

CSE 8A Programming Assignment 8

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Known Bugs or Issues:

If you have any known bugs or issues with your code, let us know here.

NA

Questions:

1. Are dictionaries mutable? Explain with an example.

The entries in a dictionary can be changed, deleted, updated etc.. So yes, dictionaries are mutable. The entries are accessed via their keys meaning that each key must still be unique.

2. You are given the following dictionary:

```
students =  
{ "1" : { "Name": "Brian", "Age": 18, "Gender": "M"},  
  "2" : { "Name": "Kenneth", "Age": 17, "Gender": "M"},  
  "3" : { "Name": "Elisa", "Age": 18, "Gender": "F"},  
  "4" : { "Name": "Roxy", "Age": 17, "Gender": "F"} }
```

A student has written the following statement to get all of the names into a list:

```
name_list = students['Name']
```

Explain why this code is incorrect, and how you could write code to achieve the goal to create a list of all the names (i.e., name_list should contain the list with values ["Brian", "Kenneth", "Elisa", "Roxy"]).

When printing the name_list created by the student above the program will result in a Keyerror message. This is because the key options for the students dictionary are "1", "2", "3", or "4", of which "Name" is not.

This is better:

```
#we create an empty list to fill with names  
name_list = []  
#iterate through each dictionary  
for student in students:  
    #define the dictionary we are currently in
```

```
        studentData = students[student]
        #add value at current name key
        name_list.append(studentData["Name"])

    print(name_list)
```

3. (Optional Star Point) If you attempted the star point question, explain what your function returns, and what meaningful analysis it does.

My function takes in a threshold and returns a dictionary with string key values of state names and their black population as values. The only states returned will be states who had more than the threshold's value of protests. This allows us to look into the black population in states that had many protests. It does not take into consideration the success of those protests. This could be the beginning of some statistical analysis on whether or not diversity in a state results in more protests.