



Venkatesh Mogili

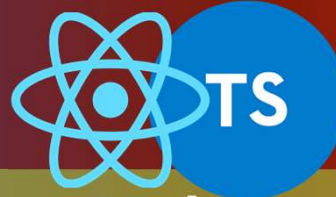
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V M

Online Training



Venkatesh Mogili  
#WebGuru



Part-1

React TypeScript  
Crash Course

తెలుగులో



Venkatesh Mogili  
#WebGuru

# తెలుగు లో

# Web Developer

## Full Course


VM Training

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- 44+ Hours Videos
- 28 Quizzes
- 76 Practical Tasks
- Lifetime Access
- Certification





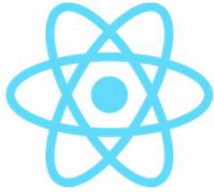

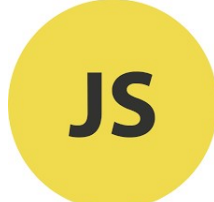




## Prerequisites

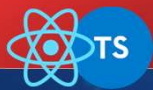


You should be familiar with the following languages:

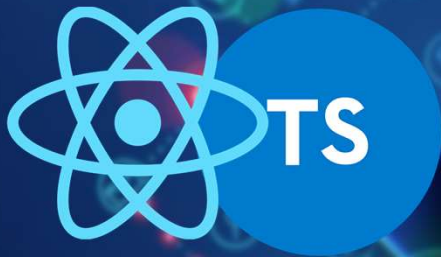
- 1.HTML - <https://vmtraining.netlify.app/html5>
- 2.CSS - <https://vmtraining.netlify.app/css3>
- 3.JavaScript - <https://vmtraining.netlify.app/javascript>
- 4.TypeScript - <https://www.youtube.com/c/VenkateshMogili/playlists>
- 5.ReactJS - <https://vmtraining.netlify.app/reactredux>



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# System Requirements



## 1. Hardware Requirements:

- ✓ Memory - Minimum 2/4 GB RAM
- ✓ Processor - Intel Core i3 CPU @2.00 GHz or later
- ✓ Storage - 20 GB HDD/SDD or above

## 2. Software Requirements:

- ✓ Operating System - Any OS (Windows 7 or later/Linux/Mac)
- ✓ Visual Studio Code (for web app development)
- ✓ Chrome/Mozilla Firefox (latest version)

## 3. Visual Studio Code (IDE):

<https://code.visualstudio.com/download>

## 4. Google Chrome (Browser):

[https://www.google.com/intl/en\\_in/chrome/](https://www.google.com/intl/en_in/chrome/)

## 5. NodeJS Software:

<https://nodejs.org/en/download>

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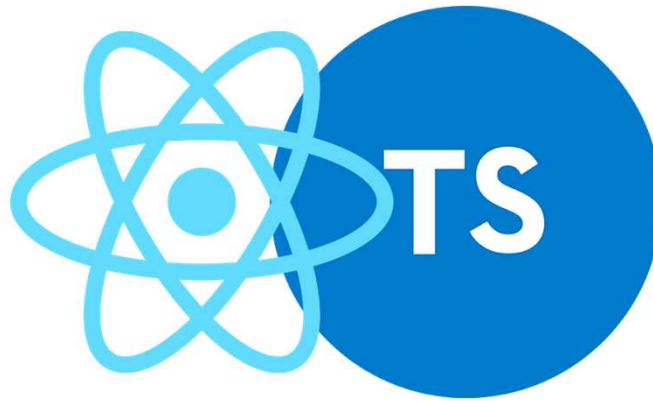


# Contents

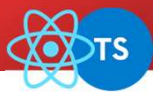


- Introduction to React and TypeScript
- ReactJS vs React TypeScript
- Environment Setup
- Folder Structure
- React Basics
- Advantages and Disadvantages
- Summary

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## Introduction

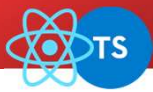


## Introduction to React and TypeScript



- ✓ **React** is a free and open-source **front-end JavaScript** library for building **user interfaces based on components**.
- ✓ **TypeScript** is a **strongly typed programming language** that builds on **JavaScript**, giving you better tooling at any scale.
- ✓ It is a **strict syntactical superset of JavaScript** and adds optional static typing to the language.
- ✓ It is designed for the development of large applications and **transpiles to JavaScript**.



