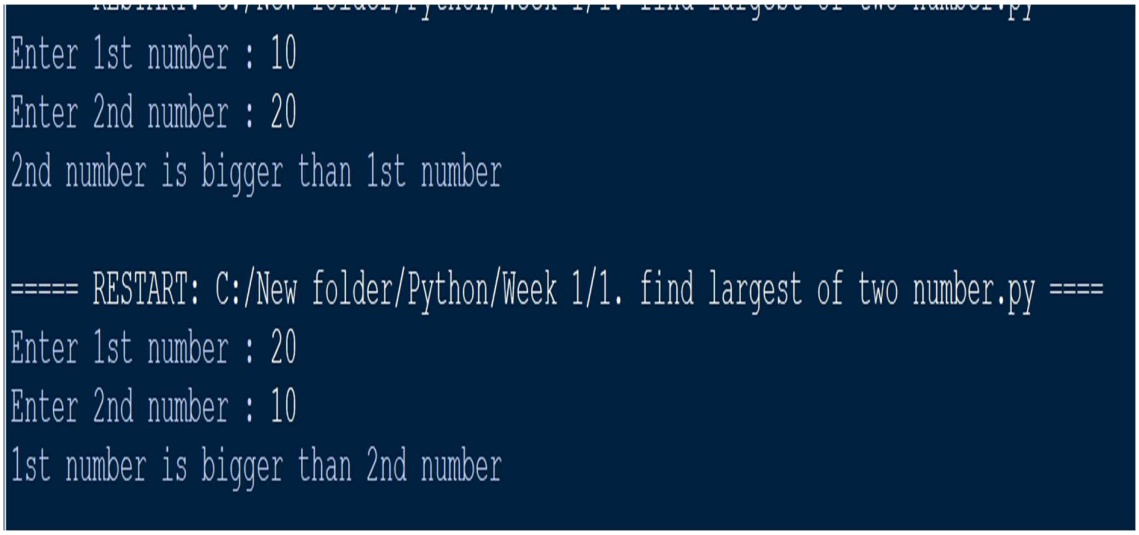
1. Write a program to find the largest of two numbers using if-else statements.

```
a=int(input("Enter 1st number : "))
b=int(input("Enter 2nd number : "))
if(a>b):
   print("1st number is bigger than 2nd number")
else:
   print("2nd number is bigger than 1st number")
```

 # Output:



2. Write a program that uses if-else statements to print whether a number is positive, negative, or zero.

```
a=int(input("Enter number : "))
if(a==0):
   print("Number is zero")
elif (a>0):
   print("Number is positive")
else:
   print("Number is Negative")
```

 # Output:

```
Enter number : 0
Number is zero

========= RESTART: C:/New folder/Python/Week 1/2. Positive Negative.py =========
Enter number : 5
Number is positive

========= RESTART: C:/New folder/Python/Week 1/2. Positive Negative.py =========
Enter number : -3
Number is Negative
```

3. **Write a program that checks whether a given number is even or odd using the ternary operator.**

```
n = int(input("Enter Number : "))

result = "Even" if n % 2 == 0 else "Odd"

print(result)
```

 # Output:

4. **What is the output of the following expression?**

```
result = 25 // 4 * 3 + 18 % 7 - 5 * 2 / 2

print(result)
```

 # Output :

5. Write a program to calculate the area of a triangle given its base and height using the formula Area = (base * height) / 2.

```
base = int(input("Enter Base for triangle : "))

height = int(input("Enter Height for triangle : "))

Area = (base * height) / 2

print("Area of Triangle = ",Area)
```

 # Output:

```
Enter Base for triangle : 10
Enter Height for triangle : 5
Area of Triangle =  25.0
```

6. Write a program to calculate the perimeter of a rectangle using length and width variables.

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

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

perimeter = 2 * (length + width)

print("The perimeter of the rectangle = ",perimeter)
```

 # Output:

```
Enter the length of the rectangle : 5
Enter the width of the rectangle : 8
The perimeter of the rectangle =  26.0
```

7. Write a program that uses the modulus operator (%) to find the remainder when dividing two numbers.

```
n1 = int(input("Enter the dividend: "))

n2 = int(input("Enter the divisor: "))

remainder = n1 % n2

print(f"The remainder when {n1} is divided by {n2} is {remainder}")
```

 # Output:

```
Enter the dividend: 10
Enter the divisor: 3
The remainder when 10 is divided by 3 is 1
```

8. Write a program to compare two numbers and print whether the first is greater, smaller, or equal to the second using relational operators.

```
n1 = float(input("Enter the first number : "))

n2 = float(input("Enter the second number : "))


if n1 > n2:

   print(f"first number {n1} is greater than second number{n2}")

elif n1 < n2:

   print(f"first number {n1} is smaller than second number {n2}")

else:

   print(f"first number {n1} is equal to second number {n2}")
```

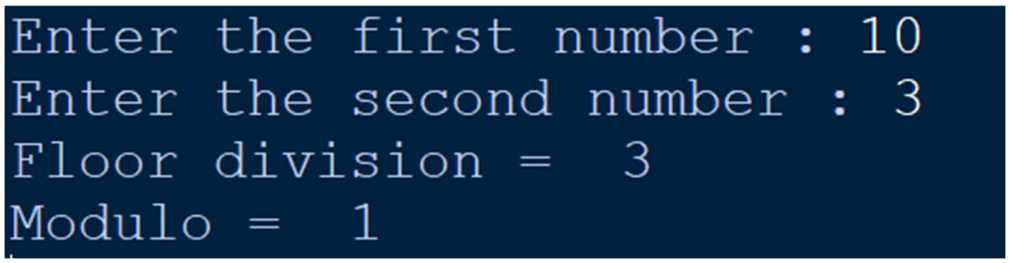
 # Output :

```
Enter the first number : 10
Enter the second number : 20
first number 10.0 is smaller than second number 20.0

====== RESTART: C:/New folder/Python/Week 1/8. Compare t
Enter the first number : 20
Enter the second number : 10
first number 20.0 is greater than second number10.0

====== RESTART: C:/New folder/Python/Week 1/8. Compare t
Enter the first number : 10
Enter the second number : 10
first number 10.0 is equal to second number 10.0
```

9. Write a program that takes two integers and performs both floor division (//) and modulo (%) operations. Print the results

```
n1 = int(input("Enter the first number : "))

n2 = int(input("Enter the second number : "))

if n2 == 0:

   print("Division by zero is not allowed.")

else:

   floor = n1 // n2

   remainder = n1 % n2

   print("Floor division = ",floor)

   print("Modulo = ",remainder)
```

 # Output:



10. Write a program that prints the grade based on the score input using if-else statements (A for 90-100, B for 80-89, etc.).

```
marks = int(input("Enter Marks : "))

if 90 <= marks <= 100:

   print("grade = A")

elif 80 <= marks < 90:

   print("grade = B")

elif 70 <= marks < 80:

   print("grade = C")

elif 60 <= marks < 70:

   print("grade = D")

elif 0 <= marks < 60:

   print("grade = F")

else:

   print ("Invalid marks")
```

 # Output :

```
Enter Marks : 101
Invalid marks

============================
Enter Marks : 96
grade = A

============================
Enter Marks : 88
grade = B

============================
Enter Marks : 74
grade = C

============================
Enter Marks : 55
grade = F

============================
Enter Marks : 63
grade = D
```