

## Pure functions are deterministic

```
// Non-deterministic  
case class NonDeterministicClass(var n : Int = 0) {  
  def whatDoIDo(i: Int) : Int = {  
    n = n + 1  
    i + n  
  }  
}  
  
val c1 = NonDeterministicClass()  
val f1 = c1.whatDoIDo(10) // 11  
val f2 = c1.whatDoIDo(10) // 12
```

Harder to test

# Pure functions are

1. **Total**
2. **Deterministic**
3. **Without side-effects**