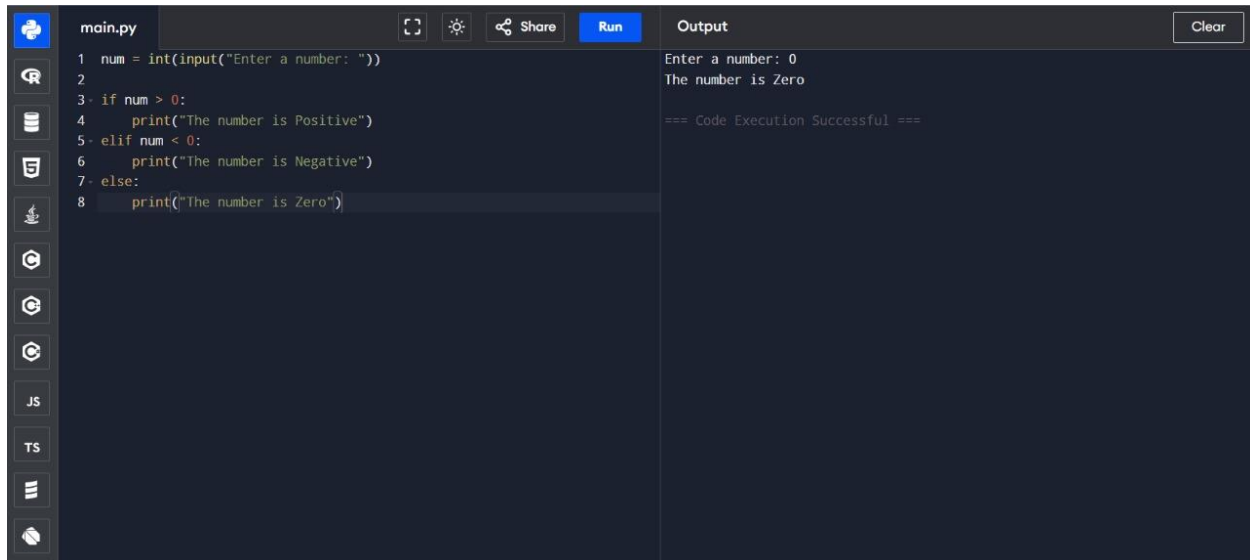


Class Activity / Practice Problems

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

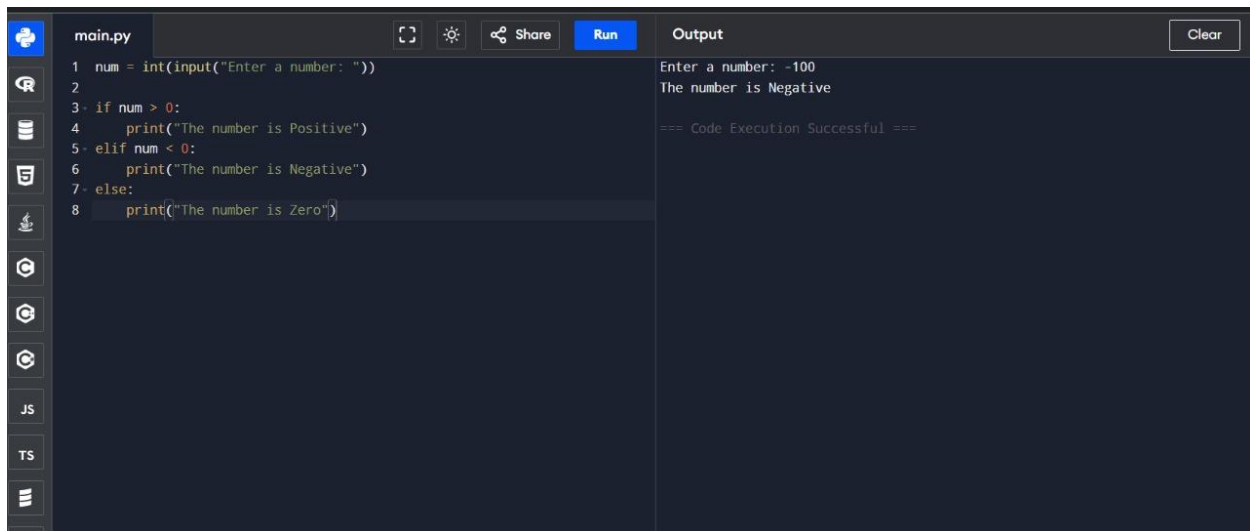


```
main.py
1 num = int(input("Enter a number: "))
2
3 if num > 0:
4     print("The number is Positive")
5 elif num < 0:
6     print("The number is Negative")
7 else:
8     print("The number is Zero")
```

