program2

January 3, 2025

1. Last week you wrote a program that printed out a cheery greeting including your name. Take a copy of it, and modify it so that the user enters their name at the keyboard, and then receives a greeting.

[2]:
```
name = input("Hello, what is your name? ")
print(f"Hello, {name}. Good to meet you!")
```

```
Hello, what is your name?  Albatros
```

```
Hello, Albatros. Good to meet you!
```

2. Write a program that prompts a user to enter a temperature in Celsius, and then displays the corresponding temperature in Fahrenheit, like so: Enter a temperature in Celsius: 32.5 32.5C is equivalent to 90.5F.

[3]:
```
Celsius = float(input("Enter temperature in celsius: "))
Fahrenheit = (Celsius * 9/5) + 32
print(f"{Celsius}C is equivalent to {Fahrenheit}F.")
```

```
Enter temperature in celsius:  45.2
```

```
45.2C is equivalent to 113.36F.
```

3. The Head of Computing at the University of Poppleton is tasked with dividing a group of students into lab groups. A lab group is usually 24 students, but this is sometimes varied to create groups of similar size. Write a program that prompts for the number of students and group size, and then displays how many groups will be needed and how many will be left over in a smaller group. How many students? 113 Required group size? 22 There will be 5 groups with 3 students left over. For bonus credit, see if you can fix the grammar in the output. So if there were 101 students in groups of 20 the output would be: There will be 5 groups with 1 student left over.

[4]:
```
students = int(input("How many students? "))
group_size = int(input("Required group size? "))

groups_required = students // group_size
students_left = students % group_size

if students_left ==1:
    print(f"There will be {groups_required} groups with {students_left} student␣
 ↪left over.")
```

```
else:
    print(f"There will be {groups_required} groups with {students_left}␣
 ↪students left over.")
```

```
How many students?  31
Required group size?  5
```

```
There will be 6 groups with 1 student left over.
```

4. A kindly teacher wishes to distribute a tub of sweets between her pupils. She will first count the sweets and then divide them according to how many pupils attend that day. Write a program that will tell the teacher how many sweets to give to each pupil, and how many she will have left over.

[5]:
```
pupils = int(input("Enter the number of pupils present: "))
sweets_available = int(input("Enter the amount of sweets you have: "))

sweet_to_distribute = sweets_available // pupils
sweets_left = sweets_available % pupils

print(f"You must distribute {sweet_to_distribute} sweets to each pupil, you␣
 ↪will have {sweets_left} sweets left over.")
```

```
Enter the number of pupils present:  6
Enter the amount of sweets you have:  30
```

```
You must distribute 5 sweets to each pupil, you will have 0 sweets left over.
```