CS23710 Worksheet One 2000-01

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1 Introduction

This worksheet is intended to be a simple first introduction to the production of programs in the language 'C'.

The assessment for the module CS23710 will be wholely based on practical work.

2 Entry of a simple, supplied program

Take the simple program listed below for convenience and enter it into a file using your favourite editor. Use the *gcc* compiler to compile the source code so that an executable program is produced in a file called *a.out*

3 Compiler flags

Use an appropriate flag to the compiler to recompile your source code causing the executable program to be placed in a file whose name you specify.

What compiler flags exist to enable us to specify that we wish our source code to be checked against the rules for ANSI C ?

4 Source code modification - integer

Modify the source code so that the variable 'c' is calculated by dividing the value contained in the variable 'a' by the value contained in the variable 'b'. Compile and execute your new program. What value does the variable 'c' contain ?

5 Source code modification - real

Modify the source code from the last section to change the variables a, b and c so they are real variables rather than integer.

NOTE. For this purpose use the ANSI C variable type called float for your real variables.

You also need to know that %f can be used as a format conversion specification in the first argument of the call to printf to enable it to produce output corresponding to a float in its argument list.

Compile your new program. What value does the variable 'c' contain ?

What do we now know about the / operator and integer and real arithmetic?

6 The Example Program

```
/* This is a first C Program */

main ()

{

int a, b, c; /* define three integer variables */

a = 4; b = 5; /* give them values */

c = a + b; /* add them up */

/* print out some answers */

printf("The sum of %d and %d is %d", a, b, c);

}
```

7 Effort Allocated to the Worksheet

This worksheet should be completed in your two hour practical this week.

8 Submission Date for students attending CS23710

You should show your work to a demonstrator in your practical and make sure that he initials the appropriate boxes on his attendance / marking sheet for the sections you have completed.