Output

```
Enter a number: 0
The number is Zero

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

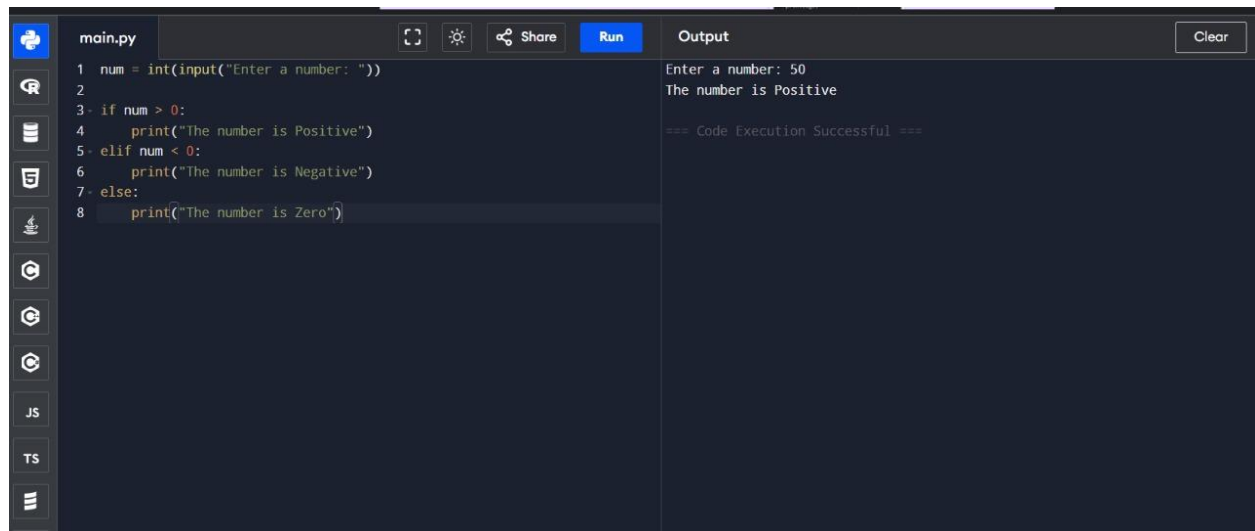


```
main.py
1 num = int(input("Enter a number: "))
2
3 if num > 0:
4     print("The number is Positive")
5 elif num < 0:
6     print("The number is Negative")
7 else:
8     print("The number is Zero")
```

Output

```
Enter a number: -100
The number is Negative

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



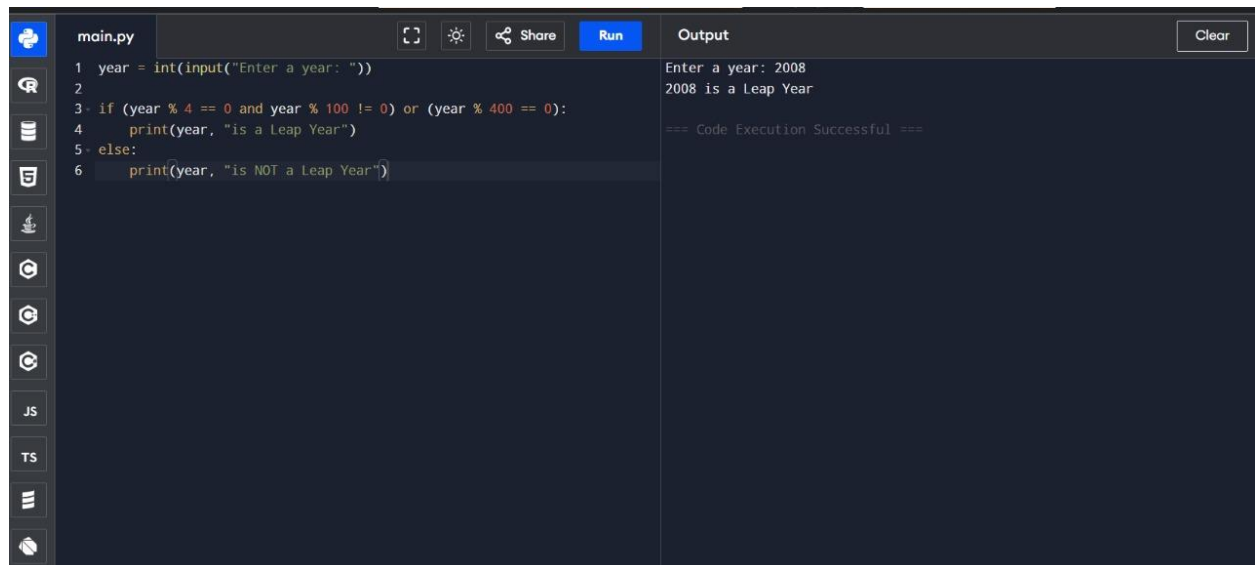
```
main.py
1 num = int(input("Enter a number: "))
2
3 if num > 0:
4     print("The number is Positive")
5 elif num < 0:
6     print("The number is Negative")
7 else:
8     print("The number is Zero")
```

