Write a program that includes: Input handling to accept user choices and temperature values. A function for each type of conversion: Celsius to Fahrenheit: F=C×95+32F. Fahrenheit to Celsius: C=(F−32)×59C. Output statements to display the results. Test the program with the following inputs: Convert 25°C to Fahrenheit. Convert 77°F to Celsius.

Code:

```
[4]: def celsius_to_fahrenheit(celsius):
         return celsius * 9 / 5 + 32
     def fahrenheit_to_celsius(fahrenheit):
         return (fahrenheit - 32) * 5 / 9

     print("Temperature Conversion Program")
     print("1) Celsius to Fahrenheit")
     print("2) Fahrenheit to Celsius")
     choice = input("Input your choice (1 or 2): ")
     if choice == '1':
         celsius = float(input("Enter temperature in Celsius: "))
         fahrenheit = celsius_to_fahrenheit(celsius)
         print(f"{celsius}°C = {fahrenheit:.2f}°F.")
     elif choice == '2':
         fahrenheit = float(input("Enter temperature in Fahrenheit: "))
         celsius = fahrenheit_to_celsius(fahrenheit)
         print(f"{fahrenheit}°F = {celsius:.2f}°C.")
     else:
         print("Invalid choice.")
```

Output:

```
Temperature Conversion Program
1) Celsius to Fahrenheit
2) Fahrenheit to Celsius
Input your choice (1 or 2):  1
Enter temperature in Celsius:  25
25.0°C = 77.00°F.
```

```
Temperature Conversion Program
1) Celsius to Fahrenheit
2) Fahrenheit to Celsius
Input your choice (1 or 2):  2
Enter temperature in Fahrenheit:  77
77.0°F = 25.00°C.
```

Explanation:

Requirement:

- Celsius_to_fahrenheit(celsius): Converts Celsius to Fahrenheit.
- Fahrenheit_to_celsius(fahrenheit): Converts Fahrenheit to Celsius.

Program Working:

- First of all "Temperature Conversion Program" is printed as it is.
- Then it asks to choose between two choices (Celsius to Fahrenheit or Fahrenheit to Celsius)
- After choosing, it asks to input the temperature value which we want to convert.
- At last, it calculates the converted temperature using formula and prints the final result.