Session 4 Exercises

Exercise 4.1

When I'm travelling in the winter I often forget to pack warm clothes. Let's write a program to help me to remember the right clothes.

The program should check if the first item in the **clothes** list is **"shorts"**. If it is it should change the value to "warm coat".

```
clothes = [
    "shorts",
    "shoes",
    "t-shirt",
]
```

Extension: Change the other items in the list to clothing more appropriate to winter if the first item is shorts

Exercise 4.2

Make a list of game scores. Using list functions write code to output information of the scores in the following format:

```
Number of scores: 10
Highest score: 200
Lowest score: 3
```

Extension: Output all of the scores in descending order

Exercise 4.3

Whenever I'm shopping and I buy some bread I always forget to buy butter. Create a list and if **'bread'** is in the list, add **'butter'** to the shopping list.

Try running the program with and without bread in the list to check that your program works.

Remember the **in** operator checks if an item is in a list and the **.append()** method adds an item to a list.

Extension: only add butter to the list if it is not already in the list

Exercise 4.4

I want to work out how much money I've spent on lunch this week. I've created a list of what I spent each day.

Write a program that uses a **for** loop to calculate the total cost

```
costs = [8.30, 7.12, 5.01, 1.00, 0.99, 5.92, 3.50]
total_cost = 0
```

Extension: work out the average that I spend on lunch for the week

Exercise 4.5

Print the values of **name**, **post_code** and **street_number** from the dictionary

```
place = {
    'name': 'The Anchor',
    'post_code': 'E14 6HY',
    'street_number': '54',
    'location': {
        'longitude': 127,
        'latitude': 63,
    }
}
```

Extension: Print the values of **longitude** and **latitude** from the inner dictionary

Exercise 4.6

Using a for loop, output the values **name**, **colour** and **price** of each dictionary in the list

```
fruits = [
    {'name': 'apple', 'colour': 'red', 'price': 0.12},
    {'name': 'banana', 'colour': 'yellow', 'price': 0.2},
    {'name': 'pear', 'colour': 'green', 'price': 0.19},
]
```

Extension: Add more items to the list

Exercise 4.7

Write a program to create a random name. You should have a list of random first names and a list of last names. Choose a random item from each and display the result.

Extension: Using list of verbs and a list of nouns, create randomised sentences