **PROGRAM-11**

### **AIM:**

**Program to determine the ticket rate based on age.**

### **SOURCE CODE:**

```
age=int(input("Enter the age:"))
if age<10:
    print("Ticket rate is 7")
elif 10<=age<60:
    print("Ticket rate is 10")
elif age>=60:
    print("Ticket rate is 5")
else:
    print("Invalid age")
```

### **OUTPUT:**

```
Enter the Age:40
The Ticket Rate is 10
```

```
Enter the Age:5
The Ticket Rate is 7
```

```
Enter the Age:78
The Ticket Rate is 5
```