# Lesson 05 Demo 02

# Working with Functions and Arrays

**Objective:** To create functions and work with arrays by performing operations such as pushing, removing, and updating array elements

**Tools required:** Visual Studio Code and Node Package Manager

**Prerequisites:** JavaScript and knowledge of basic Linux and NPM commands

Steps to be followed:

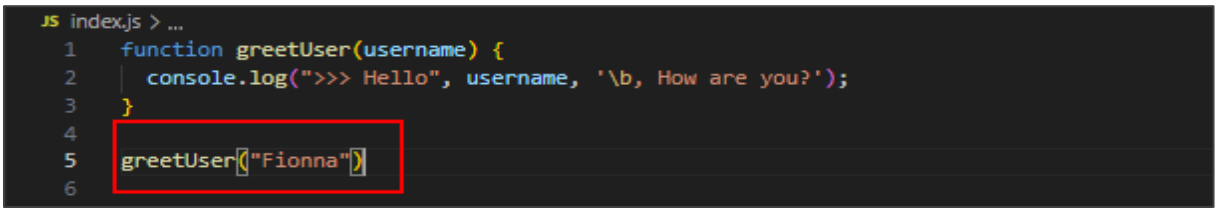
1. Declare a simple function in JavaScript
2. Store the function reference in a variable
3. Declare the first-class function using the arrow operator
4. Declare a simple array in JavaScript
5. Push a new value to an array
6. Remove an element from an array
7. Update the value at a particular index in an array

## Step 1: Declare a simple function in JavaScript

1.1 Create a function named **greetUser()** with an input argument in the **index.js** file

```
function greetUser(username) {
  console.log(">>> Hello", username, '\b, How are you?');
}
```

1.2 Execute the function by passing a string name: **greetUser("Fionna")**




1.3 Open the terminal window and execute the code using the command **node index.js** inside the project directory to view the output:


## Step 2: Store the function reference in a variable

2.1 Use the following to define a function named **greetUser**(), which takes a **username** parameter and logs a greeting message to the console:

```
const greetUser = function(username) {
  console.log(">>> Hello", username, '\b, How are you?');
}
```


2.2 Use the variable name to execute the function by passing a suitable string as input: **greetUser("Fionna")**

2.3 Open a terminal window and execute the command **node index.js** inside the project directory to view the output:

```
demopython1yopm@ip-172-31-16-204:~/Desktop/nodeProjec/demo4$ node index.js
>>> Hello Fionna, How are you?
```

## Step 3: Declare the first-class function using the arrow operator

3.1 Use the following code to declare the first-class function using the arrow operators:

```
const greetUser = (username) => {
  console.log(">>> Hello", username, '\b, How are you?');
}

greetUser("Fionna")
```


3.2 Open a terminal window and execute the command **node index.js** inside the project directory to view the output:

```
demopython1yopm@ip-172-31-16-204:~/Desktop/nodeProjec/demo4$ node index.js
>>> Hello Fionna, How are you?
```

## Step 4: Declare a simple array in JavaScript

4.1 Declare a simple array using the following code:

**let nameArray = ["Fionna", "Jack", "John"]**
**console.log(nameArray);**


4.2 Open a terminal window and execute the command **node index.js** inside the project directory to view the output:

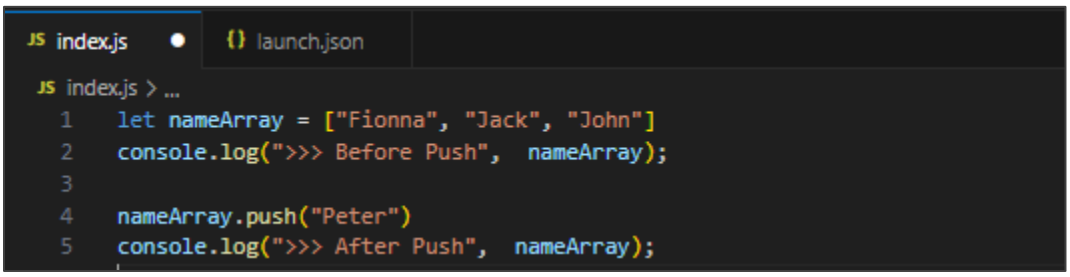
```
demopython1yopm@ip-172-31-16-204:~/Desktop/nodeProjec/demo4$ node index.js
[ 'Fionna', 'Jack', 'John' ]
```

## Step 5: Push a new value to an array

5.1 Use the following code to declare an array and push a new value in it:

**let nameArray = ["Fionna", "Jack", "John"]**
**console.log(">>> Before Push", nameArray);**

**nameArray.push("Peter")**
**console.log(">>> After Push", nameArray);**



5.2 Open a terminal window and execute the command **node index.js** inside the project directory to view the output:

```
demopython1yopm@ip-172-31-16-204:~/Desktop/nodeProjec/demo4$ node index.js
>>> Before Push [ 'Fionna', 'Jack', 'John' ]
>>> After Push [ 'Fionna', 'Jack', 'John', 'Peter' ]
```

## Step 6: Remove an element from an array

6.1 Use the following code to declare an array with some values and remove a value from it:


6.2 Open a terminal window and execute the command **node index.js** inside the project directory to view the output:

```
demopython1yopm@ip-172-31-16-204:~/Desktop/nodeProjec/demo4$ node index.js
>>> Before Pop [ 'Fionna', 'Jack', 'John', 'Peter' ]
>>> After Pop [ 'Fionna', 'Jack', 'John' ]
```

## Step 7: Update the value at a particular index in an array

7.1 Use the following code to declare an array with some values and update a value at a particular index:

**let nameArray = ["Fionna", "Jack", "John", "Peter"]**
**console.log(">>> Before Updation", nameArray);**

**nameArray[1] = "Jack Petersons"**
**console.log(">>> After Updation", nameArray);**


7.2 Open a terminal window and execute the command **node index.js** inside the project directory to view the output:

```
demopython1yopm@ip-172-31-16-204:~/Desktop/nodeProjec/demo4$ node index.js
>>> Before Updation [ 'Fionna', 'Jack', 'John', 'Peter' ]
>>> After Updation [ 'Fionna', 'Jack Petersons', 'John', 'Peter' ]
```

By following these steps, you have successfully created functions and worked with arrays by performing operations such as pushing, removing, and updating array elements.