1 Functions and Prototyping

index.html

```
<html>
  <body>
    <h1>MEAN Stack</h1>
    <p> Lesson 3 Demos </p>
    <script src="functions_and_prototypes.js"></script>
  </body>
</html>
```

functions_and_prototypes.js

```
function Employee(name, designation, yearOfBirth){
  this.name= name;
  this.designation= designation;
  this.yearOfBirth= yearOfBirth;
}
Employee.prototype.calculateAge= function(){
  console.log('The current age is: '+(2019- this.yearOfBirth));
}
console.log(Employee.prototype);
let Emp1= new Employee('Alex', 'Junior Tester', 1995);
console.log(Emp1) ;
Emp1.calculateAge();

let Emp2= new Employee('Dexter', 'Senior Software Developer', 1990);
console.log(Emp2)
Emp2.calculateAge();

let Emp3= new Employee('Annie', 'Junior HR', 1998);
console.log(Emp3)
Emp3.calculateAge();
```

2 Working with Functions

index.html

```
<html>
   <body>
      <h1>MEAN Stack</h1>
      <p> Lesson 3 Demos </p>
      <script src="function.js"></script>
   </body>
</html>
```

function.js

```
<!DOCTYPE html>
<html>
<body>
<h1>Javascript – Function<h1>

<script>

  var x = (2 * 3) + 5;
  var y = 3 * 4;

  var result = myFunction(2,3);
  console.log(result);

  function myFunction(num1, num2) {
  var a = num1 * num2;
  var b = num1 + num2;
  return(a + b);
  }

  console.log( myFunction(3, 4));
```

```
  function toCelcius(f){
  return (5/9) * (f-32);
  }
  console.log("The temperature is "+ toCelcius(60));
</script>
</body>
</html>
```

3 IIFEs, Callbacks, and Closures

index.html

```
<html>
   <body>
      <h1>MEAN Stack</h1>
      <p> Lesson 3 Demos </p>
      <script src="IIFEs_Callbacks_Closures.js"></script>
   </body>
</html>
```

IIFEs_Callbacks_Closures.js

```
const empId = (function() {
   let count = 0;
   return function() {
     ++count;
     return `emp${count}`;
   };
 })();

 console.log("New Emplyee IDs are listed here");
 console.log("Alex: "+empId());
 console.log("Dexter: "+empId());
```

```
console.log("Annie: "+empId());



//Callbacks
console.log("\n"); //to start the output from the neext line
function fullName(firstName, lastName, callback){
  console.log("My name is " + firstName + " " + lastName);
  callback(lastName);
}

var greeting = function(ln){
  console.log('Welcome ' + ln);
};

fullName("Alex", "Wilson", greeting);
console.log("\n");
fullName("Dexter", "Johnson", greeting);
console.log("\n");
fullName("Annie", "Butler", greeting);
```

4 Maps and Classes

index.html

```
<html>
   <body>
      <h1>MEAN Stack</h1>
      <p> Lesson 3 Demos </p>
      <script src="maps_and_classes.js"></script>
   </body>
</html>
```

maps_and_classes.js

```
<!DOCTYPE html>
<html>
<body>
<h1>Javascript – Maps and Classes<h1>

<script>

var map1 = new Map();
map1.set("first name", "Robb");
map1.set("last name", "Stark");
map1.set("friend 1","Bran")
    .set("friend 2","Arya");
console.log(map1);
console.log("map1 has friend 3 ? " + map1.has("friend 3"));
console.log("get value for key = friend 3 - "+ map1.get("friend 3"));
console.log("delete element with key = friend 2 - " + map1.delete("friend 2"));
map1.clear();
console.log(map1);
class Employee
{
    constructor(id,name)
    {
      this.id=id;
      this.name=name;
    }
    detail()
```

```
   {
  document.writeln(this.id+" "+this.name+"<br>")
   }
 }
//passing object to a variable
var e1=new Employee(101,"Michael");
var e2=new Employee(102,"Bob");
e1.detail();
e2.detail();
```