Name: _____ NetID: _____

Q1. Explain all iterations of the for loop below (clarify the state of all related variables). Also, what is the value of the variable *result*?

```
alphabets = “abcdefghijklmnopqrstuvwxyz”
digits = “0123456789”
def NYU_id(astr):
        flag_alphabet = False
        for char in astr:
                if not flag_alphabet and char in alphabets:
                        flag_alphabet = True
                elif char in digits:
                        return True
        return False

result = NYU_id(“jk190”)
```

The variable `result` is True. I recommend how it works with pythontutor.com, it returns True before the last character (which implies it is incorrect in some examples). See also Assignment 6.

Q2. Show an example (parameters to NYU_id, such as “jk190”) where the function NYU_id incorrectly classifies a valid/invalid nyu id string.

For example, it misclassifies “j190k” as True.

Name: _____ NetID: _____

Q1. Explain all iterations of the for loop below inside “my_maximum”, and the value of result.

```
def my_maximum(int_list):
        current_max = -1
        for element in int_list:
                if element > current_max:
                        current_max = element
        return current_max

result = my_maximum([1, 2, 10, 5, 12])
```

Omitted, see the pythontutor.com. The key is that it keeps the partial maximum - for example, at the end of the third iteration, current_max is the max among the first three elements.

Q2. Show an example where the function my_maximum incorrectly computes the max, and explain all iterations of the for loop in that case.

It starts with -1, so if the maximum is -2, it still outputs -1.
result = my_maximum([-2, -10, -5])