

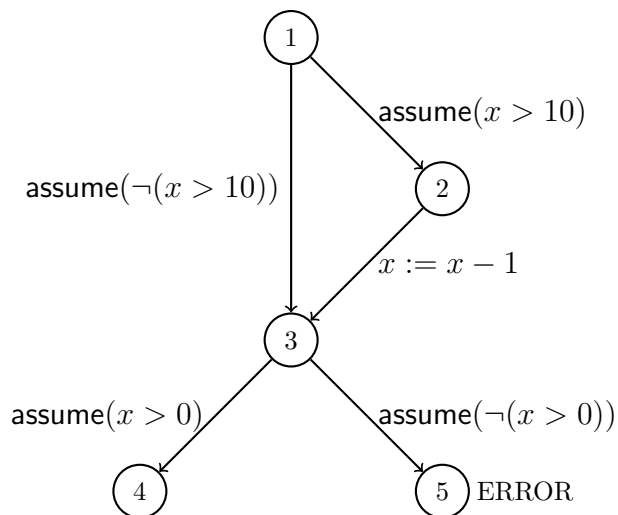
# Example for deriving a labeled transition system and an abstraction from a C program

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Given the following program:

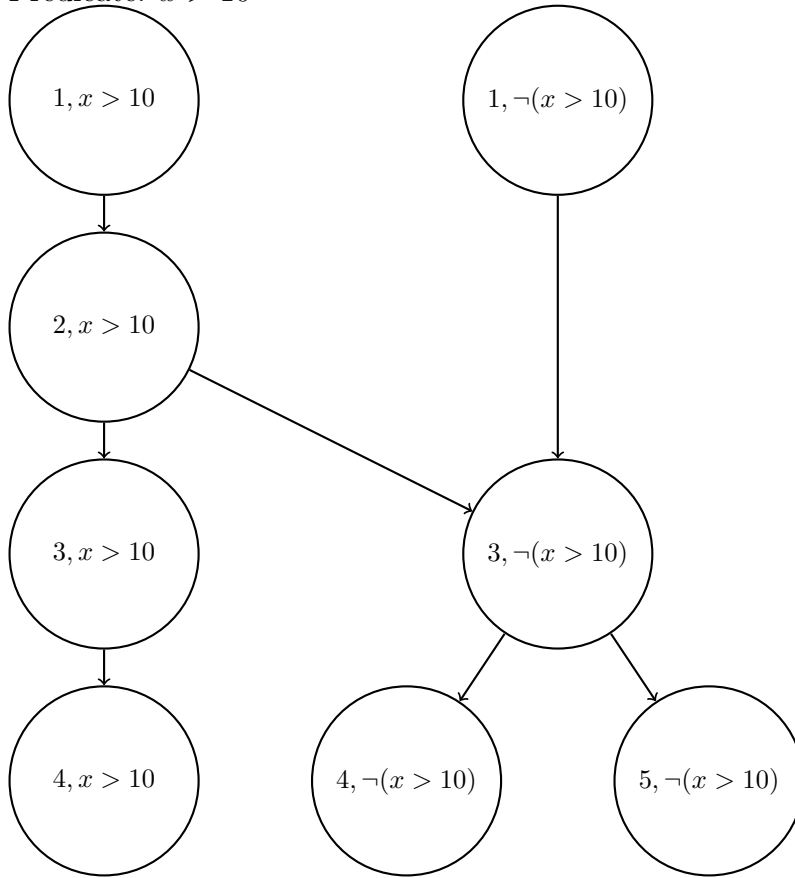
```
int x;  
  
void foo() {  
    if (x > 10) {  
        x--;  
    }  
  
    assert(x > 0);  
}
```

## 1 Labeled Transition System



## 2 Abstraction

Predicate:  $x > 10$



## 3 Error Trace

A feasible trace to the error location is  $(1, \neg(x > 10)), (3, \neg(x > 10)), (5, \neg(x > 10))$ .

A spurious trace to the error location is  $(1, x > 10), (2, x > 10), (3, \neg(x > 10)), (5, \neg(x > 10))$ .