Output

```
Enter a number: 50
The number is Positive

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

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



```
main.py
1 year = int(input("Enter a year: "))
2
3 if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
4     print(year, "is a Leap Year")
5 else:
6     print(year, "is NOT a Leap Year")
```

Output

```
Enter a year: 2008
2008 is a Leap Year

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

main.py	Output
<pre>1 year = int(input("Enter a year: ")) 2 3 if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0): 4 print(year, "is a Leap Year") 5 else: 6 print(year, "is NOT a Leap Year")</pre>	<pre>Enter a year: 2005 2005 is NOT a Leap Year === Code Execution Successful ===</pre>

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

main.py	Output
<pre>1 # Ask the user for two numbers 2 num1 = float(input("Enter first number: ")) 3 num2 = float(input("Enter second number: ")) 4 5 # Ask the user for an operator 6 operator = input("Enter operator (+, -, *, /): ") 7 8 # Check which operation to do 9 if operator == "+": 10 print("Result =", num1 + num2) 11 elif operator == "-": 12 print("Result =", num1 - num2) 13 elif operator == "*": 14 print("Result =", num1 * num2) 15 elif operator == "/": 16 if num2 != 0: # To avoid divide by zero error 17 print("Result =", num1 / num2) 18 else: 19 print("Error: Cannot divide by zero") 20 else: 21 print("Invalid operator") 22</pre>	<pre>Enter first number: 5 Enter second number: 9 Enter operator (+, -, *, /): + Result = 14.0 === Code Execution Successful ===</pre>

main.py

```
1 # Ask the user for two numbers
2 num1 = float(input("Enter first number: "))
3 num2 = float(input("Enter second number: "))
4
5 # Ask the user for an operator
6 operator = input("Enter operator (+, -, *, /): ")
7
8 # Check which operation to do
9- if operator == "+":
10     print("Result =", num1 + num2)
11- elif operator == "-":
12     print("Result =", num1 - num2)
13- elif operator == "*":
14     print("Result =", num1 * num2)
15- elif operator == "/":
16-     if num2 != 0: # To avoid divide by zero error
17         print("Result =", num1 / num2)
18-     else:
19         print("Error: Cannot divide by zero")
20- else:
21     print("Invalid operator")
22
```

Output

Clear

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

=== Code Execution Successful ===

main.py

```
1 # Ask the user for two numbers
2 num1 = float(input("Enter first number: "))
3 num2 = float(input("Enter second number: "))
4
5 # Ask the user for an operator
6 operator = input("Enter operator (+, -, *, /): ")
7
8 # Check which operation to do
9- if operator == "+":
10     print("Result =", num1 + num2)
11- elif operator == "-":
12     print("Result =", num1 - num2)
13- elif operator == "*":
14     print("Result =", num1 * num2)
15- elif operator == "/":
16-     if num2 != 0: # To avoid divide by zero error
17         print("Result =", num1 / num2)
18-     else:
19         print("Error: Cannot divide by zero")
20- else:
21     print("Invalid operator")
22
```

Output

Clear

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

=== Code Execution Successful ===

main.py

Run

Share

Clear

```
1 # Ask the user for two numbers
2 num1 = float(input("Enter first number: "))
3 num2 = float(input("Enter second number: "))
4
5 # Ask the user for an operator
6 operator = input("Enter operator (+, -, *, /): ")
7
8 # Check which operation to do
9- if operator == "+":
10     print("Result =", num1 + num2)
11- elif operator == "-":
12     print("Result =", num1 - num2)
13- elif operator == "*":
14     print("Result =", num1 * num2)
15- elif operator == "/":
16-     if num2 != 0: # To avoid divide by zero error
17         print("Result =", num1 / num2)
18-     else:
19         print("Error: Cannot divide by zero")
20- else:
21     print("Invalid operator")
22
```

