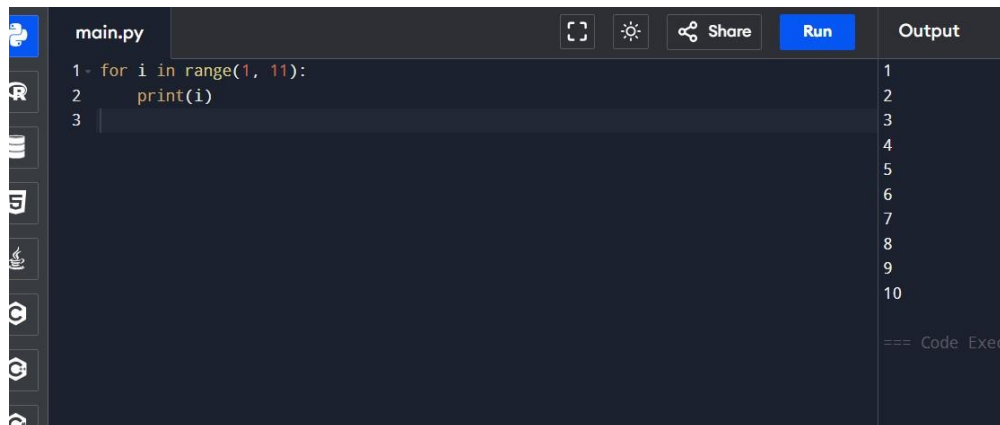


LAB # 02

Q. Print numbers from 1 to 10 using a for loop.

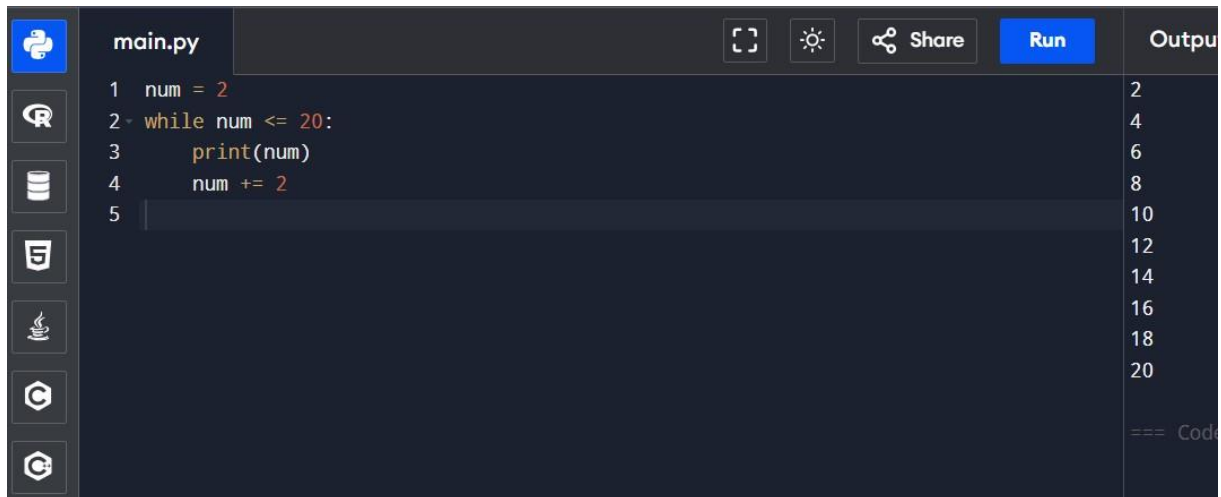


The screenshot shows a Python IDE interface. On the left, a vertical toolbar contains icons for file operations, search, and other IDE functions. The main editor area, titled 'main.py', contains the following Python code:

```
1- for i in range(1, 11):  
2-     print(i)  
3- 
```

On the right side of the IDE, there is a 'Run' button and an 'Output' panel. The 'Output' panel displays the result of the code execution, which is the numbers 1 through 10, each on a new line. Below the output, the text '=== Code Exec' is visible.

