

# Longest Word

This is a **challenge** exercise. It is **not compulsory**, and may be completed **individually or with your lab partner**.

In this activity, you will make a program called `longestWord.c`.

This program should read in characters using `getchar()` until the end of input is reached.

Your program should determine the longest word, from the input it scanned in.

For simplicity, characters that are part of a word are

- lowercase and uppercase letters,
- numbers,
- the apostrophe,
- the hyphen ( - ), and
- underscore ( \_ ). Every other character is considered a separator between words. You are also allowed to assume that the longest word will be less than 255 characters long.

Remember, you may not always *start* or *end* with a word and multiple word separators doesn't indicate multiple words.

For example:

```
$ ./longestWord
The quick brown fox jumped over the lazy dog.
Ctrl+D
The longest word was: jumped
```

If there is a tie for the longest word, your program should print the first of the longest words, e.g.

```
$ ./longestWord
Man, I can't, I shan't,
formulate an anthem where the words comprise mnemonics
dreaded mnemonics for pi.
Ctrl+D
The longest word was: formulate
```

Remember, `getchar()` will read in the next character from input and return it. When it reaches the end of input, it will return the value `EOF`. You can tell a program to stop reading characters by using `Ctrl+D` which will cause `getchar()` to return the `EOF` value.

To read from a file instead of typing in text, you can use `<`. For example:

```
$ ./longestWord < myTestFile.txt
```

To tell the program you have finished typing, you can press `Ctrl+D`.

To run some simple automated tests:

```
$ 1511 autotest longestWord
```

To run Styl-o-matic:

```
$ 1511 stylomatic longestWord.c  
Looks good!
```

You'll get advice if you need to make changes to your code.

Submit your work with the *give* command, like so:

```
$ give cs1511 wk06_longestWord
```

Or, if you are working from home, upload the relevant file(s) to the `wk06_longestWord` activity on [Give Online](#).