

Lab 8-1 – Temperature Converter

Goals

- Familiarity with if and if/else statements
- Familiarity with loops (while/for)
- Learn how to write and use functions

Setup

- In PyCharm, create a new project or open an existing one (such as Labs)
- Create a new Python file using the following naming convention:
ITP115_L8_1_LastName_FirstName
(replace *LastName* with your last/family name and *FirstName* with your first name)
- Your new file must begin with comments in the following format (replace the name and email with your actual information):

```
# Name, USC email  
# ITP 115, Spring 2020  
# Lab 8-1
```

Requirements

Your program must perform the following:

- You will write a program that will allow the user to convert between Celsius and Fahrenheit
- Write a function called **temperatureConverter** that converts Celsius to Fahrenheit, and Fahrenheit to Celsius
 - Parameters
 - **conversionType** is 1 for F->C, and 2 for C->F
 - **inputTemperature** is the desired input temperature as int
 - Returns: converted temperature
 - Formula for converting F->C: $(F - 32) * 5 / 9$
 - Formula for converting C->F: $(C * 9/5) + 32$
 - If **conversionType** is an invalid choice, display an error message and return 0
- Write a function called **wantsToContinue** that asks the user if they want to continue, and then returns True or False
 - Parameters

- none
- Returns: **True** if user entered **Y**, **False** if user entered **N**
- Function should include a while loop so continues asking user until they enter **Y** or **N**
- Write a function called **main** that uses the two functions you have created (see output)

Sample Output

Welcome to the Temperature Converter 1.0

Enter 1 for F->C, or 2 for C->F: 1

Enter input temperature: 212

The converted temperature is 100

Do you want to continue (y/n)? y

Welcome to the Temperature Converter 1.0

Enter 1 for F->C, or 2 for C->F: 6

Enter input temperature: 8

Invalid conversion code

The converted temperature is 0

Do you want to continue (y/n)? x

Do you want to continue (y/n)? n

Deliverables and Submission Instructions

- Create a zip file containing your Python code. This cannot be done within PyCharm. Find the file or folder on your computer and compress it.
 - a. Windows:
 1. Using File Explorer, select your lab file
 2. Right click
 3. Send to ->
 4. Compressed (zipped) folder
 - b. Mac OSX:
 1. Using Finder, select your lab file
 2. Right click
 3. Compress "*FileName*"
- Upload the zip file to your Blackboard section:
 1. On Blackboard, click on the Labs item in the course menu on the left.
 2. Click on the specific item for this assignment (starts with L and a number).
 3. Click on the Browse My Computer button and select your zip file.
 4. Click the Submit button.