In [ ]:
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Python for data analysis Lab 2 IO Files
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In [2]:
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# 1) Exercise
filename = input("Enter the filename: ")

with open(filename, 'w') as file:
    while True:
        line = input("Enter a line (leave empty to finish): ")
        if line == "":
            break
        file.write(line + "\n")

print(f"Data has been written to the file {filename}.")
```

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Data has been written to the file hello_world.txt.
```

In [3]:
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# 2) Exercise
def count_string_in_file(filename, search_string):
    try:
        with open(filename, 'r') as file:
            content = file.read()
            return content.count(search_string)
    except FileNotFoundError:
        return None

filename = input("Enter the filename: ")

search_string = input("Enter the string to search for: ")

occurrences = count_string_in_file(filename, search_string)

if occurrences is not None:
    print(f"The string '{search_string}' appears {occurrences} times in the file '{filename}'.")
```

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The string 'Hello World!' appears 3 times in the file 'hello_world.txt'.
```

In [4]:
```
# Opttion 1 Task 1
def sum_two_integers(input_filename, output_filename):
    try:
        with open(input_filename, 'r') as infile:
            num1 = int(infile.readline().strip())
            num2 = int(infile.readline().strip())

        result = num1 + num2

        with open(output_filename, 'w') as outfile:
            outfile.write(str(result) + '\n')

        print(f"Sum of integers written to {output_filename}.")
    except Exception as e:
        print(f"An error occurred: {e}")

sum_two_integers('input_task1.txt', 'output_task1.txt')
```

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Sum of integers written to output_task1.txt.
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In [5]:
```
# Opttion 1 Task 2
def reverse_string(input_filename, output_filename):
    try:
        with open(input_filename, 'r') as infile:
            text = infile.readline().strip()

        reversed_text = text[::-1]

        with open(output_filename, 'w') as outfile:
            outfile.write(reversed_text + '\n')

        print(f"Reversed string written to {output_filename}.")
    except Exception as e:
        print(f"An error occurred: {e}")

# Example usage
reverse_string('input_task2.txt', 'output_task2.txt')
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Reversed string written to output_task2.txt.
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In [6]:
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# Opttion 2 Task 1
def sum_two_integers_o2(input_filename, output_filename):
    try:
        with open(input_filename, 'r') as infile:
            content = infile.read()
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        numbers = [int(num) for num in content.split()]

        result = sum(numbers)

        with open(output_filename, 'w') as outfile:
            outfile.write(str(result) + '\n')

        print(f"Sum of integers written to {output_filename}.")
    except Exception as e:
        print(f"An error occurred: {e}")


sum_two_integers_o2('input_task1_o2.txt', 'output_task1_o2.txt')
```

```
Sum of integers written to output_task1_o2.txt.
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In [7]:
```
# Opttion 2 Task 2
def reverse_lines_in_file(input_filename, output_filename):
    try:
        with open(input_filename, 'r') as infile:
            lines = infile.readlines()

        reversed_lines = lines[::-1]

        with open(output_filename, 'w') as outfile:
            outfile.writelines(reversed_lines)

        print(f"Reversed lines written to {output_filename}.")
    except Exception as e:
        print(f"An error occurred: {e}")

reverse_lines_in_file('input_task2_o2.txt', 'output_task2_o2.txt')
```

```
Reversed lines written to output_task2_o2.txt.
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In [ ]:
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