

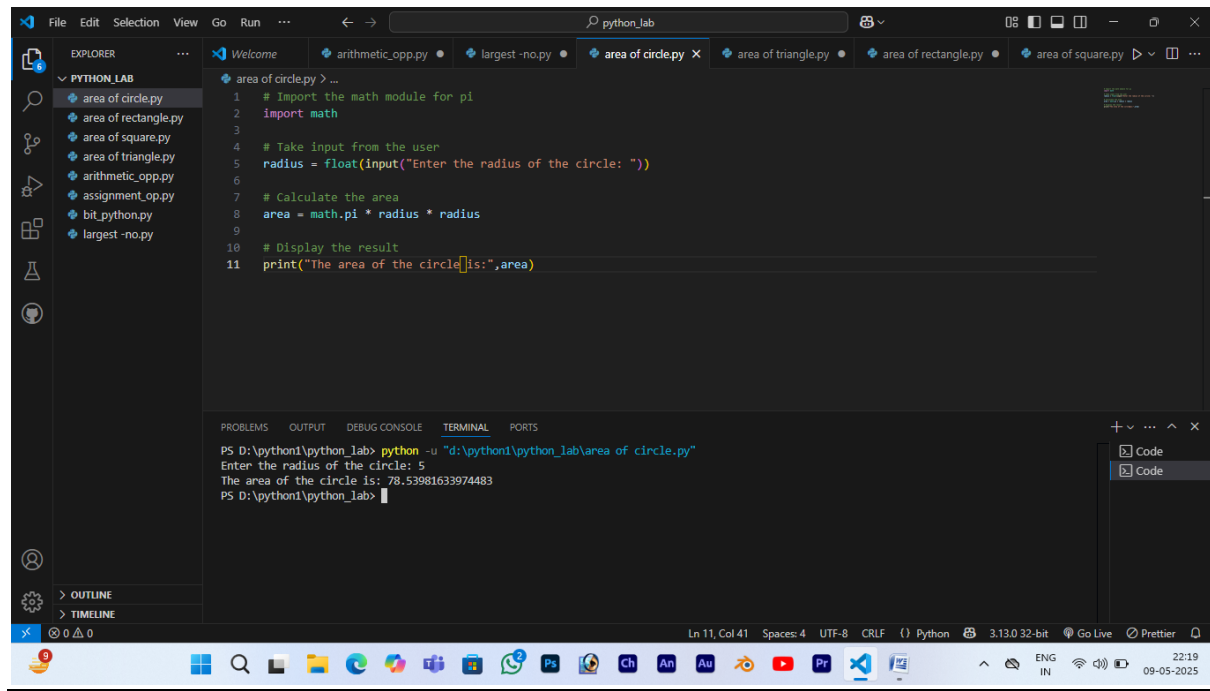
Lab

Area of circle

```
num1 = float(input("Enter the first number: "))
num2 = float(input("Enter the second number: "))

# Ask the user to choose an operator
print("Choose an operator: +, -, *, /")
operator = input("Enter operator: ")

# Perform calculation based on operator
if operator == '+':
    result = num1 + num2
    print("Result:", result)
elif operator == '-':
    result = num1 - num2
    print("Result:", result)
elif operator == '*':
    result = num1 * num2
    print("Result:", result)
elif operator == '/':
    if num2 != 0:
        result = num1 / num2
        print("Result:", result)
    else:
        print("Error: Cannot divide by zero")
else:
    print("Invalid operator")
```



Area of rectangle

```
length = float(input("Enter the length of the rectangle: "))
width = float(input("Enter the width of the rectangle: "))

# Calculate the area
area = length * width

# Display the result
print("The area of the rectangle is:", area)
```

The screenshot shows the Visual Studio Code editor with the file explorer on the left displaying a project named 'PYTHON LAB'. The file 'area of rectangle.py' is selected. The code in the editor is as follows:

```
1
2 length = float(input("Enter the length of the rectangle: "))
3 width = float(input("Enter the width of the rectangle: "))
4
5 # Calculate the area
6 area = length * width
7
8 # Display the result
9 print("The area of the rectangle is:", area)
```

The terminal at the bottom shows the command to run the script and its output:

```
PS D:\python1\python_lab> python -u "d:\python1\python_lab\area of rectangle.py"
Enter the length of the rectangle: 5
Enter the width of the rectangle: 8
The area of the rectangle is: 40.0
PS D:\python1\python_lab>
```

