



## Assignment 1: Perl Hashes and Arrays — Solutions

**Submission:** by 5pm, Friday, 11 October 2002

**Where:** On paper, to the office

**Important:** All programs you write must start with these lines:

```
#!/usr/bin/perl -w
use strict;
```

and should compile without errors.

**Cheating:** Your work *must* be original. Copying will be *severely* dealt with.

### Assignment Requirements

1. What happens if you assign an array to a hash? Explain what happens in this example:

```
#!/usr/bin/perl -w
use strict;
my @array = ( 'word1', 'word2', 'word3', 'word4' );
my %hash = @array;
# Now what values are stored in %hash?
```

Examine the documentation for the builtin functions `keys` and `each`, with `perldoc -f keys` and `perldoc -f each`.

Add to this program code to print the keys and values stored in `%hash`, showing which is a key, and which is a value, and write an explanation of the output.

2. Write a program to read the lines from any number of input files, and print the words from the file, one word on each line.

Use the builtin `split` function described in the last laboratory exercise. You should also use the angle-bracket operator “<>”.

3. Extend your program from the previous exercise to print a summary of how many times each word occurred in all of the input files. Use a hash as the basic data structure in your program.

4. Modify your program from the previous exercise to also sort the output by the ASCII order of the words.

Study the documentation for the builtin function `sort`; do `perldoc -f sort`.

5. Modify your program from question 3 so that the output is sorted by frequency of the words, so that the most frequent words come at the beginning of the output.