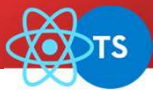


# Introduction to React

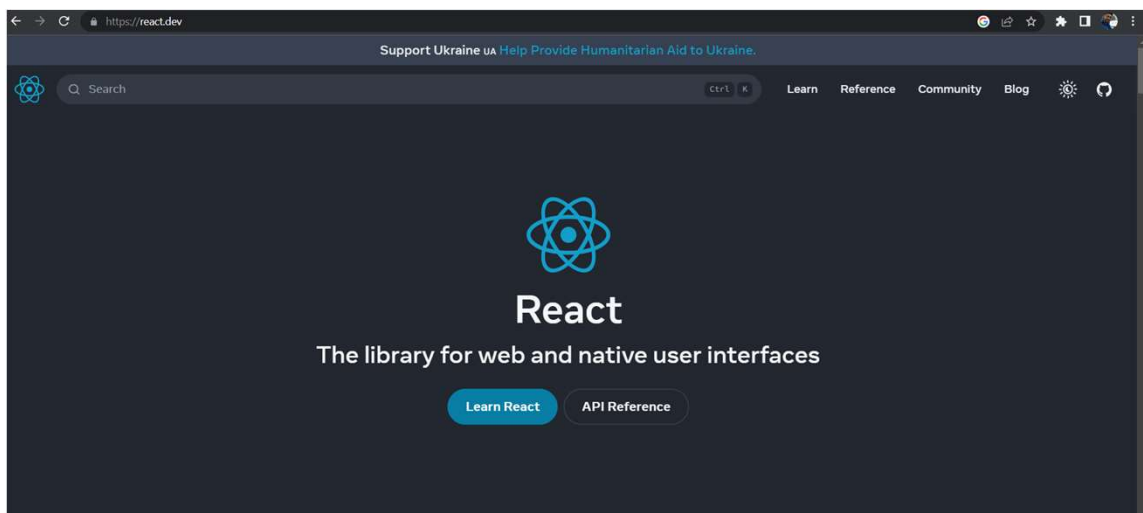


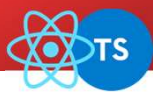
- React is a JavaScript **User Interface Library** for building web and mobile applications.
- Developed By **Facebook**
- It's **Open Source**
- It's released on **2013**
- Current Stable Version **18.2.0**
- Official Website: <https://react.dev/>
- Online Platforms to play with React:
  - <https://codesandbox.io/s/new>
  - <https://stackblitz.com/fork/react>
  - <https://codepen.io/pen>

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# React Official Website



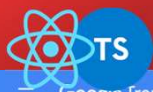


## ReactJS vs React TypeScript



- ✓ ReactJS is by default a **JavaScript** based user interface **library**, which uses **completely JavaScript only**.
- ✓ React TypeScript is a TypeScript based user interface library, which supports both TypeScript as well as JavaScript, as TypeScript is superset of JavaScript.
- ✓ ReactJS doesn't have type checking feature, due to that we may get more runtime errors.
- ✓ React TypeScript has type checking feature, which checks type for each and every variable that we use.
- ✓ So, that if we assign any non-related data it will throw error which helps us to get very less to no runtime errors.

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## Popularity of React



Google Trends Compare

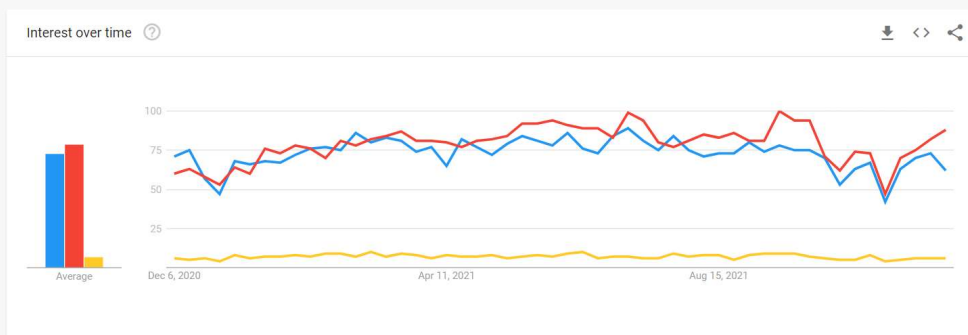
Angular  
Web framework

React  
JavaScript library

Vue.js  
Topic

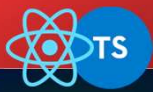
+ Add comparison

India Past 12 months All categories Web Search



- ✓ React is the first most popular frontend framework, have more job opportunities and future.

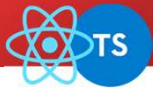




## React TypeScript Practical



# Let's Start Coding...



## Environment Setup



✓ NodeJS latest version should be installed.

