

Computing

Lesson 2: String Handling I

Programming Part 5: Strings and Lists

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¹ Materials from the Teach Computing Curriculum created by the National Centre for Computing Education



Worked example

Password checker

```
1 stored_pass = "password"
2 password = ""
3 pass_mismatch = stored_pass != password
4
5 while pass_mismatch:
6     print("Enter your password:")
7     password = input()
8     pass_mismatch = stored_pass != password
9
10 print("Access granted")
```

Reveal the length of the word

```
1 len(word)
```

Reveal the first letter of the word

```
1 word[0]
```



Task 1 - Guess the word

Use previous programs and the code above to support you in creating a guess the word game.

Your guess the word game should:

- Display how many letters are in the word
- Allow for five guesses
- After the first guess, reveal the first letter of the word
- After the third guess, reveal the last letter of the word
- After the fifth guess, end the game
- If they guess correctly it should display “Correct, you win!”
- If the guess is incorrect it should display “Incorrect, you lose!”



Task 1 - Example output

The table below reveals the example output for the game based on specific inputs.

The word to guess is sandwich

A prompt is displayed to the user	Guess the word:
The user enters a word to guess and the program checks this is the correct word. It isn't so the number of guesses is incremented by 1.	cheese
The number of guesses is now 1 so a hint is displayed and the user is prompted to guess the word.	The first letter of the word is s Guess the word:
The user enters a different word.	cucumber
The number of guesses is now 2. The user is prompted to make another guess.	Guess the word:
The user enters a different word.	fish
The number of guesses is now 3 so a hint is displayed and the user is prompted to make another guess.	The last letter of the word is h Guess the word:
The user enters a different word. This word matches the word to guess so the loop now terminates.	sandwich
The final message is displayed to the user.	Correct, you win!



Worked example

How many e's

```
1 word = "sheep"
2 count_e = 0
3
4 for letter in word:
5     if letter == "e":
6         count_e = count_e + 1
7
8 print(count_e)
```



Task 2 - Iterate over a string

Modify the program above so that it asks the user for a character. The character entered should then be checked against the word to see how many matching characters are in that word.

Example

Note: Given the input you see in this sample interaction, this is the output your program should produce.

A prompt is displayed to the user

Enter a character:

The user enters a character. This is held in a variable and used in the condition inside the for loop.

p

The count variable is incremented at each occurrence. The output is displayed.

The letter p appears 1 times

Add this additional functionality to your guess the word game from activity 1. The user should be able to type a letter to get a hint and see if the word contains that letter, and how many times.



Task 3 - Python documentation

Open the python documentation using oaknat.uk/comp-stringmethods the provided link.

Discover what the following string methods do:

Method	Description
str.capitalize()	
str.title()	
str.swapcase()	

