

## Functions that are not total

```
// Not a total function throws java.lang.ArithmeticException: / by zero  
def tenDividedByN(n: Int) : Int = 10 / n  
  
// Not a total function throws java.lang.NumberFormatException  
def stringToInt(s: String) : Int = {  
  | s.toInt  
}
```

**Total functions  $A \rightarrow B$  return a valid B for every A**

**Exceptions are not valid type B**

**Lost ability to compose**

# Pure functions are

**1.Total**

**2.Deterministic**