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

=== Code Execution Successful ===

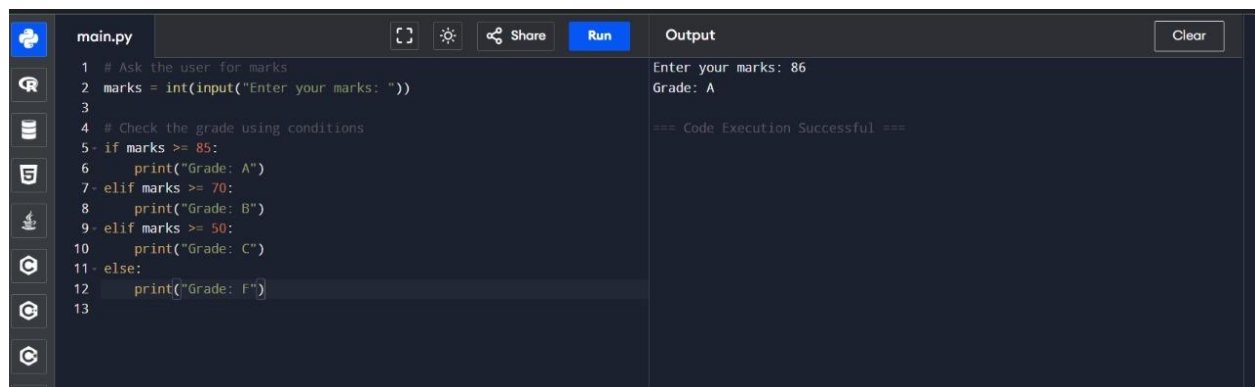
Write a Python program that accepts a student's marks and prints the appropriate grade based on the following criteria:

A: 85 and above

B: 70 to 84

C: 50 to 69

F: Below 50

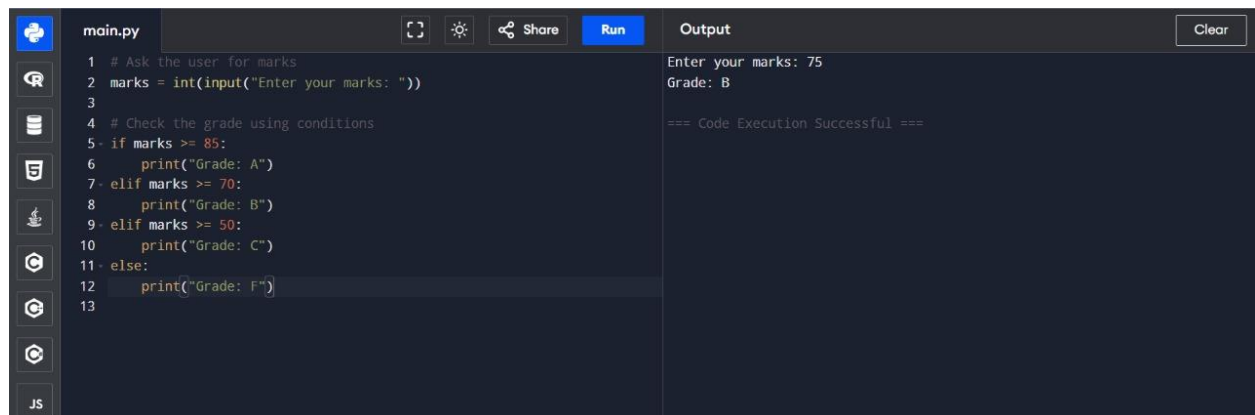


```
main.py
1 # Ask the user for marks
2 marks = int(input("Enter your marks: "))
3
4 # Check the grade using conditions
5 if marks >= 85:
6     print("Grade: A")
7 elif marks >= 70:
8     print("Grade: B")
9 elif marks >= 50:
10    print("Grade: C")
11 else:
12    print("Grade: F")
13
```

Output

```
Enter your marks: 86
Grade: A

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



```
main.py
1 # Ask the user for marks
2 marks = int(input("Enter your marks: "))
3
4 # Check the grade using conditions
5 if marks >= 85:
6     print("Grade: A")
7 elif marks >= 70:
8     print("Grade: B")
9 elif marks >= 50:
10    print("Grade: C")
11 else:
12    print("Grade: F")
13
```

Output

```
Enter your marks: 75
Grade: B

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

```
main.py  
1 # Ask the user for marks  
2 marks = int(input("Enter your marks: "))  
3  
4 # Check the grade using conditions  
5 if marks >= 85:  
6     print("Grade: A")  
7 elif marks >= 70:  
8     print("Grade: B")  
9 elif marks >= 50:  
10    print("Grade: C")  
11 else:  
12    print("Grade: F")  
13
```

Output

Enter your marks: 55
Grade: C

=== Code Execution Successful ===

[illegible]