

SCREENSHOTS

A screenshot of a code editor window titled "Simple Calculator". The code defines four arithmetic functions: add, subtract, multiply, and divide. It then enters a loop where it prints a menu of operations (Add, Subtract, Multiply, Divide, Exit) and prompts the user to choose an operation. If the choice is '5' (Exit), it prints "Goodbye!" and breaks the loop. If the choice is '1' (Add), it prints the result of adding num1 and num2. If the choice is '2' (Subtract), it prints the result of subtracting num2 from num1. If the choice is '3' (Multiply), it prints the result of multiplying num1 and num2. If the choice is '4' (Divide), it prints the result of dividing num1 by num2. If the input is not valid, it prints an error message. The code ends with a check for the __name__ variable.

```
def add(x, y):
    return x + y

def subtract(x, y):
    return x - y

def multiply(x, y):
    return x * y

def divide(x, y):
    if y == 0:
        return "Error: Cannot divide by zero"
    return x / y

def main():
    print("Simple Calculator")

    while True:
        print("\n1. Add\n2. Subtract\n3. Multiply\n4. Divide\n5. Exit")
        choice = input("Choose operation: ")

        if choice == '5':
            print("Goodbye!")
            break

        if choice in ['1', '2', '3', '4']:
            try:
                num1 = float(input("First number: "))
                num2 = float(input("Second number: "))

                if choice == '1':
                    print(f"Result: {add(num1, num2)}")
                elif choice == '2':
                    print(f"Result: {subtract(num1, num2)}")
                elif choice == '3':
                    print(f"Result: {multiply(num1, num2)}")
                elif choice == '4':
                    print(f"Result: {divide(num1, num2)}")
            except ValueError:
                print("Invalid input! Please enter numbers.")

        else:
            print("Invalid choice!")

if __name__ == "__main__":
    main()
```

A screenshot of the same code editor window, showing the completed script. The main() function has been moved to the bottom of the file. The code now includes a check for the __name__ variable, which triggers the execution of the main() function when the script is run directly.

```
elif choice == '3':
    print(f"Result: {multiply(num1, num2)}")
else:
    print(f"Result: {divide(num1, num2)}")
except ValueError:
    print("Invalid input! Please enter numbers.")

else:
    print("Invalid choice!")

if __name__ == "__main__":
    main()
```

OUTPUT

A screenshot of the code editor showing the execution output of the calculator script. The terminal pane displays the following interactions:

- The script starts with a menu of operations (1. Add, 2. Subtract, 3. Multiply, 4. Divide, 5. Exit).
- The user chooses operation 1 (Add) and inputs first number 10 and second number 20, resulting in a sum of 30.0.
- The user chooses operation 2 (Subtract) and inputs first number 20 and second number 20, resulting in a difference of -40.0.
- The user chooses operation 3 (Multiply) and inputs first number 10 and second number 100, resulting in a product of 1000.0.
- The user chooses operation 4 (Divide) and inputs first number 20 and second number 5, resulting in a quotient of 4.0.

A screenshot of a terminal window with a dark theme. The window title is "Terminal". The menu bar includes "File", "Edit", "View", "Code", "Text", "Run all", and "Help". The status bar shows "RAM" and "Disk". The main pane displays the following text:

```
First number: 20
Second number: 5
Result: 4.0
...
1. Add
2. Subtract
3. Multiply
4. Divide
5. Exit
Choose operation: 5
Goodbye!
```