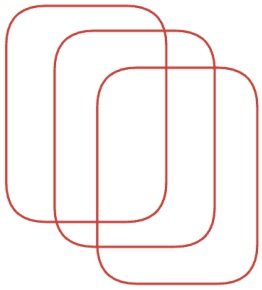
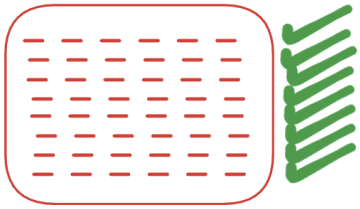
Statement(code) Coverage

test coverage için verilen en genel örnek: unit tests

$$\text{Coverage} = \frac{\#\text{executed statements}}{\#\text{all statements}}$$

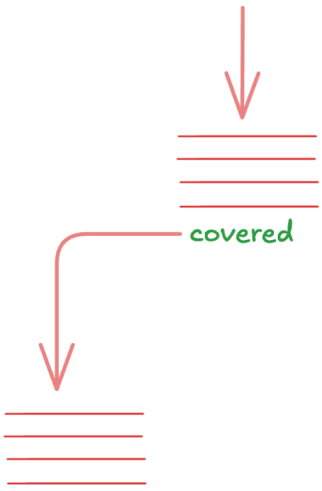




Types of Bugs	Likely	Rare
Mostly Harmless	Testing	Don't care
Catastrophic	Testing FV	FV

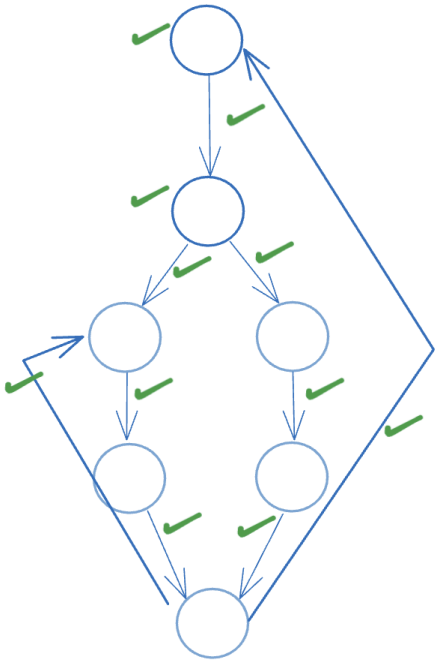
satır bazlı coverage

statement/block bazlı coverage



bu fikir satır bazlı code coverage'a bakar.

- block/statement bazlı,
- satır bazlı,
- branch bazlı
- path bazlı



Flow diagram

-brach testing

Branch Testing

$$\text{Coverage} = \frac{\#\text{executed branches}}{\#\text{all branches}}$$

```
y = x;
if (x < 0)
{
  y = -x;
}
```

if you test all of the statements,
you have %100 of statement coverage

however, here there's another edge case
which is x>=0. Therefore checking all the statements
will not give %100 of branch coverage
<you didn't test every edge case>

Satisfying Coverage

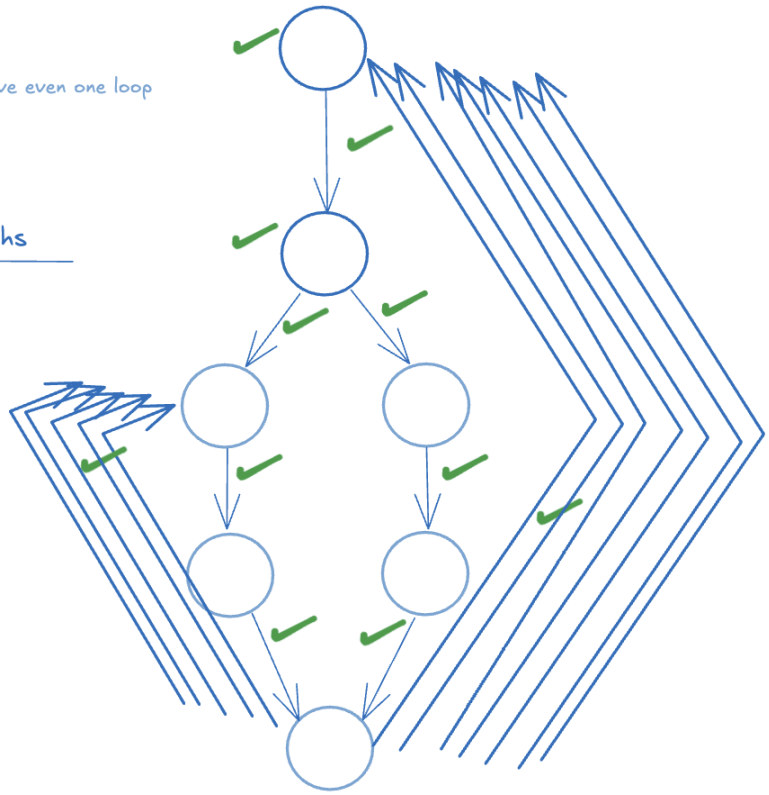
Almost impossible to have %100 coverage.

Path Testing

highest coverage -> problem: if you have even one loop in your code, the paths are infinate.

Path Testing

$$\text{Coverage} = \frac{\#\text{executed paths}}{\#\text{all paths}}$$



Control Flow Graph,
Towards Procedure Call Testing
...

3 main data structures of testing

Structural Testing Hierarchy

*Bunlar slaytta da var.