Typescript : It is a superset of javascript. Angular2 is built in typescript . It is completely object oriented scripting

By definition typescript is javascript for application scale development.

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Typescript is typed superset of javascript compiled to javascript.

Note : The online official editor for typescript is : [www.typescriptlang.org/Playground](https://www.typescriptlang.org/play/)

Simply declaring the variable in typescript :

let n : number = 120;

console.log(‘The number is ‘+n)

**Environment setup :**

1)We need one editor . The file extension for typescript is **.ts;**

a)We can also install vim editor with typescript from following link : https://www.microsoft.com/en-us/download/details.aspx?id=55258

For vim editor we have the option to open on command prompt by right clicking on the file.

b) Note we can configure the typescript on bracket .The steps are as follows

Go to menubar at top. Click on the **file->Extension manager.** Now search for **typescript** in the searchbar. Install **Bracket TSLint** and **Brackets Typescript.** We ca also install **Brackets shell** to use command prompt.

**2)**Typescript compiler :

The TypeScript Compiler

The TypeScript compiler is itself a **.ts** file compiled down to JavaScript (.js) file. The TSC (TypeScript Compiler) is a source-to-source compiler (transcompiler / transpiler).



The TSC generates a JavaScript version of the **.ts** file passed to it. In other words, the TSC produces an equivalent JavaScript source code from the Typescript file given as an input to it. This process is termed as transpilation.

However, the compiler rejects any raw JavaScript file passed to it. The compiler deals with only **.ts** or **.d.ts** files.

3)Install node.js

After installing the node we can test it by firing command on cmd :

node –v

4)Now install typescript by :

npm install typescript –g

5)Running the typescript file :

First create a file with extension **.ts.** Fir ex : first.ts

Now, open the cmd and fire compile it by : **tsc first.ts**

To excute : **node first.ts**

Typescript is case sensitive :

Creating class in typescript :

Class Abc{

show() {

console.log(‘This is test example’);

}}

var obj = new Abc();

obj.show();

**Different datatype in typescript :**

**Any :** The super set of all data types.

**Build in type :** number , string , boolean , void , null , undefined

**User defined data type** : Array , Enum , class , Interface

There is no integer data type in typescript or javascript.

Loop :

var n : number = 1;

for(n=1;n<=10;n++){

}

Optional parameter in typescript.

function disp\_details(id:number,name:string,mail\_id?:string) {

console.log("ID:", id);

console.log("Name",name);

if(mail\_id!=undefined)

console.log("Email Id",mail\_id);

}

disp\_details(123,"John");

disp\_details(111,"mary","mary@xyz.com");

**Class in typescript :**

**Create a simple class Employee with data members as id, first\_name , last\_name, sal . Initialize through the function and the display them.**

class Employee {

id: number;

first\_name: string;

last\_name: string;

salary: number;

setEmployeeData(id:number,first\_name:string,last\_name:string,salary:number):void {

this.id = id;

this.first\_name = first\_name;

this.last\_name = last\_name;

this.salary = salary;

}

showEmployeeData():string {

return 'Id = ' + this.id + '\n Name = ' + this.first\_name + ' ' + this.last\_name + '\n Salary = ' + this.salary;

}

}

var obj = new Employee();

this.obj.setEmployeeData(1, 'Mohan', 'kumar', 100000);

console.log(this.obj.showEmployeeData())

**2)Create a simple class Employee with data members as id, first\_name , last\_name, sal . Initialize through the constructor and the display them.**

Hint :

constructor(id:number,first\_name:string,last\_name:string,salary:number) {

this.id = id;

this.first\_name = first\_name;

this.last\_name = last\_name;

this.salary = salary;

}