

CS 101  
HOMEWORK 8: PROGRAMMING EXERCISES LISTS

TASKS

1. What does the following code do? Try to answer without running the code. After you answer, type in the code and see if you answered correctly.

```
aList = []  
  
for char in 'Christmas is near':  
    aList.append(char)  
  
print(aList)
```

2. What is printed out? Try to answer without running the code. After you answer, type in the code and see if you answered correctly.

```
L = [1,2,3,'a','c','z']  
  
print('a' in L)
```

3. Does a list allow duplicate items?
4. Is a list mutable, can you change the value of any item in the list?
5. Does a list need to be homogenous (can it have objects of different types)?
6. You could create a new empty list by clearing the elements of an existing list using `.clear()` Can you tell what is printed out?

```
food = ['salad', 'soup', 'dessert']  
  
print(food)  
  
food.clear()  
  
print(food)
```

7. You can concatenate two strings by using the `+` operator. What is printed out?

```
L1 = ['a', 'b', 'c']  
L2 = [1, 2, 3]  
  
print(L1+L2)
```

8. `len()` returns the length of a list. What does the following code print out?

```
aList = [[1,2],[2,3],[1,2,3,4]]  
  
print(len(aList))
```