**TypeScript Concepts:**

TypeScript has seen enormous growth in the past years. Today, it is used to build several key frameworks like AngularJS, Ionic etc. Several large applications such as Visual Studio Code and Office Web Applications are also built using the same, with more coming online every day.

TypeScript enables you to leverage features from the current and future of JavaScript while increasing the productivity of JavaScript development across the board.

TypeScript is a superset of JavaScript. It means that TypeScript provides all the features and functionalities of JavaScript with some added features. TypeScript compiles to JavaScript, which the browser understands. TypeScript provides “type safety” (hence the name!) to JavaScript. It was created by Microsoft and is open source.

To understand type safety, consider an example where you define a variable name. In JavaScript, you would use a similar code as below:

**var name = "Harshil"**

Since this is a variable name and we haven’t defined its type, this variable can have any value. It doesn’t matter if it’s a string, number, boolean, or object. Hence, the below code will execute without errors:

**name = 17**

**name = false**

**name = {**

**first: "Harshi",**

**last: "Agrawal:**

**}**

Using TypeScript, you can define the type string for the variable name, as below:

**var name :string = "Harshil"**

If you change its value to any other type, the compiler returns an error. Type safety saves a lot of debugging time and helps in keeping the code consistent.

**Features of TypeScript**

Typescript enables developers to add type safety to their projects. Moreover, TypeScript provides various other features, like interfaces, type aliases, abstract classes, function overloading, tuple, generics, etc.

We'll talk about some of the latest features of TypeScript, including future ECMAScript proposals such as Async Functions, support for Angular and React/JSX, the state of the art type system capabilities, and how it all comes together to make working and creating things in JavaScript more productive and fun with TypeScript.