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# temperatures.py
# @author: Put Your Name Here
# Created July 11, 2023
# This script tracks temperatures over a number of days chosen by the user.
# We can then calculate descriptive statistics (min, max, average) for
# the temperatures entered.


num_days = int(input('How many days do you want to track temperatures?'))

# initialize the lists specifying data type and size
dates = [' '] * num_days
lows = [0.0] * num_days
highs = [0.0] * num_days
average_temps = [0.0] * num_days

# The commented lines below were used to verify the size and contents of
# the lists so far, and we see how to use type to determine if we have a list
# or a simple variable like an int, float, or string.
# print(dates)
# print(lows)
# print(highs)
# print(average_temps)
# print(type(dates))
# print(type(num_days))

# loop that loads the data into the lists. The user enters the data except
# for average_temps and we calculate that.
for i in range(0, num_days, 1):  # for i in range(num_days):
    dates[i] = input('Please enter the date (ex. Jul. 9)')
    print('Please enter the low for ', dates[i])
    lows[i] = float(input())
    print('Please enter the high for ', dates[i])
    highs[i] = float(input())
    average_temps[i] = (lows[i] + highs[i]) / 2

# uncomment the lines below if you want to see the lists with data so far.
# print(dates)
# print(lows)
# print(highs)
# print(average_temps)

# for loop to print each item in the lists in a columnar format
print('-' * 51)
print(f'{"Dates":8} {"Lows":>10s} {"Highs":>10s} {"Average Temps":>20s}')
for i in range(0, len(dates), 1):
    print(f'{dates[i]:8} {lows[i]:10.1f} {highs[i]:10.1f}
{average_temps[i]:20.1f}')
print('-' * 51)

# code block for finding lowest low temp and the date it occurred on
lowest_low = min(lows)  # min works for single dim list
lowest_low_date = ' '
for i in range(0, len(lows), 1):
    if lows[i] == lowest_low:
        lowest_low_date = dates[i]
print('-' * 51)
print(f'{"Lowest Low Temp":30} {lowest_low:20,.1f}')
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58 print(f'{"Lowest Low Date":30} {lowest_low_date:>20s}')
59
60 # code block for finding highest high temp and the date it occurred on
61 highest_high = max(highs)
62 highest_high_date = ' '
63 for i in range(0, len(highs), 1):
64     if highs[i] == highest_high:
65         highest_high_date = dates[i]
66
67 print('-' * 51)
68 print(f'{"Highest High Temp":30} {highest_high:20,.1f}')
69 print(f'{"Highest High Date":30} {highest_high_date:>20s}')
70
71 # calculating the average of the average_temps
72 sum_average_temps = sum(average_temps)  # works on single dim lists
73 average_average_temps = sum_average_temps / len(average_temps)
74 # this would work too in only 1 line of code
75 # average_average_temps = sum(average_temps) / len(average_temps)
76
77 print('-' * 51)
78 print(f'{"Average of Average Temps":30} {average_average_temps:20,.1f}')
79 print('-' * 51)
```