CITS5501 Software Testing and Quality Assurance
Logic-Based Testing

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Logic-based testing

- One simplification we made when looking at source flow control was that a decision point was just treated as a "black box" – it might contain a complex boolean condition, but all we cared about was the fact that graph edges went in, and graph edges came out.
- Modeling the internal structure of the boolean conditions leads us to *logic testing* – modeling the logical structure of conditions, and checking how well we have exercised different parts of them.

Logic expressions

- Logic expressions show up in many situations in software systems.
  - Decisions in programs
  - State charts (a system can move to a different state when particular conditions are satisfied)
  - Use cases (a user can take different actions)
  - . . . pretty much all the things we could model as a graph, in fact, where there's a choice of path based on logical conditions
  - Requirements, both formal and informal (e.g. something must satisfy requirement A **AND** either or both of requirements B and C)
  - SQL queries