# Fotoshop Improvements

## Editor.java

* Moved four separate filter fields into an array list ‘filters’. This greatly improves extendibility and maintainability by making the list of filters enumerable, enabling the use of loops to perform operations. Also means that new filters can just be appended onto the ArrayList, instead of manually hard-coded as new fields.
* Compressed staircase of if statements into a for loop, operating on the ArrayList of filters.
* processCommand() changed to use reflection instead of many if/elseif to determine if a command is correct. Commands now called using the Invoke() method.
* Refactored filter operations into a new ‘Image’ class, increasing cohesion.
* Differentiated between ‘Editor’ commands and ‘filter’ commands in order to denote which parameters are passed to method.invoke().

## Parser.java

* Moved individually-declared string fields (for each word) into an ArrayList ‘words’. This makes the application more extendable If the stakeholders wanted to add additional words for each command.

## Command.java

* Moved command words from individually-declared strings to an ArrayList of strings. Words can now be accessed using their index within the array. This greatly increases maintainability and extendibility as more command words can be added if desired – without the need to add additional fields, getters or null checks.
* Condensed the duplicated getters and null checking methods into one function each, both accepting array an index parameter.

## General Improvements

* Added support for internationalisation.
* Added cache to store the list of filters currently applied to an image (as a field of Image)
* Added support for an Undo command, to revert the image back to its previous state. Added a new Stack field to Image to contain these changes. Push and Pop used to add/revert from stack.

Appendicies

Full commit log

Static analysis screens

Examples of Linter being used