Functions that have side effects in the real world are not pure

```
// Side effects
def addUserToDB(id: Int, name: String)(implicit db: Database) : Boolean = {
   db.insert(id, name)
}

val u1 = addUserToDB( id = 1, name = "Justin") // True
val u2 = addUserToDB( id = 1, name = "Justin") // False (already exists)
```

Hard to test

Not referentially transparent

Functions that have side effects in the real world are not pure

```
// Side effects
def addUserToDB(id: Int, name: String)(implicit db: Database) : Boolean = {
   db.insert(id, name)
}

val u1 = addUserToDB( id = 1, name = "Justin") // True
val u2 = addUserToDB( id = 1, name = "Justin") // False (already exists)
```

Hard to test

Not referentially transparent

Hard to compose