Angular Framework

Angular is a framework used to develop single page applications using HTML & Typescript.

Single Page Applications are applications that makes user to see everything in one page, it only loads part of the page instead of reloading the complete page whenever user interacts with the application.

Ex: Gmail, Facebook, GitHub, Angular.io, ...

Angular uses component to render the data, components are UI’s which can be independently built and reused in other components. They are build without knowing where it will be displayed

Ex: Facebook has Profile component, that can be reused in comments, likes, newsfeed and so on.

Angular uses HTML & Typescript to develop the application.

HTML: It is used display the content

Typescript: It is used to write logics in angular, like fetching the data from server and passing the data to the HTML, deciding what components to be loaded and so on.

Typescript is a super-set of Javascript, it is less error prone compare to javascript, Typescripts are compiled to javascript.

* Typescript more safe compare to javascript
* It supports all the features of Javascript, including the new features of Javascript (released by ES6 in 2015)
* ES means EcmaScript which is a standard or specification for Javascript, ES is not a programming language, however Javascript implements the ES standard

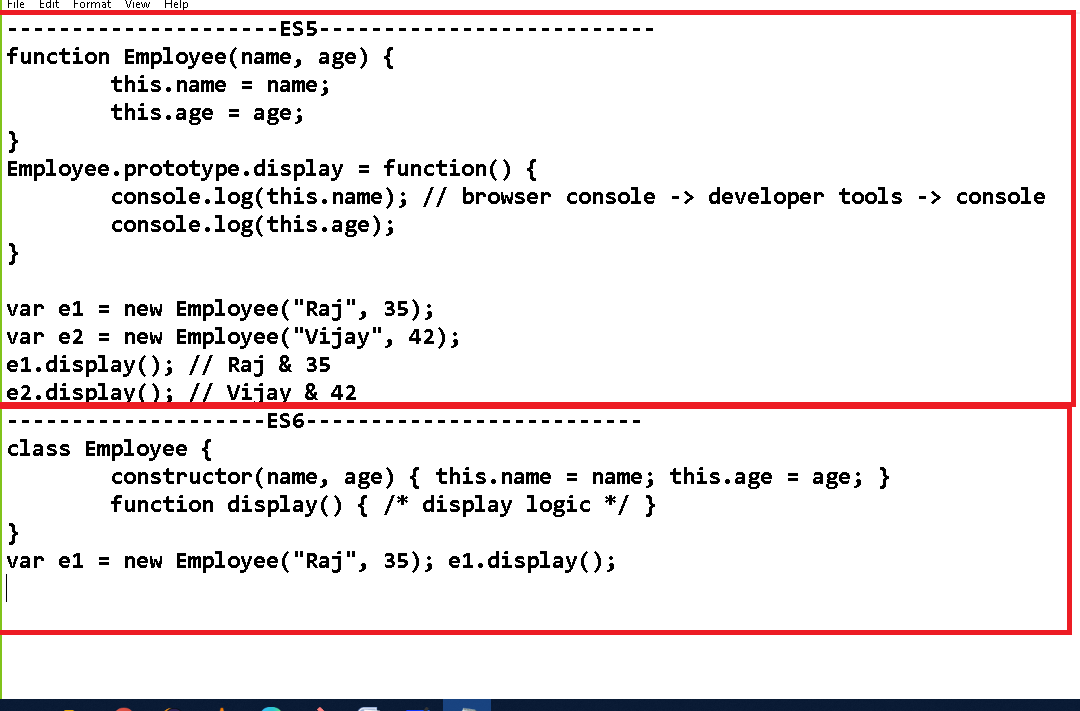
Softwares required for Angular application development

* Visual Studio Code - Editor
* Node.js - Runtime environment to run javascript code & also angular code
* Angular CLI - toolkit for angular applications

