Computing

Lesson 7: Being a Programmer

Programming Part 6: Dictionaries and Datafiles

Rebecca Franks

Explore Alternatives

Code Snippets

Displays an instruction and prompts for input in one line

```
1  name = input("Enter your name:")
```

Increments the score value by 1

```
1  score += 1
```

Displays a variable within a print, variables are separated by commas

```
1  print("Name:", name, "Score:", score)
```

Code Snippets

Concatenates a string within a print statement. Casting is required on all non-string variables

```
1  print("Name: " + name + "Score: " + str(score))
```

Uses a call without the use of an additional variable

```
1  numbers = [3, 4, 5, 2, 3, 4, 5, 5]
2
3  for x in range(3, len(numbers)):
4      print(numbers[x])
```

Challenge 1: Adapt this program

Open the Repl.it with the start code using this shortlink: **oaknat.uk/comp-oak-adapt1**

A guess the word game has been created. The game gives the user 5 attempts at guessing the word.

Instructions

- Execute the code to make sure that you have an understanding of how it works.
- The code doesn't use meaningful identifiers. Change the variable names so that they use meaningful identifiers.
- Use the code snippets above to provide an alternative solution to the same problem.
- Add informative commenting to the program

Challenge 2: Adapt this program

Open the Repl.it with the start code using this shortlink: **oaknat.uk/comp-oak-adapt2**

A Simon says program has been created. The player types in as many Simon says instructions as they wish. The program will then iterate through the list either saying "Simon says" or leaving that part blank.

Instructions

- Execute the code to make sure that you have an understanding of how it works.
- Fix the variable names. They have been written using inconsistent naming conventions. They should follow the Python naming conventions.
- Use the code snippets above to form an alternative approach to the solution.
- Add informative commenting to the program.

Appending to a CSV File

Code Snippet

Opens a CSV file in append mode and writes 3 numbers to it.

```
1  file = open("numbers.csv", "a")
2  numbers = "3,4,5"
3  file.write(numbers)
4  file.close()
```

Challenge: Spelling test

Open the Repl.it with the start code using the shortlink: **oaknat.uk/comp-oak-spellings**

A teacher has a list of 8 spellings that they would like to use as a test for learners. They will shout out the spelling in the classroom and the learner must type their spelling of the word into the program. The program should:

- Read the data from the spellings.csv file
- Append the data to a list
- Allow the learner to enter each spelling, 1 at a time
- Check if the entry matches the spelling in the list
- Record whether the learner was correct or incorrect
- Append the results data to the spellings.csv file

NOTE: Your final solution should use good programming habits and the alternative approaches covered at the start of this lesson. Remember to comment on your code!

Challenge: Spelling test

The finished CSV file should look like the example below when opened with spreadsheet software:

	A	B	C	D	E	F	G	H
1	adorable	applicable	considerable	tolerable	desirable	believable	excitable	regrettable
2	Correct	Correct	Correct	Correct	Incorrect	Incorrect	Incorrect	Incorrect

Note: You can also view the CSV file using the left hand pane in Repl.it