Area of Square

The screenshot shows the Visual Studio Code editor with the file explorer on the left displaying a project named 'PYTHON LAB'. The file 'area of square.py' is selected. The code in the editor is as follows:

```
1
2 side = float(input("Enter the side of the square: "))
3
4 # Calculate the area
5 area = side * side
6
7 # Display the result
8 print("The area of the square is:", area)
```

The terminal at the bottom shows the command to run the script and its output:

```
PS D:\python1\python_lab> python -u "d:\python1\python_lab\area of square.py"
Enter the side of the square: 8
The area of the square is: 64.0
PS D:\python1\python_lab>
```

Area of Triangle

```
1
2 num1 = float(input("Enter the first number: "))
3 num2 = float(input("Enter the second number: "))
4
5 # Ask the user to choose an operator.
6 print("Choose an operator: +, -, *, /")
7 operator = input("Enter operator: ")
8
9 # Perform calculation based on operator
10 if operator == "+":
11     result = num1 + num2
12     print("Result:", result)
13 elif operator == "-":
14     result = num1 - num2
15     print("Result:", result)
16 elif operator == "*":
17     result = num1 * num2
18     print("Result:", result)
19 elif operator == "/":
20     if num2 != 0:
21         result = num1 / num2
22         print("Result:", result)
23     else:
24         print("Error: Cannot divide by zero")
25 else:
26     print("Invalid operator")
27
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS D:\python\python_lab> python -u "D:\python\python_lab\arithmetic_op.py"

Enter the first number: 8
Enter the second number: 9
Choose an operator: +, -, *, /
Enter operator: -
Result: -1.0
PS D:\python\python_lab>

Arithmetic operation

```
1
2 num1 = float(input("Enter the first number: "))
3 num2 = float(input("Enter the second number: "))
4
5 # Ask the user to choose an operator.
6 print("Choose an operator: +, -, *, /")
7 operator = input("Enter operator: ")
8
9 # Perform calculation based on operator
10 if operator == "+":
11     result = num1 + num2
12     print("Result:", result)
13 elif operator == "-":
14     result = num1 - num2
15     print("Result:", result)
16 elif operator == "*":
17     result = num1 * num2
18     print("Result:", result)
19 elif operator == "/":
20     if num2 != 0:
21         result = num1 / num2
22         print("Result:", result)
23     else:
24         print("Error: Cannot divide by zero")
25 else:
26     print("Invalid operator")
27
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS D:\python\python_lab> python -u "D:\python\python_lab\arithmetic_op.py"

Enter the first number: 8
Enter the second number: 9
Choose an operator: +, -, *, /
Enter operator: +
Result: 17.0
PS D:\python\python_lab>

Assignment operator

```
File Edit Selection View Go ... python_lab
assignment_op.py
1 a = int(input("Enter a number: "))
2 b = int(input("Enter another number: "))
3
4 a += b
5 print("Now a is:",a)
```

```
PS D:\python\python_lab> python -u "d:\python\python_lab\assignment_op.py"
Enter a number: 8
Enter another number: 6
Now a is: 14
PS D:\python\python_lab>
```

Bitwise operators

```
File Edit Selection View Go ... python_lab
bit_python.py
1 a = int(input("Enter the first number: "))
2 b = int(input("Enter the second number: "))
3
4
5 # Bitwise AND
6 print("a & b (Bitwise AND): (a & b)")
7
8 # Bitwise OR
9 print("a | b (Bitwise OR): (a | b)")
10
11 # Bitwise XOR
12 print("a ^ b (Bitwise XOR): (a ^ b)")
13
14 # Bitwise NOT
15 print("~a (Bitwise NOT of a): (~a)")
16 print("~b (Bitwise NOT of b): (~b)")
17
18 # Bitwise left shift
19 shift = int(input("Enter the number of positions to left shift: "))
20 print("a << (shift) (Left shift): (a << shift)")
21 print("b << (shift) (Left shift): (b << shift)")
22
23 # Bitwise right shift
24 print("a >> (shift) (Right shift): (a >> shift)")
25 print("b >> (shift) (Right shift): (b >> shift)")
26
```

