```
# Input: Get two numbers from the user
num1 = float(input("Enter the first number: "))
num2 = float(input("Enter the second number: "))


# Process: Add the two numbers
sum = num1 + num2


# Output: Display the sum
print(f"The sum of {num1} and {num2} is {sum}")
```

```
Enter the first number: 12
Enter the second number: 13
The sum of 12.0 and 13.0 is 25.0
```

```
# Program to compare two numbers and determine the greatest and smallest


# Input: Get two numbers from the user
num1 = float(input("Enter the first number: "))
num2 = float(input("Enter the second number: "))


# Process: Compare the two numbers
if num1 > num2:
    print(f"The greatest number is {num1}")
    print(f"The smallest number is {num2}")
elif num1 < num2:
    print(f"The greatest number is {num2}")
    print(f"The smallest number is {num1}")
else:
    print("Both numbers are equal.")
```

```
Enter the first number: 12
Enter the second number: 18
The greatest number is 18.0
The smallest number is 12.0
```

```
# Program to check if a number is Positive, Negative, or Zero


# Input: Get a number from the user
number = float(input("Enter a number: "))


# Process: Check the condition
if number > 0:
    print(f"The number {number} is Positive.")
elif number < 0:
    print(f"The number {number} is Negative.")
else:
    print("The number is Zero.")
```

```
Enter a number: 12
The number 12.0 is Positive.
```

```
# Program to display the first five natural numbers


# Process: Use a for loop to iterate through numbers 1 to 5
print("The first five natural numbers are:")
for number in range(1, 6):
    print(number)
```

```
# Dataset
n = [1, 12, 13, 14, 15]


# Process: Use a for loop to iterate through the dataset
print("The numbers in the dataset are:")
for number in n:
    print(number)
```

```
The numbers in the dataset are:
1
12
13
14
15
```

```
# Dataset
color = ['red', 'blue', 'green']


# Process: Use a for loop to iterate through the dataset
print("The colors in the dataset are:")
for c in color:
    print(c)
```

```
The colors in the dataset are:
red
blue
green
```

```
# Function to add two numbers
def add_numbers(a, b):
    """This function adds two numbers and returns the sum."""
    return a + b


# Example usage
num1 = 10
num2 = 20
result = add_numbers(num1, num2)
print(f"The sum of {num1} and {num2} is {result}")
```

```
The sum of 10 and 20 is 30
```

```
import pandas as pd
# creating a dataset
data = pd.DataFrame({
    'ID': [1,2,3],
    'Name' : ['Ram', 'Hari', 'Bishnu'],
    'Age': [25,35, 40]
})
print(data)
```

```
    ID    Name  Age
0   1     Ram   25
1   2    Hari   35
2   3  Bishnu   40
```

```
import pandas as pd
# Load a dataset from a CSV file
data = pd.read_csv("/cleaned_data.csv")
print("Data loaded from the CSV file:")
print(data)
```

```
Data loaded from the CSV file:
  CustomerID   Name    Age      JoinDate  MonthlyCharges Churn
0       C001   John   25.0     12/1/2024           29.85    No
1       C002  Alice   34.0    11/15/2023           56.95   Yes
```

2	C003	BOB	17.0	6/1/2022	4000.00	No
3	C004	BOBY	29.0	6/1/2022	75.50	No
4	C004	Eve	29.0	12/5/2024	75.50	No
5	C005	eve	120.0	invalid_date	45.99	Yes
6	C006	Steve	-5.0	NaN	60.00	No
7	C007	Ramu	NaN	1/1/2024	49.99	NaN
8	C008	mary	220.0	3/5/2023	-30.00	Yes
9	C008	Bob	30.0	3/5/2023	55.00	No

```
import pandas as pd


# Assuming you already have a DataFrame 'df'

df = pd.DataFrame({
    'ID': [1,2,3],
    'Name' : ['Ram', 'Hari', 'Bishnu'],
    'Age': [25,35, 40]
})
# a) Display the description of the dataset
print(df.describe())


# b) Display the shape of the dataframe
print(df.shape)


# c) Display the information of the dataframe
print(df.info())


# d) Only the first five rows
print(df.head())


# e) Only the last five rows
print(df.tail())


# f) Only the rows from index 3 to 5
print(df.iloc[3:6])


# g) Only the column “Age”
print(df['Age'])
```

```
         ID        Age
count  3.0   3.000000
mean   2.0  33.333333
std    1.0   7.637626
min    1.0  25.000000
25%    1.5  30.000000
50%    2.0  35.000000
75%    2.5  37.500000
max    3.0  40.000000
(3, 3)
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 3 entries, 0 to 2
Data columns (total 3 columns):
 #   Column  Non-Null Count  Dtype
---  ------  --------------  -----
 0   ID      3 non-null      int64
 1   Name    3 non-null      object
 2   Age     3 non-null      int64
dtypes: int64(2), object(1)
memory usage: 204.0+ bytes
None
   ID    Name  Age
0   1     Ram   25
1   2    Hari   35
2   3  Bishnu   40
   ID    Name  Age
0   1     Ram   25
1   2    Hari   35
2   3  Bishnu   40
```

```
Empty DataFrame
Columns: [ID, Name, Age]
Index: []
0    25
1    35
2    40
Name: Age, dtype: int64
```