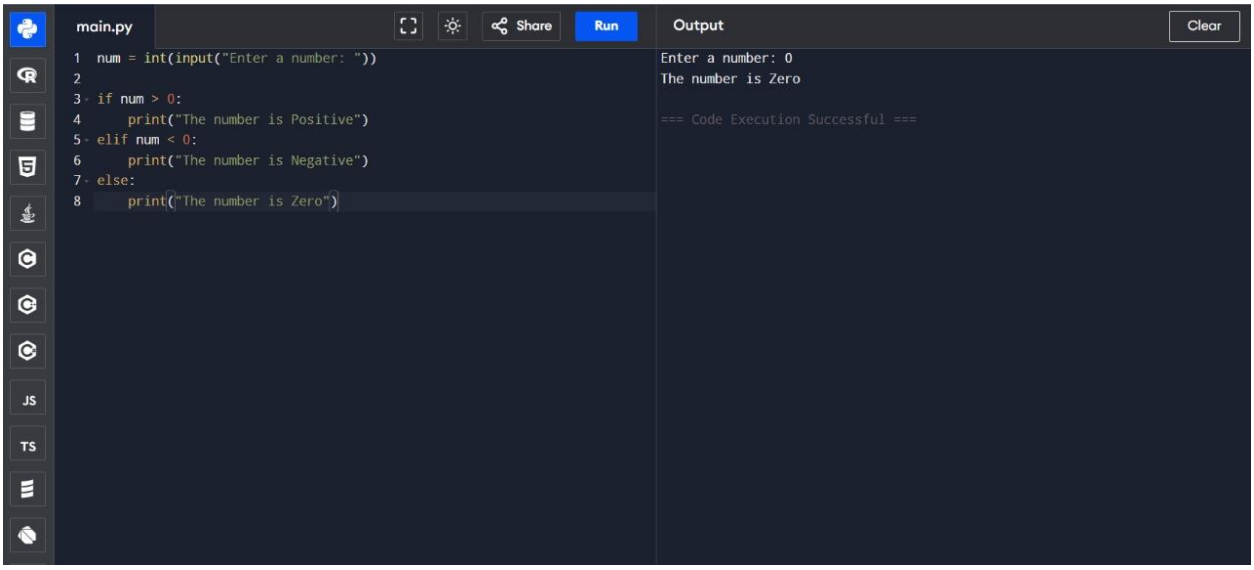
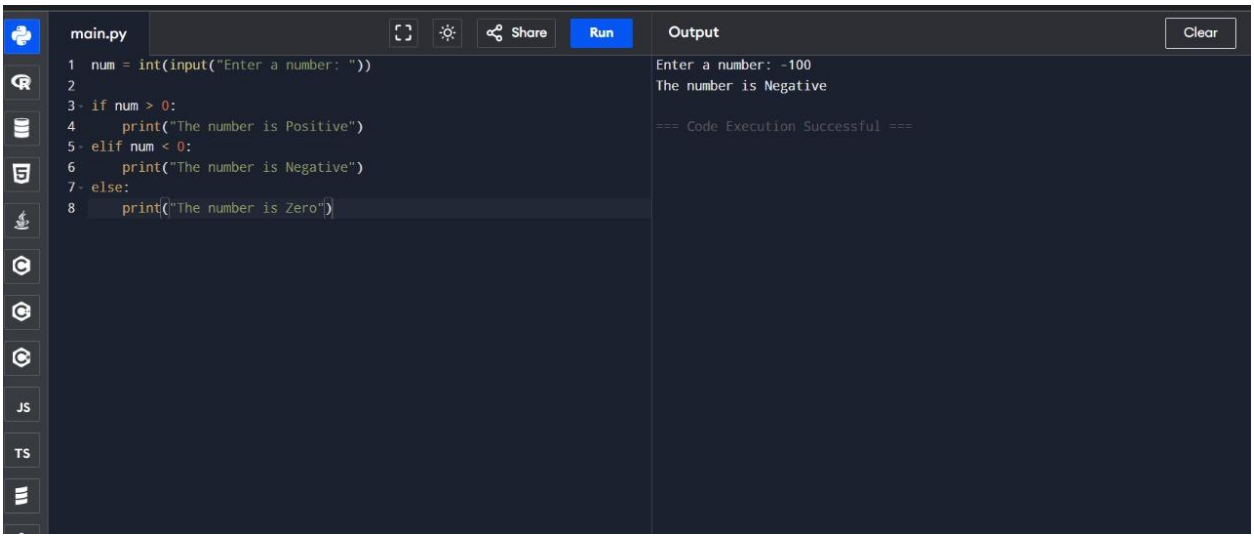
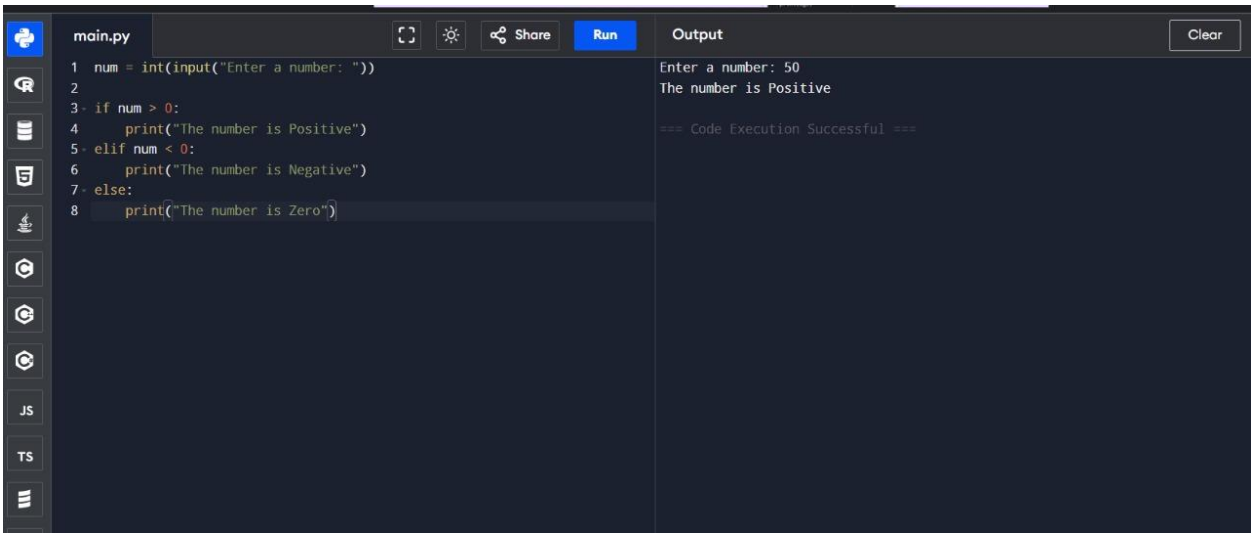
Class Activity / Practice Problems

