

### Bash Tutorial 3

1. Generate a commented **bash** script that will has a positional parameter **a** filename. Have your script validate the number of positional parameters and that you have a regular file. Then display the content of the file on screen.
2. Make a copy of your Q1 solution and extend so that have your script store the strings in the file into an array. Then have your script loop though the elements of the array and display on screen.
3. Make a copy of your Q2 solution and extend so that you apply the bubble sort and display the strings in the file on screen
4. Make a copy of your Q2 solution and extend this by removing or commenting the display of the elements of the array and have the script count the number of strings and the number of visible characters (ignore black spaces) are in the original file (you are not to use the `wc` command to carry out the task) and display on screen the following

The number of visible characters ignoring spaces in the file is ###

The number of Strings in the file is ###

5. Make a copy of the Q4 solution and extend so that your script has an optional 2<sup>nd</sup> positional parameter which will be a single character. Have your script count all the instances of 2<sup>nd</sup> positional parameters (you are not to use the `wc` or `grep` commands to carry out the task) and display by extending the display with the following

The number of times the 2nd positional parameters # appears in the file is ###

6. Make a copy of the Q5 solution and extend by outputting to the screen as well as appending the output to the original file