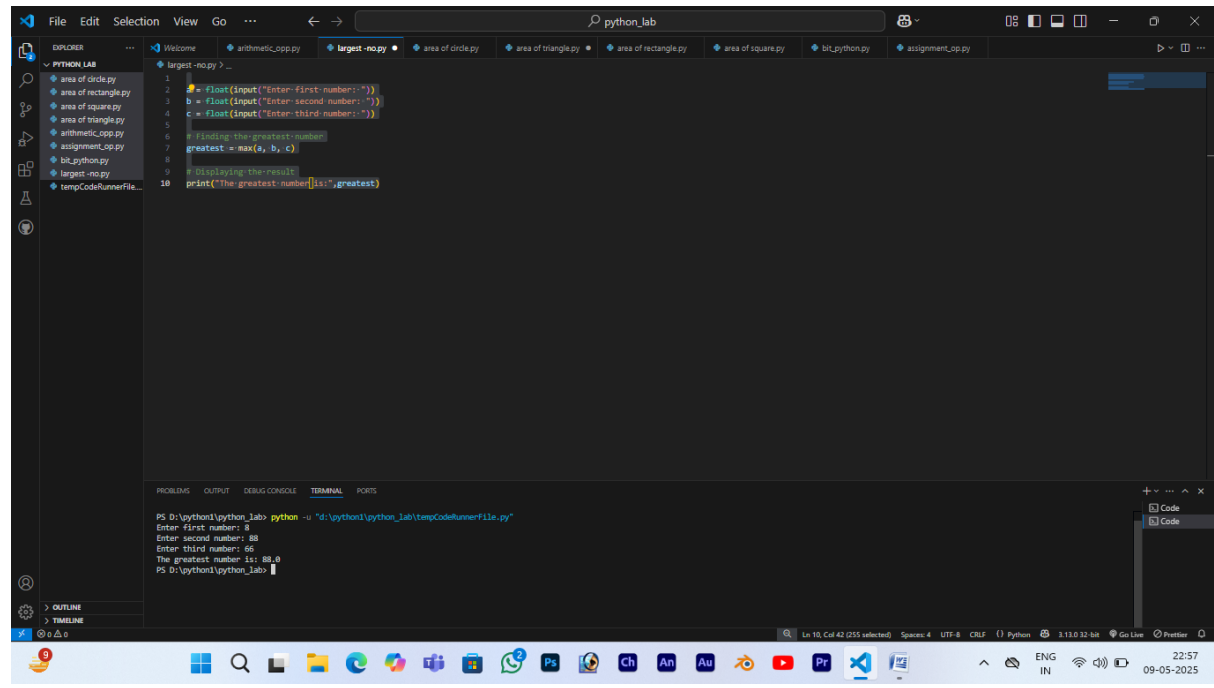
```
PS D:\python\python_lab> python -u "d:\python\python_lab\bit_python.py"
Enter the first number: 8
Enter the second number: 9
a & b (Bitwise AND): 8
a | b (Bitwise OR): 9
a ^ b (Bitwise XOR): 1
~a (Bitwise NOT of a): -9
~b (Bitwise NOT of b): -10
Enter the number of positions to left shift: 1
```

Greatest of 3 NO.

```
a = float(input("Enter first number: "))
b = float(input("Enter second number: "))
c = float(input("Enter third number: "))
```

```
# Finding the greatest number
greatest = max(a, b, c)

# Displaying the result
print("The greatest number is:",greatest)
```



The screenshot shows a Visual Studio Code editor window titled 'python_lab'. The Explorer sidebar on the left lists several Python files, including 'largest-no.py' which is currently selected. The main editor area displays the following Python code:

```
1 a = float(input("Enter first number:"))
2 b = float(input("Enter second number:"))
3 c = float(input("Enter third number:"))
4
5 # Finding the greatest number
6 greatest = max(a, b, c)
7
8 # Displaying the result
9 print("The greatest number is:",greatest)
```

Below the code editor, the TERMINAL panel shows the execution of the script using the command `python -u "d:\python\python_lab\tempCodeRunnerFile.py"`. The output of the program is as follows:

```
PS D:\python\python_lab> python -u "d:\python\python_lab\tempCodeRunnerFile.py"
Enter first number: 8
Enter second number: 88
Enter third number: 66
The greatest number is: 88.0
PS D:\python\python_lab>
```

The Windows taskbar at the bottom of the screen shows the time as 22:57 on 09-05-2025, along with various system icons and application shortcuts.