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# What you will learn

This course will begin with TypeScript basics such as the new syntax for variable declarations and progress through all of the major features of the language including arrow functions, interfaces, classes, modules, namespaces, and generics.

Use TypeScript and its Features like Types, ES6 Support, Classes, Modules, Interfaces and much more in your Projects.

Along the way, you'll learn not only the syntax, but also the benefits of the strong-typing support in TypeScript.

You will be able to start building functional websites using TypeScript 2.3 and test it using the testing framework

TypeScript is an amazing language that compiles to JavaScript and is a perfect tool for building both client and server-side web applications and also you will be able to test the code using the testing framework.

# Pre-requisites

- Good understanding of OOP concepts and basic JavaScript
- Good to have knowledge of NodeJS.

# Software requirement

- [https://www.typescriptlang.org/play/](https://www.typescriptlang.org/play/)

- Download and Install Node.js from Nodejs.org website

- Download and install Microsoft visual studio code editor(https://code.visualstudio.com/)

- Any Browser(Google/ Internet Explorer/Firefox)

# Day Wise Schedule

**# Day 1**

**Basic**

- Overview

- Environment Setup

- Basic Syntax

- Types, Variables, Operators

- Decision Making, Loop

- Functions

- Number, Strings, Array

# Day Wise Schedule

**# Day 2** (**Advanced** )

- Arrays

- Tuples

- Union

- Interface

- Abstraction

- Class

- Objects

- Namespaces

- Modules

# Day Wise Schedule

**# Day 3 (Advanced )**

- Integration Typescript Application With Testing Framework

- Typescript exercises

# Useful Resources

- **Typescript Docs ( Official Site )**
    - https://www.typescriptlang.org/docs/home.html


- **Typescript Tutorials**
    - https://www.tutorialspoint.com/typescript/
    - https://www.javatpoint.com/typescript-tutorial


- **Typescript YouTube Videos Series**
    - https://www.youtube.com/watch?v=YPShu0H3RbM&list=PLqq-6Pq4lTTanfgsbnFzfWUhhAz3tIezU
    - https://www.youtube.com/watch?v=-PR_XqW9JJU
    - https://www.youtube.com/watch?v=WBPrJSw7yQA
    - https://www.youtube.com/watch?v=T33sLm8W0Ag

# Useful Resources

- **Typescript Testing**
  - https://medium.com/@RupaniChirag/writing-unit-tests-in-typescript-d4719b8a0a40
  - https://dev.to/muhajirdev/unit-testing-with-typescript-and-jest-2gln
  - https://basarat.gitbooks.io/typescript/docs/testing/jest.html

- **Online Editor**
  - https://www.typescriptlang.org/play/

- **Useful Links for Typescript**
  - https://www.guru99.com/typescript-tutorial.html
  - https://www.tutorialsteacher.com/typescript
  - https://devexpress.github.io/testcafe/

# Assignments

**double click on image**

## TypeScript Practical Lab Assignment

1. Install NodeJS
2. Install Angular CLI
3. Install Visual Studio Code Editor

Reference:

- https://nodejs.org/en/

- https://code.visualstudio.com/

### 2. Overview Of Assignment

Create app which help to manage and maintain restaurant chain.
- Module
  -Admin
  -Restaurant ( create / Edit / Delete )
  -Menu ( create / Edit / Delete )
  -Menu Assignment To Restaurant

### 3.Steps

1. Create Typescript Application.

2. Create Class , Interface
   - Admin
   - Menu
   - Restaurant
   - User

3. Admin Module
   - Create class for AdminClass.ts
     o Contains all functionality
   - Create Interface AdminInterface.ts

Thank you for your Participation

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