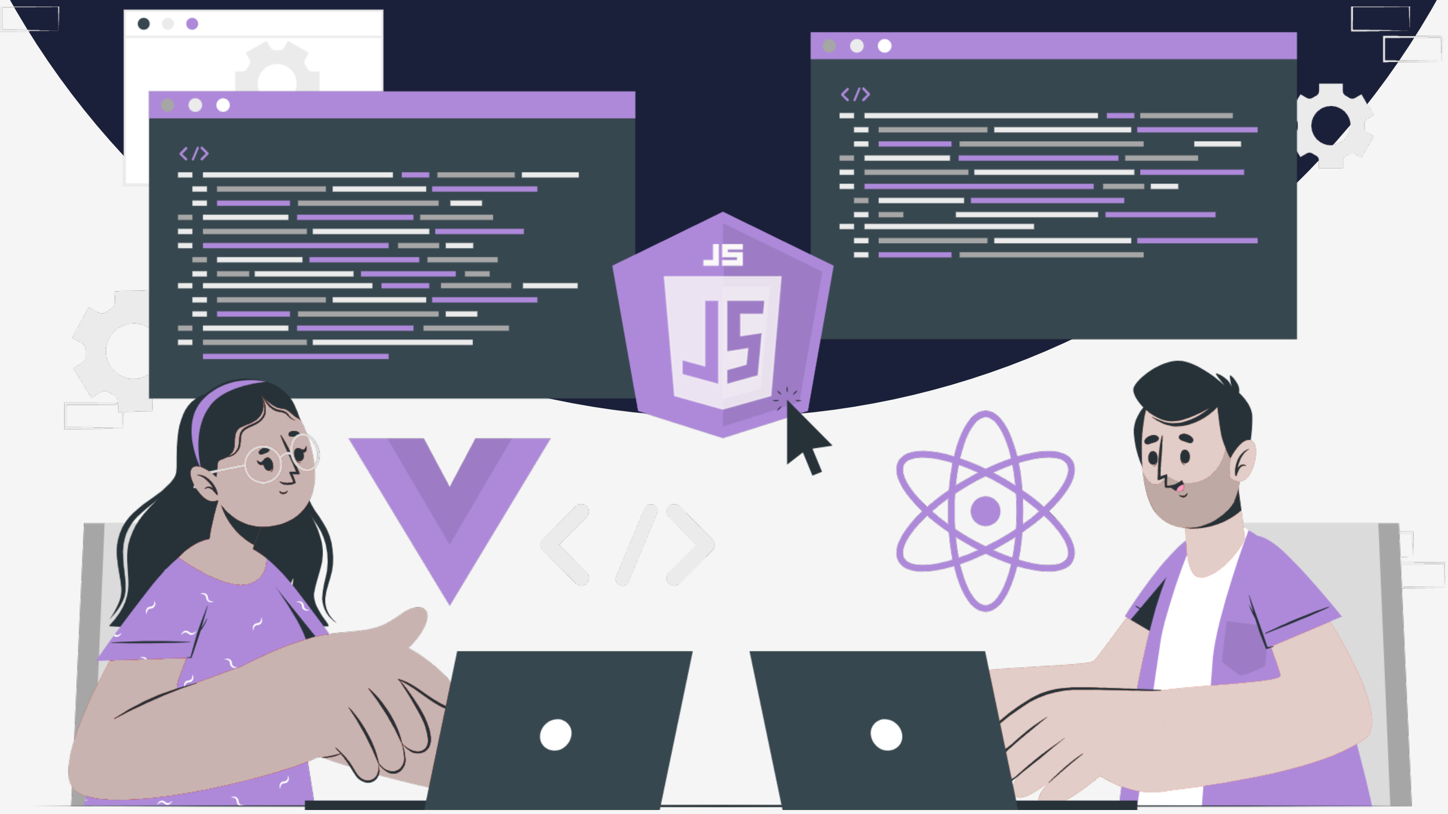
Lesson:

Anonymous Function



PW SKILLS

Topics Covered:

1. Introduction to Anonymous functions.
2. Anonymous Functions
3. Syntax of Anonymous functions.
4. Immediately Invoked Function Execution.

As the name suggests, "Anonymous", is something that does not have any "name" or "identity". Similarly, anonymous functions in javascript are functions that do not have any name. Named functions are simply functions that have some name associated with them, you can consider them as the normal javascript functions we use.

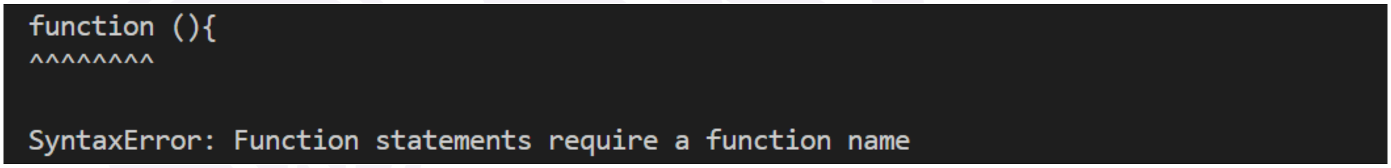
In general, an anonymous function is a function without a function name but can be assigned to a variable. Arrow functions are also anonymous functions with a compact syntax.

Can normal functions be unnamed?

Let's declare a function without any name and see the response.

```
function (){
    console.log("Hello PW Skills");
}
```

Output:



```
function (){
^^^^^^^^

SyntaxError: Function statements require a function name
```

If we try to run this function, it will result in an error saying the Function statement requires a function name. We cannot have a function without a name in JavaScript. But then, how do we create anonymous functions?

Syntax of Anonymous Function.

Here is the syntax on how to declare an anonymous function.

```
let variableName = function () {
  // Function Body
};
```

Calling an Anonymous function.

```
let variableName = function () {
  // Function Body
};

// Calling an Anonymous function.

variableName();
```

We assign this function to a variable. We can later use the variable whenever we need the value of the anonymous function. We declare an anonymous function by writing function() followed by the parentheses, where we may pass the parameters, and skip the function name as it is anonymous. Then in a pair of curly braces {}, we write our function code that will be executed on calling the function.

We should assign the anonymous function to a variable as anonymous functions in javascript are accessible after its initial creation. So we need to store the function in a variable so we can call it wherever necessary.

Immediately Invoked Function Expression

Sometimes, we need to execute the function immediately instead of calling it at a later point in time. In these situations, anonymous functions are a great option since they can be executed right when declared.

An IIFE (Immediately Invoked Function Expression) is a JavaScript function that gets called immediately. It is a way to execute functions immediately, as soon as they are created.

Syntax:

```
// IIFE

(function () {
  // Function Body
})();

// IIFE

(function (num) {
  console.log(num * num);
})(5);
```

The above is an anonymous function that returns the square of the number. It directly prints the square to the console without even calling the function.

In the above example, the square of the number 5 which is 25 is returned as the parameter 5 is passed.

```
// IIFE

(function (num) {
  console.log(num * num);
})(5);

// OUTPUT: 25
```

IIFEs can be used to scope variables. We will be learning about them in further lectures.