Test

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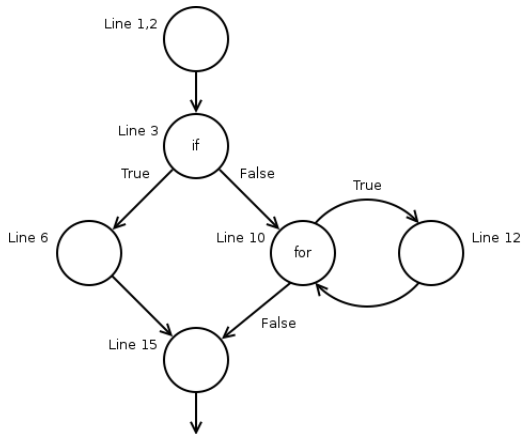
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Overview

Control-Flow Testing

- White-box testing
- Control-Flow Graphs
- Good coverage

Example Code

```
1   int Factorial(int n) {
2       int f = 1;
3       if (n < 0)
4       {
5           // -1 indicates an error
6           f = -1;
7       }
8       else
9       {
10          for (int i = 1; i < n; i++)
11          {
12              f *= i;
13          }
14      }
15      return f;
16  }
```

Example Graph

Coverage Criteria

- Statement Coverage
  - All statements are executed
  - Weakest
- Decision Coverage
  - All branches covered
  - Stronger than statement coverage
- Loop Coverage
  - Loop boundary
  - 0, 1, highest valid, lowest valid

The End

"Testing shows the presence, not the absence of bugs."
— Edsger W. Dijkstra