Lab: Containers

Modify your number guess game such that a history of the guesses made by the user is maintained.

Once the game is over present a printout of the guesses made by the user in the order that they were made. This will allow the user to review their game play.

To maintain the guess history, you will probably want to use a list as it needs to be modifiable, allow duplicates (as the user may enter the same guess twice) and needs to maintain the order of the guesses.

For example:, the following illustrates a run of the number guess program which outputs a history of the numbers entered by the user

```
Welcome to the number guess game
Please guess a number between 1 and 10: 5
Sorry wrong number
Your guess was lower than the number
Please guess again: 7
Sorry wrong number
Your guess was lower than the number
Please guess again: 9
Sorry wrong number
Your guess was lower than the number
Please guess again: 10
Well done you won!
You took 4 goes to complete the game
Your guesses were:
[5, 7, 9, 10]
Game Over
```

Extension Points

If you wish to go further include the result of the guess (i.e. was it higher or lower than the number guessed) along with the actual guess – you could use a Tuple for this. For example:

```
Your guesses were:
[(5, 'Sorry wrong number\nYour guess was lower than the
number'), (7, 'Sorry wrong number\nYour guess was lower
than the number'), (9, 'Sorry wrong number - you were out
by 1'), (10, 'Correct Guess')]
```

Next modify the game so that you ask the user if they want to play again. If they say that they do, then you need to generate another random number and clear the guess history.

Now find the lowest guess, e.g. 5

Next find the highest guess e.g. 10

Finally find the average guess e.g. 7.75

For example:

```
The lowest value entered: 5
The highest value entered: 10
Average value is: 7.75
```