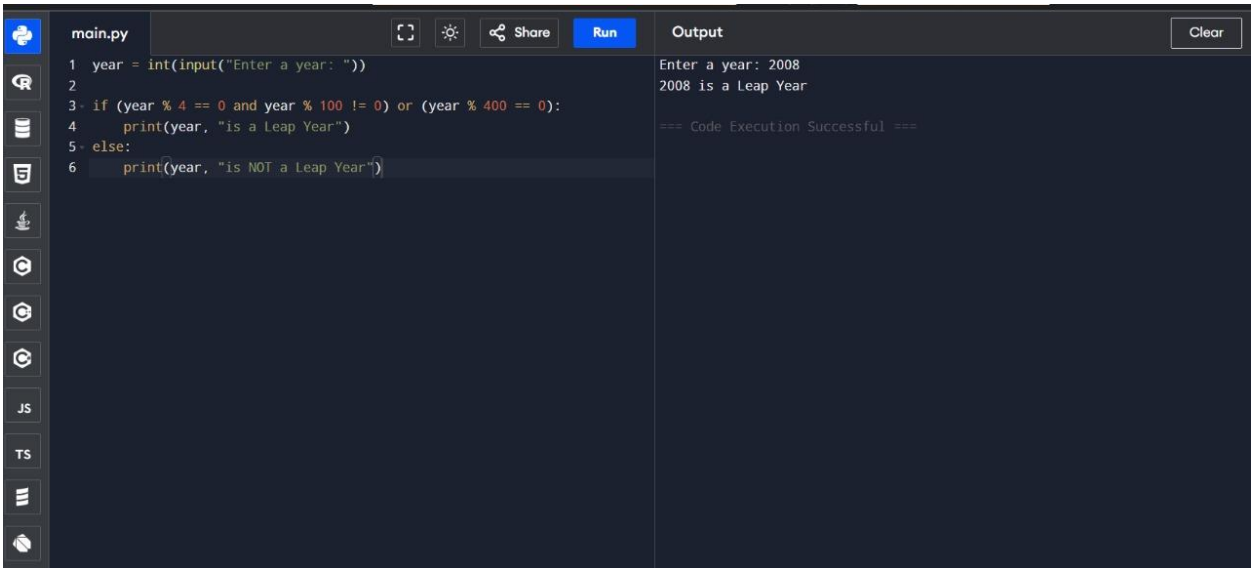
Write a program to check if a number is positive, negative, or zero.







