Name:	
Student Number:	
Signature:	

UNIVERSITY OF NEW SOUTH WALES

COMP1917 – Computing 1

Session 2, 2013

PRACTICAL EXAMINATION

- Time allowed: 80 mins

- Total number of marks: [6, 9 or 15]

- The exam consists of **THREE** questions

- Candidates **MAY NOT** retain this paper

- Candidates must bring their student card for identification

- Candidates **MAY NOT** use any aids apart from the provided
  C Reference Card and writing materials

- Candidates *may not* communicate with any person besides the supervisor

- Mobile phones must be switched off

COMP1917 Final Practical Examination

There are **THREE** Exam Problem Questions. In each case, you are required to modify a given program by implementing a function to achieve a specific outcome, or to transform some data in a specific way. The marks for each Question will be clearly shown at the top of the Question.

You will be provided with an executable file implementing the solution to the question. You will need to provide your own test data to ensure your solution behaves correctly. You are also permitted to use the *C Reference Card* available from the course web site to assist you in programming.

Logging on

To log on to the examination environment, sit at your allocated workstation and move the mouse. You should see a small login window (different from the usual logon screen). Type your login name and usual password. Leave the window near the top of the screen so the supervisors can check your identity.

The exam environment provides you with a basic window manager that can create xterms and editor windows. Press the *right* mouse button to activate the menu.

The exam environment provides you with access to the usual UNIX commands, but you will not be able to access other accounts or the Internet.

Exam directory structure

The following diagram illustrates the structure of your working area.
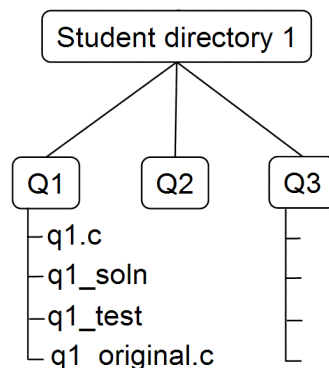
When you log on, your HOME directory is set to a workspace with (up to) three question subdirectories named `Q1`, `Q2` and `Q3`. Each directory contains four files following the same naming convention. For example, the `Q1` directory for Question 1 contains the C source you are required to modify `q1.c`, an executable solution `q1_soln`, a sample test file `q1_test`, and in case you need a fresh copy of the C source to work with, a copy of the source `q1_original.c`.

Submission

When you complete each question, enter this command into an xterm:

    submit *questionnum file*

where *questionnum* is the Question number (1, 2 or 3) and *file* is the C source file you wish to have assessed (`q1.c,` `q2.c` or `q3.c`).

You may submit multiple times if you wish; the last submission will be assessed. At the end of the elapsed time you must submit whatever you have completed.

If you have questions

You may put any questions to the supervisors. Raise your hand and wait for a response.

You may ask for a clarification of a question if you believe it to be unclear or ambiguous. You may *not* ask for advice on how to solve the task (or if you do the supervisor will ignore the request).

If you need to leave the room temporarily, raise your hand. As you must be accompanied by a supervisor only one person may be absent at a time. Nobody may leave before half an hour has elapsed from the end of reading time and nobody is admitted after this time.

And finally...

Try to relax. This is not meant to be an ordeal, but to reflect the kind of situation where simple but realistic problems can be solved using skills acquired over the last several weeks. Just make sure you leave sufficient time to attempt all questions.

Question 1: [.. Marks]

Implement a function that ...

The C source file `q1.c` contains ...

The executable file `q1_soln` may be used to check the behaviour of the desired solution.

Add your solution at the top of the existing source file without renaming the file.

Compile your solution with the following gcc command and options. This will be the command we use to test your solution:

```
gcc -O -Wall -Werror -o q1 q1.c
```

You should then test your solution with the given test file using the command:

```
./q1 < q1_test
```

However, you should test your solution more thoroughly to ensure its correctness.

When you are finished working on the solution, use the command

```
submit 1 q1.c
```

to submit your work for marking. You may *resubmit* your solution after further work on it. We will mark your last submission.

End of Question 1