COM 6854: Verification and Testing

Exercise Sheet 10

Exercise 1: Test the following program with the defs/uses procedure.

```
void MinMax (int Min, int Max)
{
    int Aux;
    if (Min < Max)
    {
        Aux = Max;
        Max = Min;
        Min = Aux;
    }
}
```

(a) Draw the control flow graph of the program, adding information on variables defined and used to each node.

(b) For each node and each variable defined there, list the succeeding nodes at which the respective variable is c-used the succeeding nodes at which it is p-used.

(c) Give test cases and paths for the all defs-criterion, the all p-uses-criterion and the all c-uses/some p-uses criterion.

Exercise 2: A program that determines prices is to be tested. The program takes article identifiers, numbers of articles and discounts. An article number is limited to 10^4 and must be at least 1. A discount can be between 0% and 100%. Identify equivalence classes and test cases for boundary value analysis.