

JavaScript functions are fundamental building blocks of the language. They are used to encapsulate code into reusable blocks. Here are the main types of JavaScript functions with examples:

1. **Function Declaration**
2. **Function Expression**
3. **Arrow Function**
4. **Anonymous Function**
5. **Immediately Invoked Function Expression (IIFE)**
6. **Generator Function**
7. **Async Function**

## **1. Function Declaration**

A function declaration defines a named function that can be invoked using its name. It is hoisted to the top of its scope, meaning it can be called before it's defined in the code.

## **2. Function Expression**

A function expression defines a function inside an expression. It can be named or anonymous and is not hoisted, meaning it cannot be called before it is defined.

## **3. Arrow Function**

Arrow functions are a shorthand syntax for writing function expressions. They do not have their own `this` context and are always anonymous. They are especially useful for writing concise, single-line functions.

## **4. Anonymous Function**

An anonymous function is a function without a name. It can be defined as a function expression, passed as an argument to another function, or used in an IIFE.

## **5. Immediately Invoked Function Expression (IIFE)**

An IIFE is a function expression that is executed immediately after it is defined. It is often used to create a new scope and avoid polluting the global scope.