**What is TypeScript ?**

TypeScript is a superset of JavaScript in which you add types to JavaScript. JavaScript is a loosely typed language which leads to lot of types error in production code. With TypeScript developers can catch those error, even before running the code.

**What is the main difference between TypeScript and JavaScript?**

This is the core difference between JavaScript and TypeScript. While JavaScript is dynamically-typed, TypeScript is a statically-typed superset of JavaScript, which means it offers strict static typing as an option but will allow dynamic typing, as well.

**What is explicit and implicit type assignment?**

**Explicit/ Annotations** means writing out the type. Like below -

**let firstName: string = "Nabendu";**

**Implicit/ Inference** means TypeScript will guess the type, based on the value. Like below type will be considered a number

**let age = 41;**

**Difference between any, unknown and never in TypeScript?**

The type of any is used to assign any type of a variable. It will not give error even if you reassign another type. Like below -

**let x: any = 10;**

**x = 'hello'; // No TypeScript error**

**console.log(x.toUpperCase()); // No TypeScript error**

The type unknown is better than type any, because it requires us checking the type before performing operations on value. Like below -

**let y: unknown = 10;**

**// Type assertion needed before using y as number**

**if (typeof y === 'number') {**

**console.log(y.toFixed(2));**

**}**

The type never represents value that never occurs. It is typically used for return statements of function that doesn’t returns properly. Like below -

**function throwError(message: string): never {**

**throw new Error(message);**

**}**