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Problem: Create a program that takes ten consecutive days of Celsius temperatures and displays them as Fahrenheit

1. **Pseudocode**

```
Initialize the array variables for Celsius and Fahrenheit

Initialize variables for warm, hot, and cold day counters

Display opening message to user
Prompt user to enter temperatures until limit has reached
while loop condition

Print all ten temperatures to screen

Loop through Celsius temps and convert to Fahrenheit
    81 degrees or higher is a hot day
    Between 62 and 80 degrees is a warm day
    Less than 62 would be a cold day

Print the Fahrenheit temperatures to screen

Display the number of hot, warm, and cold days
```

2. **Actual code**

```
c_temps = []
f_temps = []

warmDays = 0
hotDays = 0
coldDays = 0

print("You will be entering the temperatures for the next 10 days in Celsius.")

while len(c_temps) < 10 :
   print("Please enter a temperature in Celsius:")
   c = int(input())
   c_temps.append(c)

print("The temperatures in Celsius are:\n",c_temps)
```

```
for c in c_temps:
    f = int((c * 1.8) + 32)
    f_temps.append(f)
    if f >= 81 :
        hotDays += 1
    elif f >= 62 and f <= 80 :
        warmDays += 1
    elif f < 62 :
        coldDays += 1

print("The temperatures in Fahrenheit are:\n",f_temps)

print("Based on these temperatures, there will be:\n",hotDays,"hot
days\n",warmDays,"warm days\n",coldDays,"cold days.")
```

3. **Test Cases**
    a. Test Case 1
        i. Input: Celsius Temps = 33, 40, 31, 27, 24, 19, 12, 18, 24, 23
        ii. Expected output: 3 hot days, 6 warm days, 1 cold day
        iii. Actual output: (converted to integer)

```
You will be entering the temperatures for the next 10 days in Celsius.
Please enter a temperature in Celsius:
33
Please enter a temperature in Celsius:
40
Please enter a temperature in Celsius:
31
Please enter a temperature in Celsius:
27
Please enter a temperature in Celsius:
24
Please enter a temperature in Celsius:
19
Please enter a temperature in Celsius:
12
Please enter a temperature in Celsius:
18
Please enter a temperature in Celsius:
24
Please enter a temperature in Celsius:
23
The temperatures in Celsius are:
 [33, 40, 31, 27, 24, 19, 12, 18, 24, 23]
The temperatures in Fahrenheit are:
 [91, 104, 87, 80, 75, 66, 53, 64, 75, 73]
Based on these temperatures, there will be:
 3 hot days
 6 warm days
 1 cold days.
```

b. Test Case 2
    i. Input: Celsius Temps = 15, 16, 24, 23, 12, 9, 19, 21, 26, 20
    ii. Expected output: 0 hot days, 6 warm days, 4 cold days
    iii. Actual output: (converted to integer)

```
You will be entering the temperatures for the next 10 days in Celsius.
Please enter a temperature in Celsius:
15
Please enter a temperature in Celsius:
16
Please enter a temperature in Celsius:
24
Please enter a temperature in Celsius:
23
Please enter a temperature in Celsius:
12
Please enter a temperature in Celsius:
9
Please enter a temperature in Celsius:
19
Please enter a temperature in Celsius:
21
Please enter a temperature in Celsius:
26
Please enter a temperature in Celsius:
20
The temperatures in Celsius are:
 [15, 16, 24, 23, 12, 9, 19, 21, 26, 20]
The temperatures in Fahrenheit are:
 [59, 60, 75, 73, 53, 48, 66, 69, 78, 68]
Based on these temperatures, there will be:
 0 hot days
 6 warm days
 4 cold days.
```