**Typescript**

* It is a superset of javascript.
* It cannot run directly on the browser.
* Typescript code first compiled to the javascript code using typescript compiler because bowser only process javascript.
* It uses javascript syntaxes and add additional syntaxes for types.
* Typescript uses compile time checking.
* It supports oop features such as classes, interfaces, inheritance, etc.
* Latest version of typescript is 4.9.5.
* **The let command is turned into var command when typescript is converted to javascript. It is because compiler transpiles(translate a source code from one language to another) to ES3. The let keyword doesn’t exist in ES3 so the best replacement of the let keyword is the var keyword.**

**Typescript types**

* Javascript doesn’t support data types, but with the help of typescript we can use the data type feature in javascript.
* Typescript provides data types as an optional type system.
* Typescript data types are classify as: static, generator and decorators.
* In statically-typed language variables types are known at compile time.
* In these type of language, types are indicated by the programmer.
* Compiler used this information to perform type checking.
* Static types are divided into 2 categories: built-in and user-defined.
* Five built-in(primitive) data types: Number, String, Boolean, Void, Null, Undefined, Any
* Typescript supports following user-defined data types: array, class, tuple, enum, Interface, functions.

**Numbers**

* Numbers are stored as floating-point values.
* The numeric values are treated as number data types.
* Typescript also support binary, octal, decimal and hexadecimal numbers.
* It will display numbers in decimal form only.

**Strings**

* String data type is used to represents the text.

**Boolean**

* It has two values: true and false.

**Void**

* It is a return type of the functions which do not return any type of value.

**Null**

* Represents a variable whose value is undefined.

**Undefined**

* Denotes all uninitialized variables.

**Any**

* Super type of all data type in typescript.
* Used to represent any Javascript value.
* It is used when we want to skip type checking on compile time.
* Allows to assign any type of value.

**Array**

* It is a collection of elements of same data type.
* It type can be written in two ways: var list:number[] = [1,2,3] or var list:Array<number> = [1,3,5]
* We can also create mixed array. But typeof method returns object for mixed array.
* The readonly keyword can prevent arrays from being changed.

**Tuple**

* It is a typed array with predefined length and types for each index.
* To define a tuple, specify the type of each element in the array.
* Typeof() method returns the object type.