

## Assignment 4: Loops

[1] **Objectives:** This assignment aims to practice using loops to repeat certain operations. You must use a nested loop with a for-loop inside a while-loop. In addition, we will be using a simple list in this assignment even though we have not covered the chapter on lists.

[2] **Description:** Uncle Joe likes to go on fishing trips for several days. He would like to keep a record of the catches of his trips so that he can use data science later to find the best fishing spot for various kinds of fish. Your job is to write a simple program so he can keep a record of his catches of four types of fish.

A list of four names of fish is available for your use.

```
fish_species = ["salmon", "trout", "bass", "catfish"]
```

Here is what your code needs to do:

- Use a while loop to collect data for multiple days in a trip. We don't know the exact number of days in a trip. Uncle Joe is not predictable. So you will have to ask the user whether he wants to continue with an additional day of record. Get this part done first.
- For each iteration through the while-loop, the program will ask about his catch of each type of fish. This is where you will need an inner loop to collect four integer numbers. The code should compute the total number of catches on that day.
- There is no need to keep the number of fish of each type because we are not ready to use a list or an array. But you should produce a total number of catches on this trip by adding all the daily catch totals.

Your code should be about 20 lines (just a suggestion) long.

**Restriction:** Do not write four input statements. You must use a for-loop to prompt the user for the four counts. Some effort is required to construct the string in the input() function. See the sample output.

[3] **Output:** A sample output is given below. Remember, it should work for all possible cases. The TA will run your program to see if it works properly.

```
Fishing Log for Day 1:
Number of salmon caught: 1
Number of trout caught: 2
Number of bass caught: 3
Number of catfish caught: 4

Number of fish caught on Day 1: 10.

Enter another record (Y/N): y
```

Fishing Log for Day 2:  
Number of salmon caught: 2  
Number of trout caught: 3  
Number of bass caught: 4  
Number of catfish caught: 5

Number of fish caught on Day 2: 14.

Enter another record (Y/N): y

Fishing Log for Day 3:  
Number of salmon caught: 11  
Number of trout caught: 22  
Number of bass caught: 33  
Number of catfish caught: 44

Number of fish caught on Day 3: 110.

Enter another record (Y/N): n

Total number of fish caught on this 3-day trip: 134.

[4] **Deadline:** 11:59 pm, Wednesday, March 1, 2023