

# LAB 09/05/2025

## Lab1

```
# Write a program for arithmetic operators

i = 1
num1 = float(input("Enter first number: "))
num2 = float(input("Enter second number: "))
while i == 1:
    print("1: Add")
    print("2: Subtract")
    print("3: Multiply")
    print("4: Divide")
    choice = int(input("Enter your choice: "))
    if choice == 1:
        result = num1 + num2
        print("Result:", result)
        i = 2
    elif choice == 2:
        result = num1 - num2
        print("Result:", result)
        i = 2
    elif choice == 3:
        result = num1 * num2
        print("Result:", result)
        i = 2
    elif choice == 4:
        if num2 != 0:
            result = num1 / num2
            print("Result:", result)
            i = 2
        else:
            print("Cannot divide by zero")
            i = 2
    else:
        print("Invalid choice Please Enter a valid choice")
        i = 1
```

## Output :

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

aditya@Adityas-Mac-mini Lab1 % python3 lab1.py
Enter first number: 10
Enter second number: 20
1: Add
2: Subtract
3: Multiply
4: Divide
Enter your choice: 1
Result: 30.0
aditya@Adityas-Mac-mini Lab1 %
```

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## Lab2

```
# Write a program for assignment operators

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

num += 5
print("After += 5:", num)

num -= 3
print("After -= 3:", num)

num *= 2
print("After *= 2:", num)

num /= 4
print("After /= 4:", num)

num %= 3
print("After %= 3:", num)

num //= 2
print("After //= 2:", num)

num **= 3
print("After **= 3:", num)
```

## Output :

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

aditya@Adityas-Mac-mini Lab1 % python3 lab2.py
Enter a number: 10
After += 5: 15
After -= 3: 12
After *= 2: 24
After /= 4: 6.0
After %= 3: 0.0
After //= 2: 0.0
After **= 3: 0.0
aditya@Adityas-Mac-mini Lab1 %
```

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## Lab3 :

```
# Write a program for Bitwise operators

num1 = int(input("Enter first number: "))
num2 = int(input("Enter second number: "))
print("Bitwise AND:", num1 & num2)
print("Bitwise OR:", num1 | num2)
print("Bitwise XOR:", num1 ^ num2)
print("Bitwise NOT:", ~num1)
print("Left Shift:", num1 << 2)
print("Right Shift:", num1 >> 2)
```

## Output

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

aditya@Adityas-Mac-mini Lab1 % python3 lab3.py
Enter first number: 5
Enter second number: 7
Bitwise AND: 5
Bitwise OR: 7
Bitwise XOR: 2
Bitwise NOT: -6
Left Shift: 20
Right Shift: 1
aditya@Adityas-Mac-mini Lab1 %
```

## Lab4

```
# Write a program to calculate greatest of three numbers.

num1 = int(input("Enter first number: "))
num2 = int(input("Enter second number: "))
num3 = int(input("Enter third number: "))

largest= num1
if num2 > largest:
    largest = num2
if num3 > largest:
    largest = num3
print("The largest number is:", largest)
```

## Output :

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

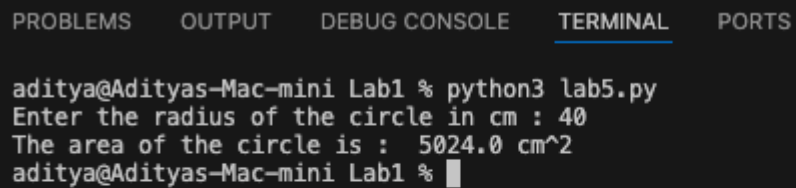
aditya@Adityas-Mac-mini Lab1 % python3 lab4.py
Enter first number: 10
Enter second number: 40
Enter third number: 20
The largest number is: 40
aditya@Adityas-Mac-mini Lab1 %
```

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# Lab5

```
# Calculate the area of a circle.  
  
radius = float(input("Enter the radius of the circle in cm : "))  
area = 3.14 * radius * radius  
print("The area of the circle is : ", area, "cm^2")
```

## Output :



The screenshot shows a terminal window with a dark background. At the top, there are five tabs: 'PROBLEMS', 'OUTPUT', 'DEBUG CONSOLE', 'TERMINAL' (which is selected and underlined), and 'PORTS'. Below the tabs, the terminal shows the following text: 'aditya@Adityas-Mac-mini Lab1 % python3 lab5.py', followed by the program's input prompt 'Enter the radius of the circle in cm : 40', then the program's output 'The area of the circle is : 5024.0 cm^2', and finally the prompt 'aditya@Adityas-Mac-mini Lab1 %' with a cursor.

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS  
  
aditya@Adityas-Mac-mini Lab1 % python3 lab5.py  
Enter the radius of the circle in cm : 40  
The area of the circle is : 5024.0 cm^2  
aditya@Adityas-Mac-mini Lab1 %
```

# Lab6

```
# Calculate the area of a triangle.  
  
base = float(input("Enter the base of the triangle in cm : "))  
height = float(input("Enter the height of the triangle in cm : "))  
area = (base * height)/2  
print("The area of the triangle is : ", area, "cm^2")
```

## Output :

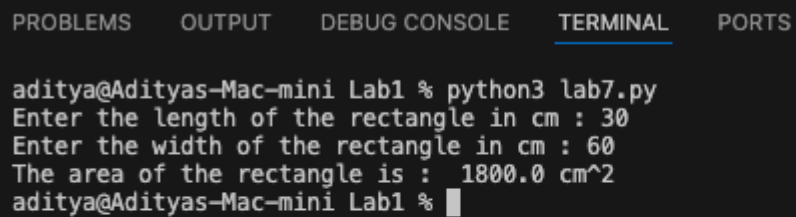
```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS  
  
aditya@Adityas-Mac-mini Lab1 % python3 lab6.py  
Enter the base of the triangle in cm : 30  
Enter the height of the triangle in cm : 40  
The area of the triangle is : 600.0 cm^2  
aditya@Adityas-Mac-mini Lab1 %
```

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# Lab7

```
# Calculate the area of a rectangle.  
  
length = float(input("Enter the length of the rectangle in cm : "))  
width = float(input("Enter the width of the rectangle in cm : "))  
area = length * width  
print("The area of the rectangle is : ", area, "cm^2")
```

## Output :



The screenshot shows a code editor with a dark background. At the top, there are five tabs: 'PROBLEMS', 'OUTPUT', 'DEBUG CONSOLE', 'TERMINAL' (which is selected and underlined), and 'PORTS'. The 'TERMINAL' tab displays the following text: 'aditya@Adityas-Mac-mini Lab1 % python3 lab7.py', 'Enter the length of the rectangle in cm : 30', 'Enter the width of the rectangle in cm : 60', 'The area of the rectangle is : 1800.0 cm^2', and 'aditya@Adityas-Mac-mini Lab1 %' followed by a cursor.

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS  
  
aditya@Adityas-Mac-mini Lab1 % python3 lab7.py  
Enter the length of the rectangle in cm : 30  
Enter the width of the rectangle in cm : 60  
The area of the rectangle is : 1800.0 cm^2  
aditya@Adityas-Mac-mini Lab1 %
```

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# Lab8

```
# Calculate the area of a square.  
  
area = float(input("Enter the side of the square in cm : "))  
area = area * area  
print("The area of the square is : ", area, "cm^2")
```

## Output :

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS  
  
aditya@Adityas-Mac-mini Lab1 % python3 lab8.py  
Enter the side of the square in cm : 50  
The area of the square is : 2500.0 cm^2  
aditya@Adityas-Mac-mini Lab1 %
```