➤ <https://nodejs.org/download>

1. Create the React Project:

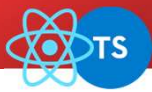
```
npx create-react-app my-app --template typescript
```

```
cd my-app/
```

2. Run the Application:

```
npm start
```

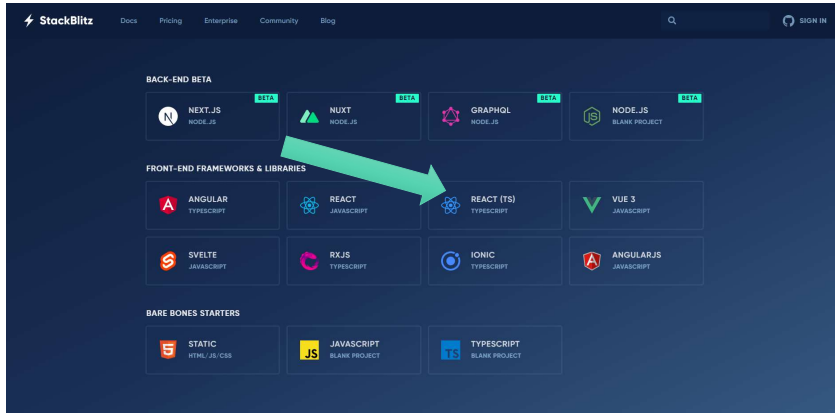
3. You can access the application in <http://localhost:3000>.



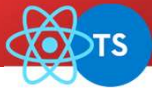
## Environment Setup with Online IDE



- ✓ You can also create React project with online IDE by choosing React (TS).
- ✓ <https://stackblitz.com/>



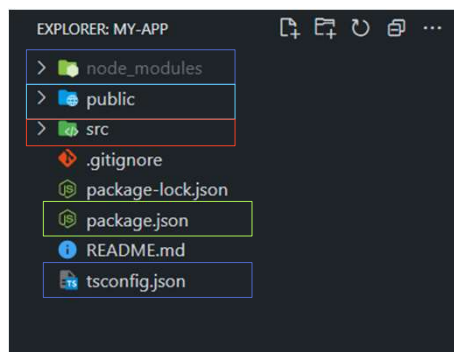
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## Folder Structure



- ✓ Install Typescript React code snippets Extension in VS Code



node\_modules

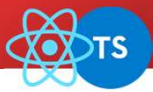
public

src

package.json

tsconfig.json

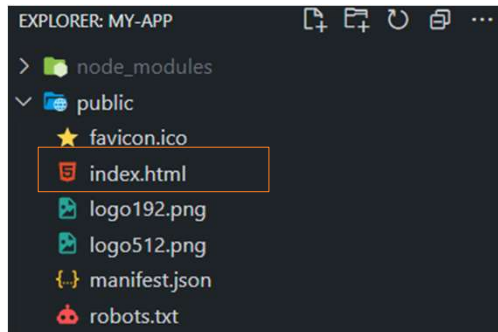




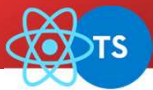
## Folder Structure



- ✓ node\_modules contains the project npm packages.
- ✓ Public folder contains favicon, index.html, logos, manifest.
- ✓ index.html is starting point for the application to run in public folder.



