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In [1]: def celsius_to_fahrenheit(celsius):
            return (celsius *9/5) + 32
        def fahrenheit_to_celsius(fahrenheit):
            return (fahrenheit - 32) * 5/9
        def meters_to_feet(meters):
            return meters * 3.28084
        def feet_to_meters(feet):
            return feet / 3.28084
        def kilograms_to_pounds(kilograms):
            return kilograms * 2.20462
        def pounds_to_kilograms(pounds):
            return pounds / 2.20462
        def unit_converter():
            print("Welcome to the Unit Converter!")
            while True:
                print("\nSelect an option:")
                print("1. Temperature Converter (Celsius to Fahrenheit / Fahrenheit to C
                print("2. Length Converter (Meters to Feet / Feet to Meters)")
                print("3. Weight Converter (Kilograms to Pounds / Pounds to Kilograms)")
                print("4. Quit")
                choice = input("Enter the number of your choice: ")
                if choice == '1':
                    value = input("Enter the temperature value: ")
                    try:
                        value = float(value)
                         source_unit = input("Enter source unit (C for Celsius / F for Fa
                        if source_unit == 'C':
                             result = celsius_to_fahrenheit(value)
                             target_unit = 'Fahrenheit'
                        elif source unit == 'F':
                             result = fahrenheit_to_celsius(value)
                             target_unit = 'Celsius'
                         else:
                             print("Unsupported unit. Please enter C or F.")
                             continue
                         print(f"{value} {source_unit} is {result} {target_unit}")
                    except ValueError:
                        print("Invalid input. Please enter a numeric value.")
                elif choice == '2':
                    value = input("Enter the length value: ")
                    try:
                        value = float(value)
                         source_unit = input("Enter source unit (M for Meters / F for Fee
                        if source_unit == 'M':
                             result = meters to feet(value)
                             target_unit = 'Feet'
                         elif source unit == 'F':
                             result = feet_to_meters(value)
                             target_unit = 'Meters'
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print("Unsupported unit. Please enter M or F.")
                    continue
                print(f"{value} {source_unit} is {result} {target_unit}")
            except ValueError:
                print("Invalid input. Please enter a numeric value.")
        elif choice == '3':
            value = input("Enter the weight value: ")
            try:
                value = float(value)
                source_unit = input("Enter source unit (K for Kilograms / P for
                if source_unit == 'K':
                    result = kilograms_to_pounds(value)
                    target_unit = 'Pounds'
                elif source_unit == 'P':
                    result = pounds_to_kilograms(value)
                    target_unit = 'Kilograms'
                    print("Unsupported unit. Please enter K or P.")
                    continue
                print(f"{value} {source_unit} is {result} {target_unit}")
            except ValueError:
                print("Invalid input. Please enter a numeric value.")
        elif choice == '4':
            print("Thank you for using the Unit Converter. Goodbye!")
            break
        else:
            print("Invalid choice. Please select a valid option (1, 2, 3, or 4).
if __name__ == "__main__":
   unit_converter()
```

```
Select an option:
1. Temperature Converter (Celsius to Fahrenheit / Fahrenheit to Celsius)
2. Length Converter (Meters to Feet / Feet to Meters)
3. Weight Converter (Kilograms to Pounds / Pounds to Kilograms)
4. Quit
Enter the number of your choice: 1
Enter the temperature value: 1
Enter source unit (C for Celsius / F for Fahrenheit): C
1.0 C is 33.8 Fahrenheit
Select an option:
1. Temperature Converter (Celsius to Fahrenheit / Fahrenheit to Celsius)
Length Converter (Meters to Feet / Feet to Meters)
3. Weight Converter (Kilograms to Pounds / Pounds to Kilograms)
4. Quit
Enter the number of your choice: 2
Enter the length value: 1
Enter source unit (M for Meters / F for Feet): M
1.0 M is 3.28084 Feet
Select an option:
1. Temperature Converter (Celsius to Fahrenheit / Fahrenheit to Celsius)
2. Length Converter (Meters to Feet / Feet to Meters)
3. Weight Converter (Kilograms to Pounds / Pounds to Kilograms)
4. Quit
Enter the number of your choice: 3
Enter the weight value: 1
Enter source unit (K for Kilograms / P for Pounds): K
1.0 K is 2.20462 Pounds
Select an option:
1. Temperature Converter (Celsius to Fahrenheit / Fahrenheit to Celsius)
2. Length Converter (Meters to Feet / Feet to Meters)
3. Weight Converter (Kilograms to Pounds / Pounds to Kilograms)
4. Quit
Enter the number of your choice: 1
Enter the temperature value: 1
Enter source unit (C for Celsius / F for Fahrenheit): F
1.0 F is -17.22222222222 Celsius
Select an option:
1. Temperature Converter (Celsius to Fahrenheit / Fahrenheit to Celsius)
2. Length Converter (Meters to Feet / Feet to Meters)
3. Weight Converter (Kilograms to Pounds / Pounds to Kilograms)
4. Quit
Enter the number of your choice: 2
Enter the length value: 1
Enter source unit (M for Meters / F for Feet): F
1.0 F is 0.3047999902464003 Meters
Select an option:
1. Temperature Converter (Celsius to Fahrenheit / Fahrenheit to Celsius)
2. Length Converter (Meters to Feet / Feet to Meters)
3. Weight Converter (Kilograms to Pounds / Pounds to Kilograms)
4. Quit
Enter the number of your choice: 3
Enter the weight value: 1
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Enter source unit (K for Kilograms / P for Pounds): P

1.0 P is 0.45359290943563974 Kilograms

Select an option:

- 1. Temperature Converter (Celsius to Fahrenheit / Fahrenheit to Celsius)
- 2. Length Converter (Meters to Feet / Feet to Meters)
- 3. Weight Converter (Kilograms to Pounds / Pounds to Kilograms)
- 4. Quit

Enter the number of your choice: 4

Thank you for using the Unit Converter. Goodbye!

In []: