

Lab 4

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1 Section

1.1 Topic: List Methods

```
[ ]: fruits = ['apple', 'orange', 'banana']
```

```
[ ]: fruits.append('grape')
     print(fruits)
```

```
['apple', 'orange', 'banana', 'grape']
```

```
[ ]: newFruits = ('kiwi', 'mango', 'strawberry')
     fruits.extend(newFruits)
     print(fruits)
```

```
['apple', 'orange', 'banana', 'grape', 'kiwi', 'mango', 'strawberry']
```

```
[ ]: fruits.insert(1, 'peach')
     print(fruits)
```

```
['apple', 'peach', 'orange', 'banana', 'grape', 'kiwi', 'mango', 'strawberry']
```

```
[ ]: fruits.remove('orange')
     print(fruits)
```

```
['apple', 'peach', 'banana', 'grape', 'kiwi', 'mango', 'strawberry']
```

```
[ ]: fruits.pop()
     print(fruits)
```

```
['apple', 'peach', 'banana', 'grape', 'kiwi', 'mango']
```

```
[ ]: fruits.clear()
     print(fruits)
```

```
[]
```

```
[ ]: fruits = ['apple', 'orange', 'banana']
     print(fruits.index('apple'))
```

0

```
[ ]: print(fruits.count('orange'))
```

1

```
[ ]: fruits.sort()
     print(fruits)
```

['apple', 'banana', 'orange']

```
[ ]: fruits.reverse()
     print(fruits)
```

['orange', 'banana', 'apple']

```
[ ]: x = fruits.copy()
     print(x)
```

['orange', 'banana', 'apple']

1.2 Topic: Dictionary Methods

```
[ ]: cars = {'Honda':'Civic', 'Toyota':'Tacoma', 'Ford':'Focus'}
```

```
[ ]: print(cars.get('Honda'))
```

Civic

```
[ ]: numbers = {'1':1, '2':2, '3':3}
     cars.update(numbers)
     print(cars)
```

{'Honda': 'Civic', 'Toyota': 'Tacoma', 'Ford': 'Focus', '1': 1, '2': 2, '3': 3}

```
[ ]: print(cars.keys())
     print(cars.values())
     print(cars.items())
```

dict_keys(['Honda', 'Toyota', 'Ford', '1', '2', '3'])

dict_values(['Civic', 'Tacoma', 'Focus', 1, 2, 3])

dict_items([('Honda', 'Civic'), ('Toyota', 'Tacoma'), ('Ford', 'Focus'), ('1', 1), ('2', 2), ('3', 3)])

```
[ ]: cars.pop('1')
     print(cars)
```

{'Honda': 'Civic', 'Toyota': 'Tacoma', 'Ford': 'Focus', '2': 2, '3': 3}

```
[ ]: cars.popitem()
     print(cars)
```

```
{'Honda': 'Civic', 'Toyota': 'Tacoma', 'Ford': 'Focus', '2': 2}
```

```
[ ]: y = cars.copy()
      print(y)
```

```
{'Honda': 'Civic', 'Toyota': 'Tacoma', 'Ford': 'Focus', '2': 2}
```

```
[ ]: y.clear()
      print(y)
```

```
{}
```

1.3 Topic: Tuple Methods

```
[ ]: number = (5,72,78,3,11,97,5)
      print(number.index(72))
      print(number.count(5))
```

```
1
```

```
2
```

1.4 Topic: Set Methods

```
[ ]: fruitSet = set(fruits)
      print(fruitSet, type(fruitSet))
```

```
{'apple', 'orange', 'banana'} <class 'set'>
```

```
[ ]: fruitSet.add('Hamburger')
      print(fruitSet)
```

```
{'Hamburger', 'apple', 'orange', 'banana'}
```

```
[ ]: fruitSet.remove('Hamburger')
      print(fruitSet)
```

```
{'apple', 'orange', 'banana'}
```

```
[ ]: food = {'apple', 'taco', 'potato'}
      print(fruitSet.intersection(food))
      print(fruitSet.union(food))
      print(fruitSet.difference(food))
```

```
{'apple'}
```

```
{'orange', 'banana', 'taco', 'apple', 'potato'}
```

```
{'orange', 'banana'}
```

1.5 Topic: Booleans

```
[ ]: t = True
      f = False
      print(f and t)
      print(f or t)
      print(not f)
```

False

True

True

```
[ ]: boolList = [True, True, True, False]
      print(all(boolList))
      print(any(boolList))
      print(False in boolList)
```

False

True

True

2 Section

```
[ ]: sentence = 'Yabba Dabba Doo.'
      sentenceList = list(sentence.upper())
      print(f'List: {sentenceList}')

      a = sentenceList.count('A')
      e = sentenceList.count('E')
      i = sentenceList.count('I')
      o = sentenceList.count('O')
      u = sentenceList.count('U')
      print('\nVowel count: ')
      print(f' A: {a}\n E: {e}\n I: {i}\n O: {o}\n U: {u}')

      vowelDict = {'A':a, 'E':e, 'I':i, 'O':o, 'U':u}
      print(f'\nVowels dictionary: {vowelDict}')

      setOfSentence = set(sentenceList)
      setOfSentence.remove(' ')
      setOfSentence.remove('.')

      vowels = set(vowelDict.keys())

      print(f'\nVowels in sentence: {setOfSentence.intersection(vowels)}')
      print(f'\nConsonants in the sentence: {setOfSentence.difference(vowels)}')
```

List: ['Y', 'A', 'B', 'B', 'A', ' ', ' ', 'D', 'A', 'B', 'B', 'A', ' ', 'D',
'O', 'O', '.']

Vowel count:

A: 4

E: 0

I: 0

O: 2

U: 0

Vowels dictionary: {'A': 4, 'E': 0, 'I': 0, 'O': 2, 'U': 0}

Vowels in sentence: {'O', 'A'}

Consonants in the sentence: {'D', 'Y', 'B'}