Week 1 worksheet

Exercise 1

Using a single `print()` statement, print this well-loved Shakespeare lyric so that each line is printed on a separate line.

> All the world's a stage,
>
> And all the men and women merely players:
>
> They have their exits and their entrances;
>
> And one man in his time plays many parts.

HINT - `\`

```
In [8]:  text = ''  # Put the text here
         print(text)
```

Exercise 2

The code below should have the following output:

```
Leave house
Go to shop
Put bread in trolley
Put milk in trolley
Put soap in trolley
Put tin foil in trolley
Put dishwasher tablets in trolley
Go to checkout
Go home
```

But if you try running it you will see that there are errors. Fix the code so that its output is the same as above. Don't forget to add some comments to remind yourself what you changed!

```
In [ ]:  do_shopping_today = False  # Can't be bothered
         shopping_list = ['bread', 'milk', soap  'tin foil', 'dishwasher tablets']

         if do_shopping_today:
             print('Leave house')
             print('Go to shop')
             for item in shopping_list:
             print(f'Put {item} in trolley')
             print('Go to checkout')
             print('Go home')
```

Exercise 3

Here's that `Pen` example again...

If you managed to solve Exercise 1, try printing the solution with the `Pen.write_something()` instead. You should see a message saying `'Not enought ink!`.

Refresh your memory on how `len()` works, and then without changing the `ink_left` attribute, see if you can adjust the code so that the ink is depleted more slowly, but still in proportion to the length of the message.

Bonus exercise – At the moment, whitespace uses ink, which is not how real pens work. Can you alter the code so that whitespace does not contribute to ink depletion? This is a tricky one...

In [ ]:
```python
# Define the Pen class
class Pen:
    def __init__(self):
        # Attribute to keep track of ink
        self.ink_left = 100

    # Method for writing stuff
    def write_something(self, what):
        if len(what) > self.ink_left:
            print("Not enough ink!")
        else:
            print(what)
            self.ink_left = self.ink_left - len(what)

# Create an instance of Pen
my_pen = Pen()

# Insert the text from exercise 1 here
msg = ''

# Call the write_something method
my_pen.write_something(what=msg)

# Check ink left
print(f"my_pen has {my_pen.ink_left} ink left")
```