**TypeScript**

**Pre-requisites:**

**Node.js**

**npm (Node Package Manager**

**Installation & Running:**

**Check Node.js Version**:

Open your terminal or command prompt.

To check if Node.js is installed, run the following command:

node -v

**Install TypeScript Globally**:

If you have Node.js and npm installed, you can install TypeScript globally using npm. Open your terminal and run the following command:

npm install -g typescript

This installs TypeScript globally on your system.

**Creating a New TypeScript Project**:

Create a new directory for your TypeScript project. You can do this using your operating system's file manager or the command-line.

**Initialize a TypeScript Project**:

Open a terminal and navigate to your project directory.

Run the following command to initialize a new TypeScript project:

tsc --init

This command generates a **tsconfig.json** file which contains configuration settings for TypeScript.

**Coding**:

Create your TypeScript source files (**.ts**) in your project directory or a subdirectory.

You can write TypeScript code using any text editor or integrated development environment (IDE) of your choice.

**Compile TypeScript to JavaScript**:

TypeScript code needs to be compiled to JavaScript before it can be executed in a web browser or Node.js. Run the following command to compile your TypeScript code:

tsc

This command compiles all TypeScript files in your project directory according to the settings in **tsconfig.json**.

**Run Your JavaScript Code**:

After compiling, you can run your JavaScript code using Node.js or include it in your HTML files for web applications.