Create a program to determine whether a given year is a leap year.



main.py

Share Run Output Clear

```
year = int(input("Enter a year: "))

if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
    print(year, "is a Leap Year")
else:
    print(year, "is NOT a Leap Year")
```

```
Enter a year: 2005
2005 is NOT a Leap Year

=== Code Execution Successful ===
```

Build a simple calculator that asks for two numbers and an operator (+, -, *, /) and prints the result.

main.py

Share Run Output Clear

```
# Ask the user for two numbers
num1 = float(input("Enter first number: "))
num2 = float(input("Enter second number: "))

# Ask the user for an operator
operator = input("Enter operator (+, -, *, /): ")

# Check which operation to do
if operator == "+":
    print("Result =", num1 + num2)
elif operator == "-":
    print("Result =", num1 - num2)
elif operator == "*":
    print("Result =", num1 * num2)
elif operator == "/":
    if num2 != 0:   # To avoid divide by zero error
        print("Result =", num1 / num2)
    else:
        print("Error: Cannot divide by zero")
else:
    print("Invalid operator")

```

```
Enter first number: 5
Enter second number: 9
Enter operator (+, -, *, /): +
Result = 14.0

=== Code Execution Successful ===
```

main.py

Share Run

```python
# Ask the user for two numbers
num1 = float(input("Enter first number: "))
num2 = float(input("Enter second number: "))

# Ask the user for an operator
operator = input("Enter operator (+, -, *, /): ")

# Check which operation to do
if operator == "+":
    print("Result =", num1 + num2)
elif operator == "-":
    print("Result =", num1 - num2)
elif operator == "*":
    print("Result =", num1 * num2)
elif operator == "/":
    if num2 != 0:   # To avoid divide by zero error
        print("Result =", num1 / num2)
    else:
        print("Error: Cannot divide by zero")
else:
    print("Invalid operator")
```

Output Clear

```
Enter first number: 8
Enter second number: 0
Enter operator (+, -, *, /): -
Result = 8.0

=== Code Execution Successful ===
```

main.py

Share Run

```python
# Ask the user for two numbers
num1 = float(input("Enter first number: "))
num2 = float(input("Enter second number: "))

# Ask the user for an operator
operator = input("Enter operator (+, -, *, /): ")

# Check which operation to do
if operator == "+":
    print("Result =", num1 + num2)
elif operator == "-":
    print("Result =", num1 - num2)
elif operator == "*":
    print("Result =", num1 * num2)
elif operator == "/":
    if num2 != 0:   # To avoid divide by zero error
        print("Result =", num1 / num2)
    else:
        print("Error: Cannot divide by zero")
else:
    print("Invalid operator")
```


Output Clear

```
Enter first number: 3
Enter second number: 4
Enter operator (+, -, *, /): *
Result = 12.0

=== Code Execution Successful ===
```

main.py

Share Run

```python
# Ask the user for two numbers
num1 = float(input("Enter first number: "))
num2 = float(input("Enter second number: "))

# Ask the user for an operator
operator = input("Enter operator (+, -, *, /): ")

# Check which operation to do
if operator == "+":
    print("Result =", num1 + num2)
elif operator == "-":
    print("Result =", num1 - num2)
elif operator == "*":
    print("Result =", num1 * num2)
elif operator == "/":
    if num2 != 0:   # To avoid divide by zero error
        print("Result =", num1 / num2)
    else:
        print("Error: Cannot divide by zero")
else:
    print("Invalid operator")

