Challenge Answers

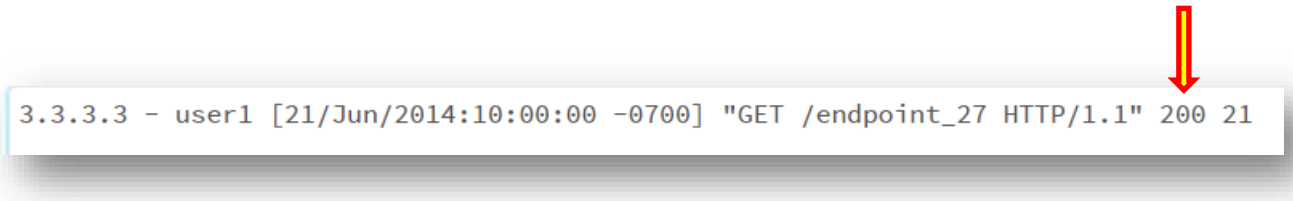
Challenge 1

For the first challenge, write a function which counts the total number of words in a file. To help you, think about how we could combine the loop we used to count the number of lines in a file (on page 12) with the function we defined on page 13 to count the number of words on the first line of a file. Use this function on the **sample_log.txt** file.

```
def print_num_words(file):
    fp = open(file,"r")
    word_count = 0
    for line in fp:
        line_count = len(line.split(" "))
        word_count += line_count
    fp.close()
    print("Number of Words", word_count)
```

Challenge 2

Each log entry contains an HTTP response code – these are three-digit codes issued by a server in response to a request from a client. These provide an easy way of communicating how the server responded to the request. The response code for a successful HTTP request is 200.



Have a look at the below code. Can you work out what this code does?

```
fp = open(filepath , "r")
counter = 0
for line in fp:
      if line.split(" ")[8] == "200":
            counter += 1
fp.close()

print(counter)
```

The file we are working on is saved within the local file system. This means we can also work with the file using Linux commands, as we did last week.

Referring back to the workshop materials from last week, can you write a Linux command which will produce the same output as the above Python code?

```
%sh
cat /tmp/sample_log.txt | cut -d ' ' -f 9 | grep -c '200'
```

Students should verify for themselves that the two approaches produce the same results.