Tutorial 2 - Hints for Lab 1

This tutorial gives examples of simple C programs and hints to help you complete Lab 1.

The `getche()` function

To get documentation for any function, type the name of the function into the edit windows, put the cursor over the function name (or other language item) and press control-F1.

The Turbo C documentation for the getche function says:

```
int getche(void);

Prototype in conio.h

Both functions return the character read.
Characters are available immediately - no
buffering of whole lines.
```

To use the `getche()` function you should include the line

```
#include <conio.h>
```

at the start of your program (typically before the main() function declaration).

ASCII Character Codes

The ASCII codes for the characters from '0' to '9' have values ranging sequentially from 48 to 57 ('0' is 48, '1' is 49, etc).

Exercise: What does the following program do? What would it print if you ran it and pressed the keyboard key labelled '4'?

```
main()
{
  int c ;
  c = getche() ;
  printf ( "%d\n", c ) ;
}
```

The fact that the ASCII character codes for digits are sequential and in increasing order makes it easy to convert from the character value to the number represented by that character. This is done by subtracting the value 48 from the character code. For example, the C expression `'3' - 48` has the value 3.

The `printf()` function

The `printf()` function has many features. To do assignment 1 you only need to do two things: begin a new line on the screen and print one period. This can be done using the following function calls:

```
printf ( "\n" ) ;  /* start a new line */
```

and

```
printf ( "." ) ;  /* print a period */
```

Exercise: What does the following program do?

```
main()
{
  int i ;
  printf ( "\n" ) ;
  i = 0 ;
  while ( i < 4 ) {
     printf ( "." ) ;
     i = i + 1 ;
  }
  printf ( "\n" ) ;
}
```

You should include the line

```
#include <stdio.h>
```

at the start of your program (typically before the main() function declaration).