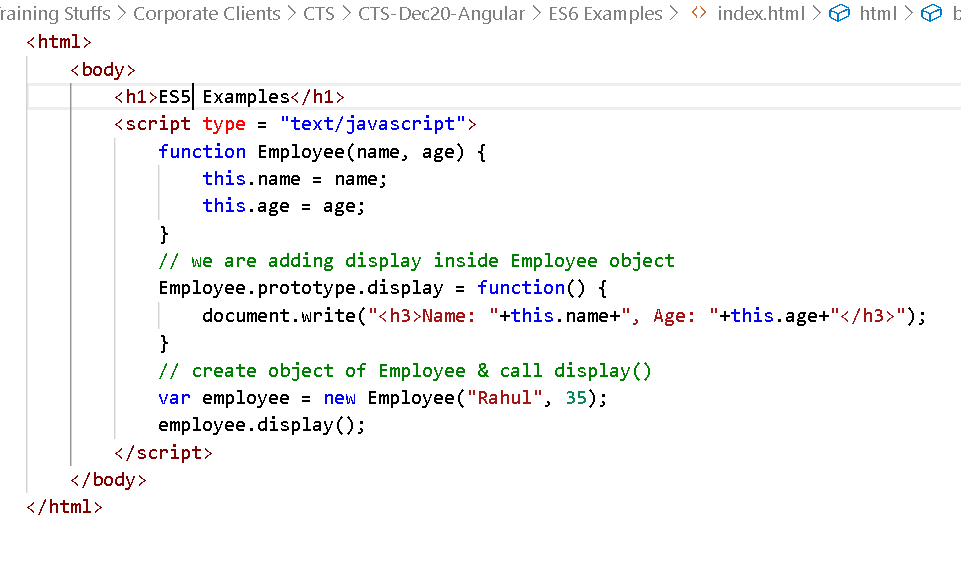
ES6 features:

There are few new features added that simplifies javascript coding

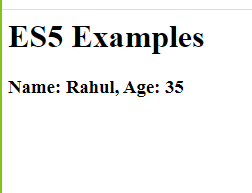
* let, const, class, constructor keywords
* template strings
* arrow functions
* rest & spread operators



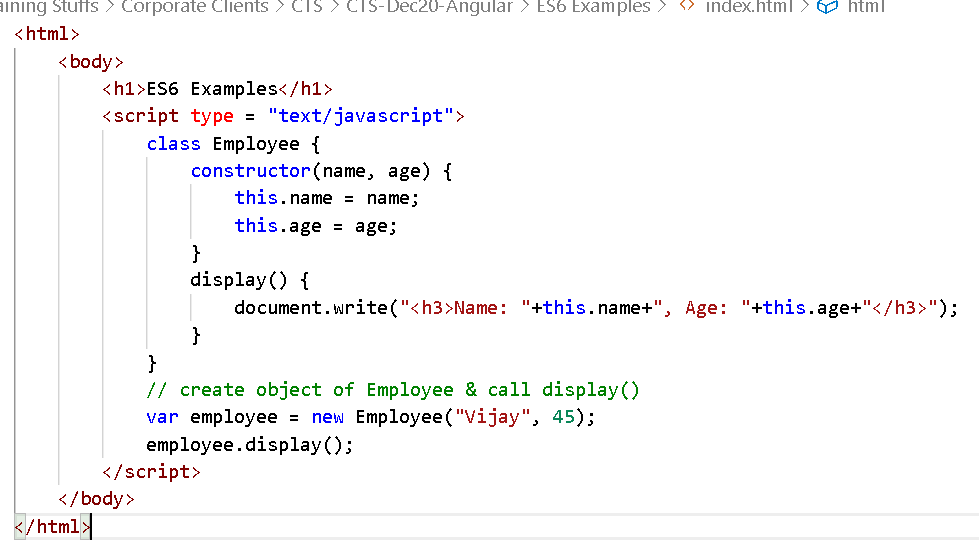
Creating function & object in ES5



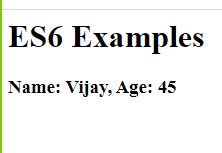
Output:



