CS16 Section 10 Mini-Assignment

Due in your section the week of:

4/22 - 4/24

Problem 1: Graph

Read through the Graph project handout and answer the questions below.

1. How will you make sure that every vertex has a unique identifying number?

2. What data structure will you use in your MyDecorator class to ensure runtimes and functionality?

3. How many times will the same edge appear in your adjacency matrix?

4. How can you get the position for a given Vertex or Edge?

Problem 2: Functional Programming warmup

In class we talked about two higher order functions called `map` and `reduce` (it is up to you to decide whiche one is appropriate for the problem). The functions you pass into `map` and `reduce` should be anonymous functions. You might have to think about each one for a few minutes, but the solutions are a single line each. You may pseudocode these, but they should be easily convertible to a working python program. You may assume for each of these that you have a variable `list` as your input.

Part 1: Length of each string in list

Write code for the `string_length` function, which takes in a list of strings and returns a list of their leghths

Example

```
string_length(["cat", "a", "square"]) → [3,1,6]
```

Part 2: Max string length in list

Write code for the `max_string_length` function, which takes in a list of strings and returns the length of the longest string in the list.

Example

```
max_string_length(["cat", "a", "orange","square"]) → 6
```