

Department of Computing

Curtin University

Software Engineering Testing (SET)

Week 7 Laboratory/Tutorial

The following exercises are intended to be done in a laboratory/tutorial session with a teaching assistant or instructor present. The exercises have been designed to reinforce concepts taught in SET.

1. List all the clauses for the predicates given below:

(a) $((f \leq g) \wedge (X > 0)) \vee (M \wedge (e < d + c))$

(b) An if statement:

```
if ((a > b) || C) && (x < y)
    o.m( );
else
    o.n( );
```

2. Write the predicate (only the predicate) to represent the requirement: "List all the wireless mice that either retail for more than \$100 or for which the store has more than 20 items. Also list non-wireless mice that retail for more than \$50."

3. Answer the following questions for the method `checkIt()` below:

```
public static void checkIt (boolean a, boolean b, boolean c)
{
    if (a && (b || c))
    {
        System.out.println ("P is true");
    }
    else
    {
        System.out.println ("P isn't true");
    }
}
```

(a) Identify the predicate and clauses that go with `checkIt()`.

- (b) Compute (and simplify) the conditions under which each of the clauses determines predicate p .
- (c) Write the complete truth table for all clauses. Label your rows starting from 1 (based on the definition of Combinatorial Coverage). Include columns for the truth value of the predicate and for the conditions under which each clause determines the predicate.
- (d) Identify all pairs of rows from your table that satisfy General Active Clause Coverage (GACC) with respect to each clause.