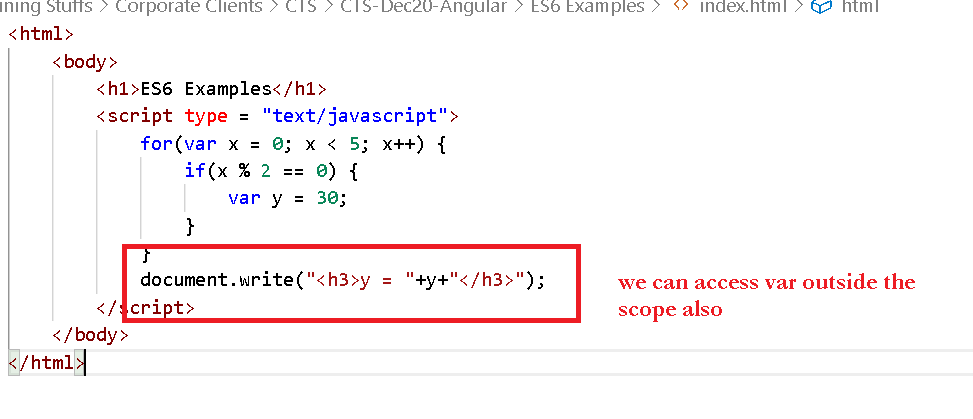
ES6 uses class & constructor keywords



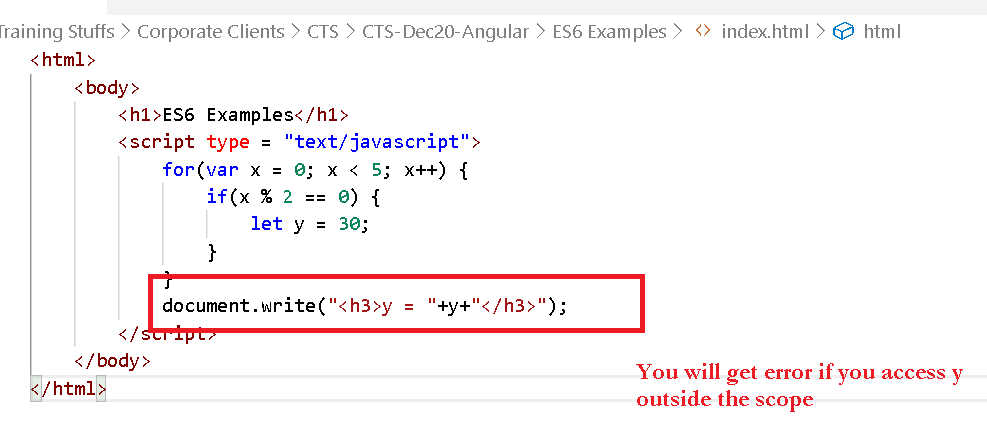
Output:



let, const keywords: these are used to create block scoped variables, because in javascript you were creating variable with ‘var’ which is not part of any scope.



But with let & const you can create block scope variables



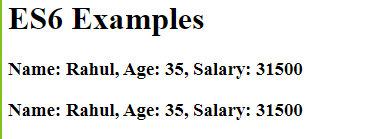
Template String

It allows you to create a string & access the data without breaking the strings using + operator.

Template strings uses a backtick(`) i.e., a quote below the Esc key.



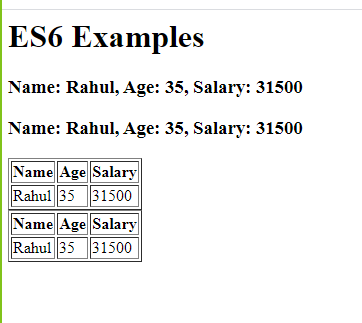
Output:



You can’t give line break without + in “ or ‘ quotes but you can give line break in ` without + operator

