

Programming Assignment: Weather Analyzer

Problem Statement:

Write a program that asks the user for current outside temperature, and prints a report.

Specifically,

1. It asks the user to enter temperature units, either Fahrenheit or Celsius. Valid inputs: F/f/C/c.
2. If user enters an invalid input
 - Prints that input was invalid
3. Else
 - It asks the user to enter the temperature.
 - Based on the units entered at step 1, if needed, converts the temperature to Fahrenheit using following formula:

$$\text{Fahrenheit} = \text{Celsius} * 9/5 + 32$$

- Prints the temperature in Fahrenheit.
- Prints the weather analysis using following policy:
 1. If temperature in Fahrenheit is higher than 80° F, prints “It is too hot outside.”
 2. Else if it is lower than 60°F, prints “It is chilly outside.”
 3. Otherwise, prints “It is very pleasant outside.”

Notes:

- Assume that user enters integer values for the temperature.
- Remember to use “” for string literals.
- You should use the Logical operators (and / or / not) to combine multiple comparisons.
- Choose the if-statement structure carefully.
- You can use lower() and upper() functions defined for strings to help with input validation.

Sample Runs:

Invalid input case:

```
Python 3.6.3 Shell
File Edit Shell Debug Options Window Help
Python 3.6.3 (v3.6.3:2c5fed8, Oct 3 2017, 18:11:49) [MSC v.1900 64 bit (AMD64)]
on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\code\Python\Playground\weather-analyzer.py =====
Welcome to the Weather Analyzer

Please enter the units (Enter F for Fahrenheit/ C for Celsius): T
Invalid units entered. Exiting.
>>>
```

Ln: 10 Col: 4

Valid input case with Celsius input:

```
Python 3.6.3 Shell
File Edit Shell Debug Options Window Help
>>>
===== RESTART: C:\code\Python\Playground\weather-analyzer.py =====
Welcome to the Weather Analyzer

Please enter the units (Enter F for Fahrenheit/ C for Celsius): c
Please enter the outside temperature: 25

It is 77.0 degrees outside
It is very pleasant outside.
>>> |
```

Ln: 20 Col: 4

Valid input case with Fahrenheit input:

```
Python 3.6.3 Shell
File Edit Shell Debug Options Window Help
>>>
===== RESTART: C:\code\Python\Playground\weather-analyzer.py =====
Welcome to the Weather Analyzer

Please enter the units (Enter F for Fahrenheit/ C for Celsius): F
Please enter the outside temperature: 88

It is 88 degrees outside
It is too hot outside
>>> |
```

Ln: 30 Col: 4