

CS152: Data Structure

Week 1.2 Knowledge Check

Write the full name of all collaborators inside this box

Discuss these questions and write your answers in the space provided below it.

1. How can you tell if a `def` statement in Python defines a function or class method?
2. What are constructors used for? What special name does Python use for them?

Discuss these questions and tick the option you think is correct

3. The `==` operation for two lists must:
 - (a) Compare pairs of items at each position for equality
 - (b) Merely verify that each item in one list is also in the other list
4. The `==` operation for two sets must:
 - (a) Compare pairs of items at each position for equality
 - (b) Verify that the sets are of the same size and that each item in one set is also in the other set

Short pair programming problem:

Statisticians would like to have a set of functions to compute the median and mode of a list of numbers. The median is the number that would appear at the midpoint of a list if it were sorted. The mode is the number that appears most frequently in the list. Define these functions in a module named `stats.py`. Also include a function named `mean`, which computes the average of a set of numbers. Each function expects a list of numbers as an argument and returns a single number.