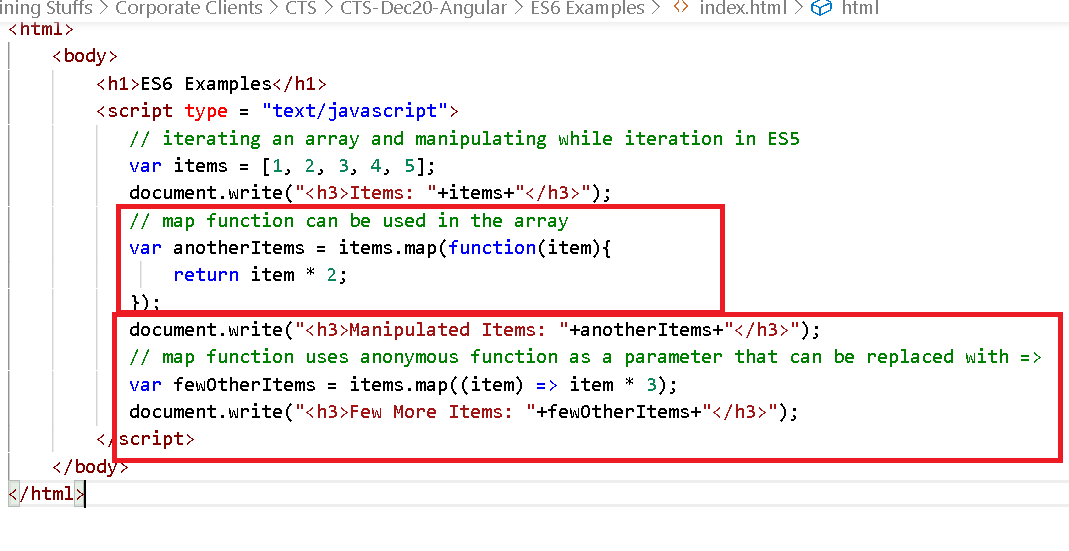


Output:

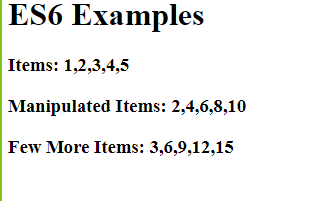


Arrow functions(=>):

These simplifies writing anonymous functions in javascript where they are having few lines of expressions.



Output:



Rest & Spread operators

When a function doesn’t have an idea how many parameters are supplied by a caller you can have rest operator, and also when an input has to be spread across multiple parameters of a function you can use spread operator.

add(4, 3, 1, 2);  
add(4, 3);  
add();

Rest operator:

function add(...x) { .... }

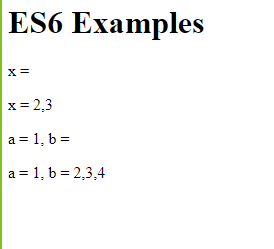
The add function takes test parameter means can accept any number of parameters from 0 to many

function test(a, ...b) { ...}

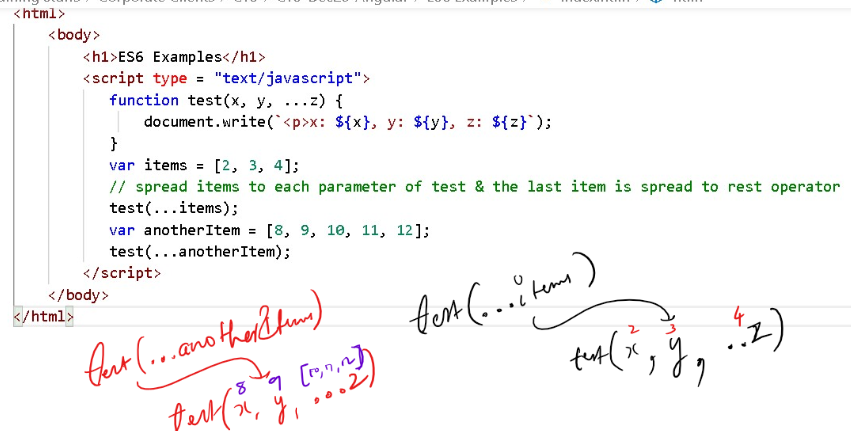
The test function takes 1 parameter minimum followed by 0 or many parameters



Output:



Spread operator



Output:

