Lecture 24 Worksheet Comprehensions

A.Given the following:

```
words = ["pineapple", "mango", "quince", "blueberry", "orange"]
```

1. Use comprehension to create a list of the words that contain "o"

```
[w for w in words if "o" in w]
```

2. Use comprehension to create a list of words that have a length > 7

```
[w for w in words if len(w) > 7]
```

3. Use comprehension to create a list of integers that represent the length of each word

```
[len(w) for w in words]
```

4. Use comprehension to create a list of words that end with "e"

```
[w for w in words if w.endswith("e")]
```

B.Given the following:

```
heart_rates = {"Micah": [67, 59, 84, 88],
         "Briana": [59, 73, 67, 80, 79],
         "Jaren": [67, 84, 71, 68 , 70]}
```

1. Use comprehension to create a list of the names

[k for (k,v) in heart_rates.items()]

2. Use comprehension to create a dictionary where the key is the same key, but the value is the min of each list

{k:min(v) for (k,v) in heart_rates.items()}

3. Use comprehension to create a dictionary where the key is the same key, but the value is the average of each list

{k:sum(v)/len(v) for (k,v) in heart_rates.items()}

C. Given the following:

```
player_stats = [
    {"name": "Rina", "goals": 17, "position": "Midfield"},
    {"name": "Charlie", "goals": 6, "position": "Defender"},
     {"name": "Heather", "goals": 20, "position": "Midfield"}
]
```

1. Use comprehension to create a list of all names of people who scored > 10 goals

[d['name'] for d in player_stats if d['goals'] > 10]

2. Use comprehension to create a list of all unique positions

list({ person['position'] for person in player_stats })

Note: you can create a set comprehension by using { }