COMP30080 Processor Design

Assignment 1 Fergal Lonergan

Question 1

The first line of code (data.) declares that the following will lines are data to be stored in our memory block.

D1 and D2 declare arrays to be filled with the words provided.

.text tells our assembler that we are now in the text segment of our code.

.global creates a global variable we declared as main

.la loads the address of the first element, i.e. (1) in our D1 data array, (5) in our D2 data array, and stores it in the variables $t0 and $t1 respectively.

We then load the words from each element into our registers, $t2-$t4 using the .lw function  
the offset is used to move through the words in our “data array” D1

4^n, n being the element in the array, is the offset

It then stores the words loaded to our $t2-$t4 registers into our D2 array again using the offset. It puts them in reverse order to how they are in D1

Question 2