Q. Print all even numbers between 1 and 20 using a while loop.

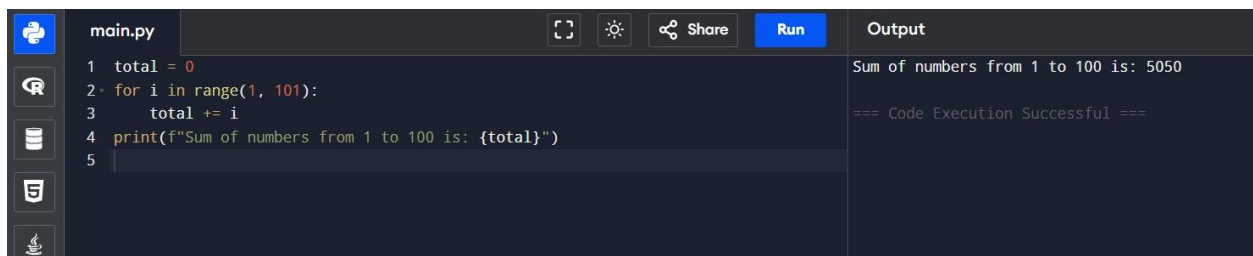


The screenshot shows a Python IDE with a file named `main.py`. The code is as follows:

```
1 num = 2
2 while num <= 20:
3     print(num)
4     num += 2
5
```

The output on the right side of the IDE shows the numbers 2, 4, 6, 8, 10, 12, 14, 16, 18, and 20, each on a new line. Below the output, it says "=== Code Execution Successful ===".

Q. Calculate the sum of numbers from 1 to 100 using a loop.

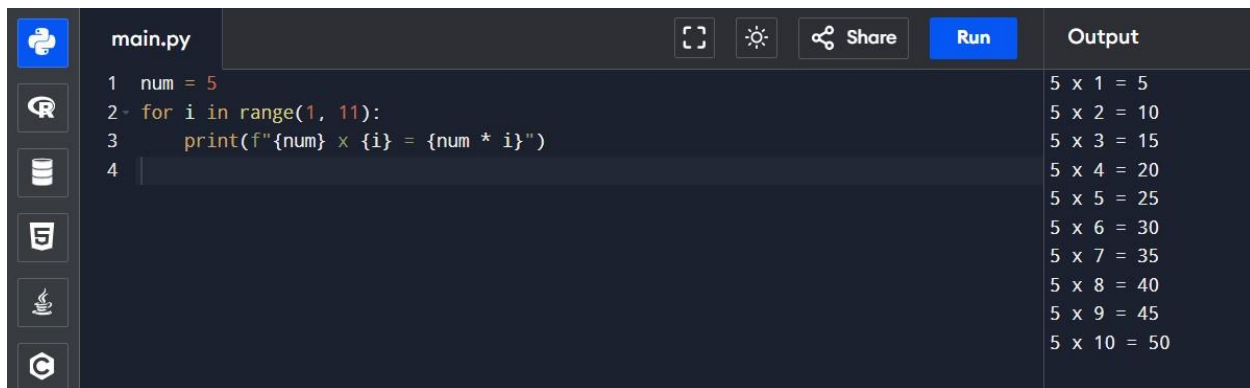


The screenshot shows a Python IDE with a file named `main.py`. The code is as follows:

```
1 total = 0
2 for i in range(1, 101):
3     total += i
4 print(f"Sum of numbers from 1 to 100 is: {total}")
5
```

The output on the right side of the IDE shows "Sum of numbers from 1 to 100 is: 5050". Below the output, it says "=== Code Execution Successful ===".

Q. Print the multiplication table of 5 using a loop.

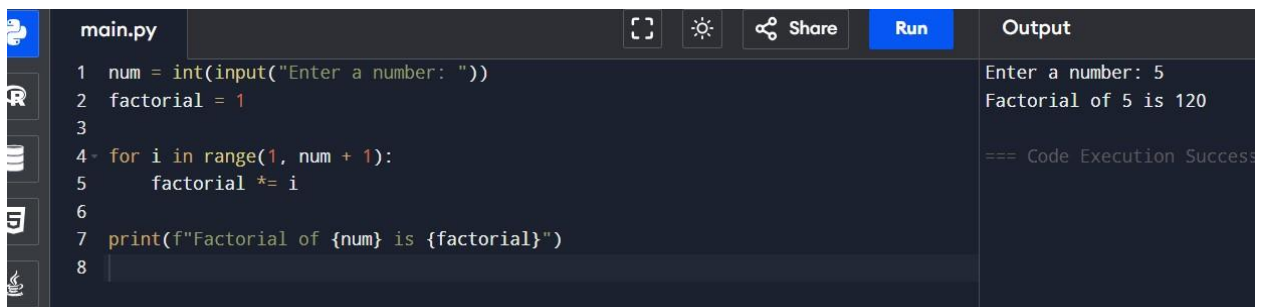


```
main.py
1 num = 5
2 for i in range(1, 11):
3     print(f"{num} x {i} = {num * i}")
4
```

Output

```
5 x 1 = 5
5 x 2 = 10
5 x 3 = 15
5 x 4 = 20
5 x 5 = 25
5 x 6 = 30
5 x 7 = 35
5 x 8 = 40
5 x 9 = 45
5 x 10 = 50
```