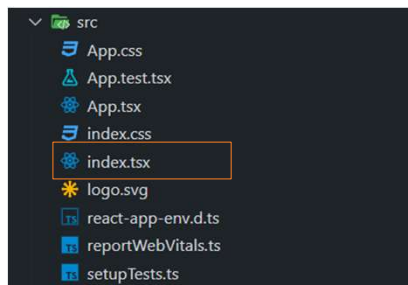
index.html



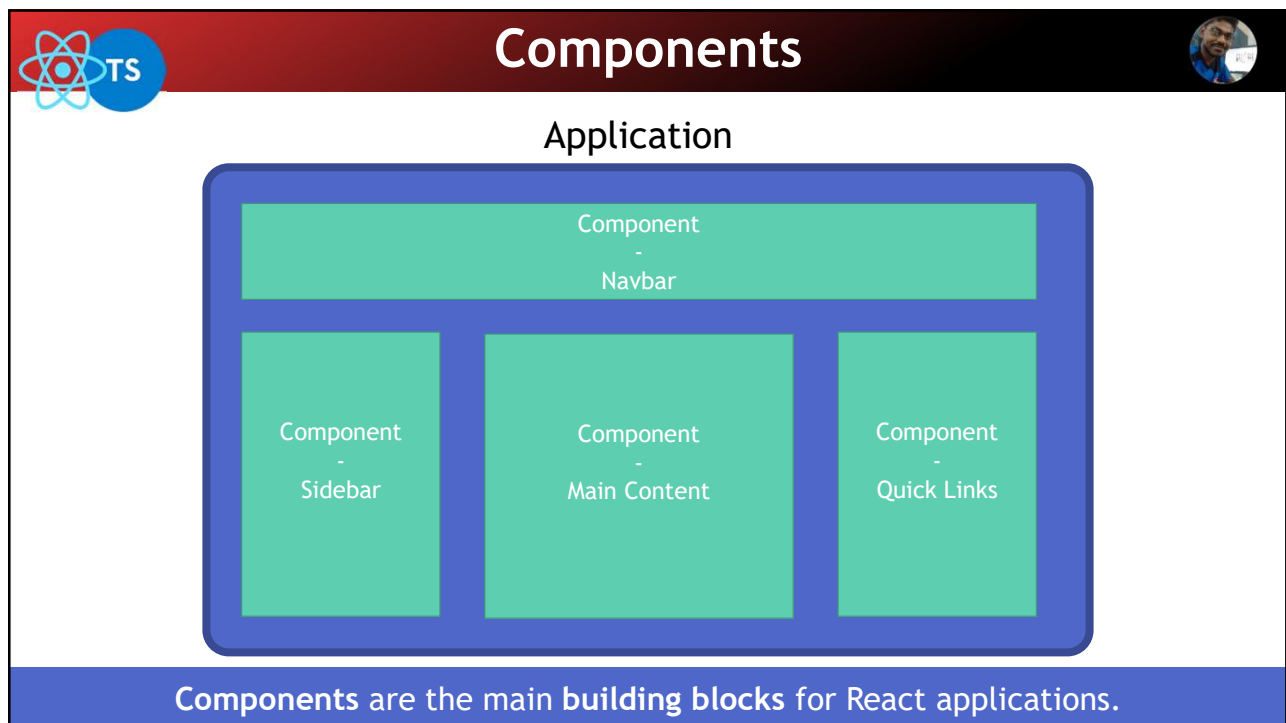
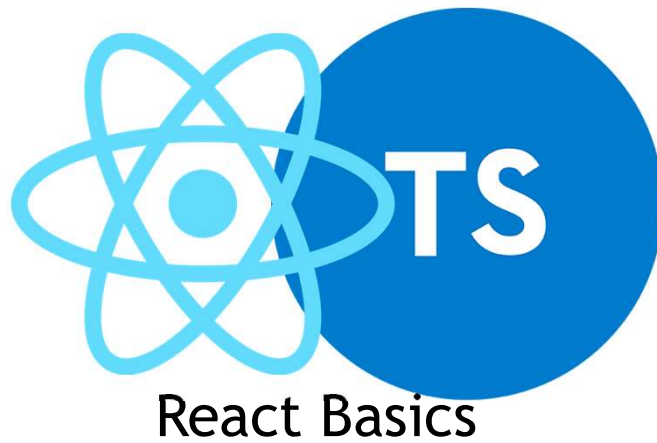
## Folder Structure



- ✓ src folder contains index.tsx, index.css, App.tsx, App.css, react-app-env.d.ts etc.,
- ✓ index.tsx file is starting point for the application in src folder.



index.tsx



# Practical Examples

<https://react.dev/learn/describing-the-ui>



## Practical Example-1

1

Amazing scientists



2

3

4

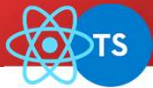
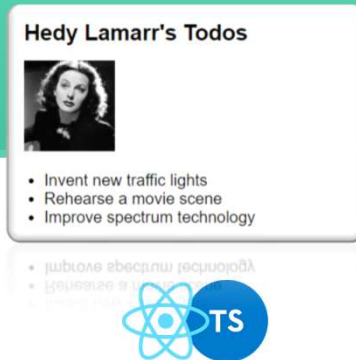
Identify **Non-reusable** Components and **Re-usable** components.

1. **Non-Reusable component (Heading)**

2. **Re-usable component (Image)**



## Practical Example-2



## Styles

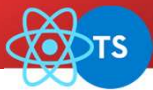


We can apply styles in three different ways.

1. Inline Styling - style prop.
2. Internal Styling - style/className
3. External Styling - className

Most recommended way to use css is external styling.

# Practical Example-3



## Advantages and Disadvantages

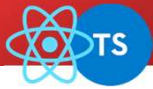


### ✓ Advantages:

- ✓ Re-usable code
- ✓ **Components**
- ✓ **TypeScript:** better tooling, cleaner code, and higher scalability
- ✓ **Medium Learning Curve**
- ✓ Both Web and Mobile Apps can be done with the similar code with minor changes.

### ✓ Disadvantages:

- ✓ No standard version yet, It keeps on updating the new features.
- ✓ No standard project structure.

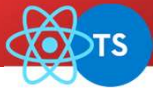


## Summary



- ✓ **React** is a free and open-source **front-end JavaScript/TypeScript** library for building **user interfaces based on components**.
- ✓ Easy to setup development environment.
- ✓ Easy to learn.
- ✓ Most trending framework for frontend developers.
- ✓ Have more job opportunities.

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## Contents



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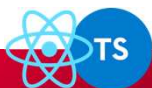
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**I**mplement



**T**ry Experiments



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