

Notes - Wednesday 1/6/21 - Backup of the Temperature Converter Code

1/6/21: My first Python Code. It converts temperatures from F to C and C to F.

Huge thanks for @Tokugero and @Leeoku for helping me. And Girlshark for the inspiration

Code with comments

```
# Instantiate initial true flag to enter loop
run_loop = True
# Set global variable to count
retry = 0
# Runs code while retry is under 3
while retry < 3:

    # While set to go
    while run_loop:
        # Try to capture a float at input time so we don't have to parse it later
        try:
            temp = (float(input("Enter temperature = ")))
        except Exception:
            # Exception catches all errors
            # more info here: https://docs.python.org/3/library/exceptions.html
            print("Input isn't a temperature; try again. Max 3 attempts. Attempts:",retry+1)
            retry += 1
            # If we can't establish a float for the first input, we'll simply skip the rest of this iteration and never set
            # the run_loop flag to false, allowing loop to continue
            # Print is setup so it tells me how many attempts I'm at and shows the count
            break
        # Ends the program if I guess too much

    # Instantiate a sub loop
```

```
run_loop_sub = True
```

```
while run_loop_sub:
```

```
    try:
```

```
        unit = str(input("Enter C or F (for Celsius or Farhenheit) = "))
```

```
    except Exception:
```

```
        print("Input needs to be c/C or f/F")
```

```
        # Harder to hit this since "" is a string in input, but if it fails for whatever reason
```

```
        # just try again
```

```
        continue
```

```
if unit.lower() == "c":
```

```
    fahrenheit = (temp * 9/5) + 32
```

```
    print(f'{round(fahrenheit,2)} F')
```

```
    print('You know the temp now!')
```

```
    # Completion condition met, set loop flag to false to exit loop after this iteration
```

```
    run_loop_sub = False
```

```
elif unit.lower() == "f":
```

```
    celsius = (temp - 32) * 5/9
```

```
    print(f'{round(celsius,2)} C')
```

```
    print('You know the temp now!')
```

```
    # Completion condition met, set loop flag to false to exit loop after this iteration
```

```
    run_loop_sub= False
```

```
else:
```

```
    print("You need to enter either c/C or f/F")
```

```
    # There is no satisfactory completion here, so don't set the close flag
```

```
    # If we make it here, that means that the sub while loop was satisfied, and there is no further exceptions  
to
```

```
    # skip this flag; we can probably end the loop
```

```
    run_loop = False
```

```
#if retry == 3:
```

```
#    run_loop = False
```

```
#    Not sure if this helps or hurts
```

```
#    After experimenting, it doesn't seem to matter if it's here
```

Code without comments

```
run_loop = True
retry = 0
while retry < 3:

    while run_loop:
        try:
            temp = (float(input("Enter temperature = ")))
        except Exception:
            print("Input isn't a temperature; try again. Max 3 attempts. Attempts:",retry+1)
            retry += 1
            break

    run_loop_sub = True

    while run_loop_sub:
        try:
            unit = str(input("Enter C or F (for Celsius or Farhenheit) = "))
        except Exception:
            print("Input needs to be c/C or f/F")
            continue

        if unit.lower() == "c":
            fahrenheit = (temp * 9/5) + 32
            print(f'{round(fahrenheit,2)} F')
            print('You know the temp now!')
            run_loop_sub = False

        elif unit.lower() == "f":
            celsius = (temp - 32) * 5/9
            print(f'{round(celsius,2)} C')
            print('You know the temp now!')
            run_loop_sub= False

        else:
            print("You need to enter either c/C or f/F")
            run_loop = False
```