```

Output

Clear

```
Enter first number: 12
Enter second number: 20
Enter operator (+, -, *, /): /
Result = 0.6

=== Code Execution Successful ===
```

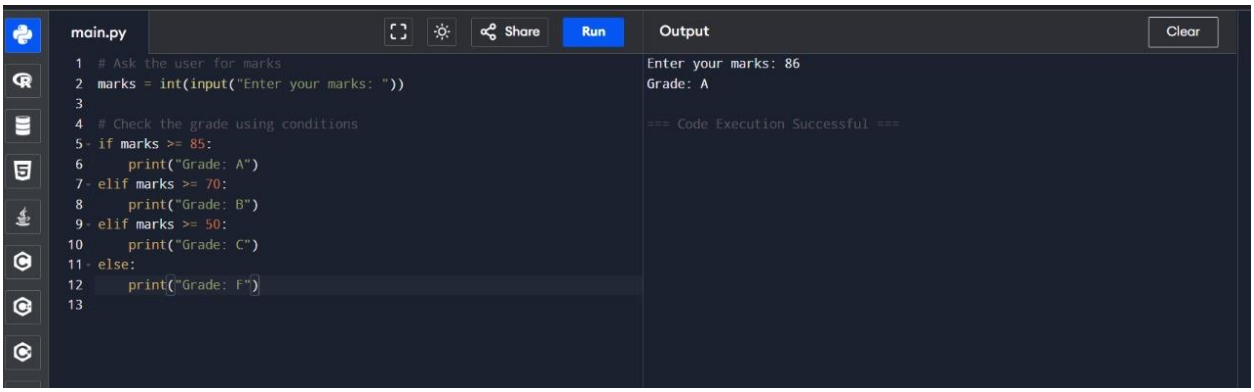
Write a Python program that accepts a student's marks and prints the appropriate grade based on the following criteria:

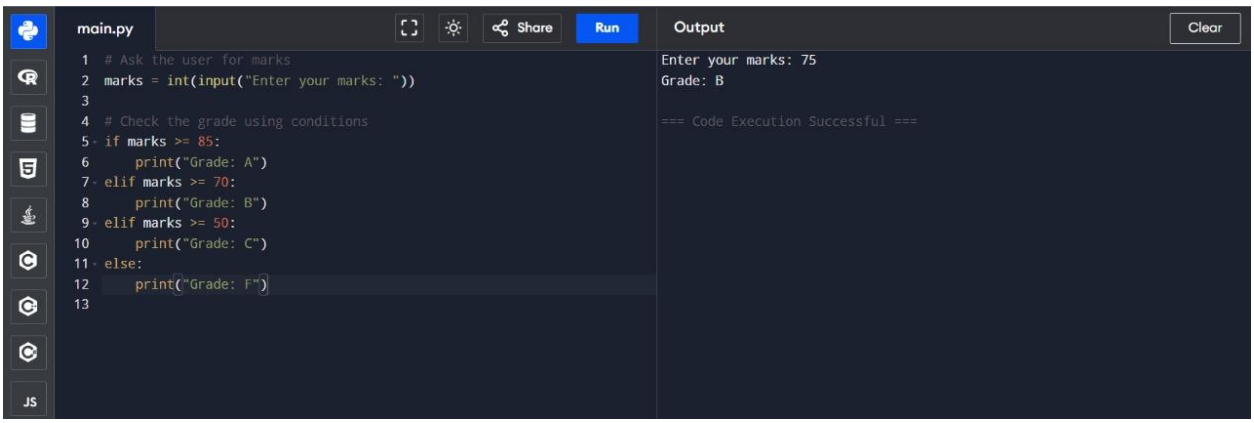
A: 85 and above

B: 70 to 84

C: 50 to 69

F: Below 50





main.py

Share Run

Output Clear

```python
# Ask the user for marks
marks = int(input("Enter your marks: "))

# Check the grade using conditions
if marks >= 85:
    print("Grade: A")
elif marks >= 70:
    print("Grade: B")
elif marks >= 50:
    print("Grade: C")
else:
    print("Grade: F")

```

```
Enter your marks: 55
Grade: C

=== Code Execution Successful ===
```