Q. Find the factorial of a given number using a for loop.



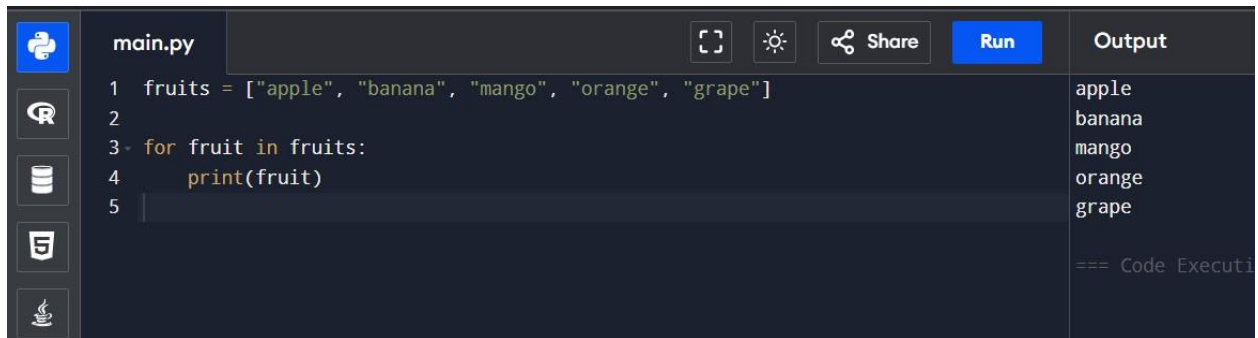
```
main.py
1 num = int(input("Enter a number: "))
2 factorial = 1
3
4 for i in range(1, num + 1):
5     factorial *= i
6
7 print(f"Factorial of {num} is {factorial}")
8
```

Output

```
Enter a number: 5
Factorial of 5 is 120

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

Q. Iterate over a list of fruits and print each item.



The screenshot shows a Python IDE with a file named `main.py`. The code defines a list `fruits` containing "apple", "banana", "mango", "orange", and "grape". A `for` loop iterates over this list, printing each fruit. The output on the right shows the fruits listed vertically. The IDE interface includes a left sidebar with icons for Python, a debugger, a database, a file explorer, and a terminal. The top bar has buttons for full screen, settings, share, and run.

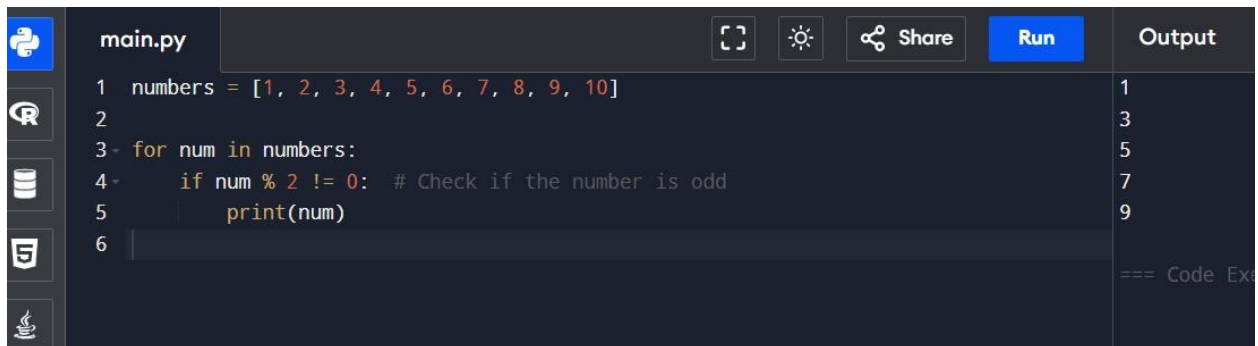
```
main.py
1 fruits = ["apple", "banana", "mango", "orange", "grape"]
2
3 for fruit in fruits:
4     print(fruit)
5
```

Output

```
apple
banana
mango
orange
grape
```

=== Code Executing

Q. Create a list of numbers and print only the odd numbers using a loop.



The screenshot shows a Python IDE with a file named `main.py`. The code defines a list `numbers` containing integers from 1 to 10. A `for` loop iterates over this list, and an `if` statement checks if each number is odd (i.e., `num % 2 != 0`). If the condition is true, the number is printed. The output on the right shows only the odd numbers: 1, 3, 5, 7, and 9. The IDE interface is identical to the first screenshot.

```
main.py
1 numbers = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
2
3 for num in numbers:
4     if num % 2 != 0: # Check if the number is odd
5         print(num)
6
```

Output

```
1
3
5
7
9
```

=== Code Executing