

The Main Difference between Pure Functions and Impure Functions Is:

## Side Effects

Let's explain what the side effects are and then we will get to the examples. 😊

A **side effect** occurs in a program whenever you use *external code* in your function — which, as a result, impacts the function's ability to perform its task.

SO,

----The Pure Functions Are Functions without any side effects.

Like:

```
function updateMyName(newName) {  
  const myNames = ["Oluwatobi", "Sofela"];  
  myNames[myNames.length] = newName;  
  return myNames;  
}
```

---- The Impure Functions Are function that contains one or more side effects.

```
const myNames = ["Oluwatobi", "Sofela"];  
  
function updateMyName(newName) {  
  myNames.push(newName);  
  return myNames;  
}
```

## Advantages of Pure Functions

The following are some advantages of pure functions.

### Pure functions are independent

Pure functions do not affect any external state, and they are also not affected by external code.

In other words, all external data a pure function uses gets received as parameters — they are not *explicitly used internally*.

Therefore, what you see within is what you get — there are absolutely no strings attached.

As such, you don't need to look for external conditions (states) that might impact your pure function's effective operation as all activities happen within.

#### **Pure functions are easier to read**

Pure functions are easier to read and debug than their impure alternatives.

Pure functions are so readable because they are solely dependent on themselves — they neither affect nor are they impacted by external states.

### **Important Stuff to Know about Pure Functions**

Keep these three essential pieces of info in mind whenever you choose to use pure functions.

#### **You can clone an external state into a pure function**

Cloning an external state into a pure function does not make the function impure.

#### **Avoid code mutations in pure functions**

Technically, you can mutate variables defined locally within a pure function's scope. However, it is best to avoid doing so.