# Assignment 1: Perl Hashes and Arrays

**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.