TW-014 TEAM LEAD VERSION

TEAMWORK

CLARUSWAY
WAY TO REINVENT YOURSELF

Meeting Agenda

- Icebreaking
- Questions
- Interview Questions
- Coffee Break
- Coding Challenge
- Video of the week
- Retro meeting
- Case study / project

Teamwork Schedule

Ice-breaking 5m

- Personal Questions (Study Environment, Kids etc.)
- Any challenges (Classes, Coding, studying, etc.)
- Ask how they're studying, give personal advice.
- Remind that practice makes perfect.

Team work 5m

- Ask what exactly each student does for the team, if they know each other, if they care for each other, if they follow and talk with each other etc.

Ask Questions 15m

1. TypeScript is developed and maintained by _____ and its first version was first introduced on ____.

A. Amazon.com, 2008
B. Microsoft Corporation, 2009
C. Microsoft Corporation, 2012
D. Facebook, 2013

Answer: C

2. What is true about the difference between TypeScript and JavaScript?

A. TypeScript does not need compilation, while JavaScript takes more time as the code needs to be compiled
B. TypeScript does not support modules, JavaScript does
C. TypeScript is not an Object-Oriented Language.
D. TypeScript comes with optional static typing and a type inference system, JavaScript is a dynamically typed language

Answer: D

3. Which command will you use to transpile your TypeScript code to JavaScript?

A. npm
B. tsc
C. compile
D. transpile

Answer: B

4.TypeScript can be run or understood in any browser.

- [ ] - True
- [x] - False

5. Which access modifiers are supported in TypeScript?

A. Public
B. Private
C. Protected
D. All of above.

Answer: D

6. Which error does this typescript code produce?

```
let a = 5;
a = 'hello'
```

A. No error occurs, this is a valid code.
B. Type 'number' is not assignable to type 'string'.
C. Type 'string' is not assignable to type 'number'.
D. Variable 'a' is used before being assigned.`

Answer: C

7. ..... type combines multiple types into one & A union type is a type formed from two or more other types, representing values that may be any one of those types.

A. Union
B. Intersection
C. Interface
D. TS

Answer: B

8. How can we declare an Enum type?

A. enum LOG_LEVEL { ERROR = 1, WARN = 2 }
B. enum LOG_LEVEL { 1 = ERROR, 2 = WARN }
C. enum LOG_LEVEL = { ERROR = 1, WARN = 2 }
D. enum LOG_LEVEL = { 1 = ERROR, 2 = WARN }

Answer: A

9. Which is a successful example of this tuple '[number, string]'?

A. const myTuple = [101]
B. const myTuple = [101, 'Code Master']
C. const myTuple = [101, 101, 'Code Master', 'Code Master']
D. const myTuple = ['Code Master', 101]

Answer: B

10. Type Aliases are mostly used with _____.

A. Booleans
B. Numbers
C. String
D. None of the above

Answer: C

Interview Questions 15m

1. What is Typescript?
Answer : TypeScript is a free and open-source programming language developed and maintained by Microsoft. It is a strongly typed superset of JavaScript that compiles to plain JavaScript. It is a language for application-scale JavaScript development. TypeScript is quite easy to learn and use for developers familiar with C#, Java and all strong typed languages.

TypeScript can be executed on Any browser, Any Host, and Any Operating System. TypeScript is not directly run on the browser. It needs a compiler to compile and generate in JavaScript file. TypeScript is the ES6 version of JavaScript with some additional features.

2. What are the advantages of using Typescript?
Answer : TypeScript has the following benefits.

- It provides the benefits of optional static typing. Here, Typescript provides types that can be added to variables, functions, properties, etc.

- Typescript has the ability to compile down to a version of JavaScript that runs on all browsers.
- TypeScript always highlights errors at compilation time during the time of development whereas JavaScript points out errors at the runtime.
- TypeScript supports strongly typed or static typing whereas this is not in JavaScript.
- It helps in code structuring.
- It uses class-based object-oriented programming.
- It provides excellent tooling supports with IntelliSense which provides active hints as the code is added.
- It has a namespace concept by defining a module.

3. What are the disadvantages of TypeScript?
Answer : TypeScript takes a long time to compile the code.

- TypeScript does not support abstract classes.
- If we run the TypeScript application in the browser, a compilation step is required to transform TypeScript into JavaScript.
- Web developers are using JavaScript from decades and TypeScript doesn?t bring anything new.
- To use any third party library, the definition file is must. And not all the third party library have definition file available.
- Quality of type definition files is a concern as for how can you be sure the definitions are correct?

4. How to compile a Typescript file?
Answer : tsc <TypeScript File Name>

```
tsc helloworld.ts
```

5. What is interface?
Answer : An Interface is a structure which acts as a contract in our application. It defines the syntax for classes to follow, it means a class that implements an interface is bound to implement all its members. It cannot be instantiated but can be referenced by the class object that implements it. The TypeScript compiler uses interface for type-checking (also known as "duck typing" or "structural subtyping") whether the object has a specific structure or not.

Syntax :

```
interface interface_name {
          // variables' declaration
          // methods' declaration
}
```

The interface just declares the methods and fields. It cannot be used to build anything. Interfaces need not be converted to JavaScript for execution. They have zero runtime JavaScript impact. Thus, their only purpose is to help in the development stage.

6. What is default visibility for properties/methods in TypeScript classes?
Answer : `Public` is the default visibility for properties/methods in TypeScript classes.

Coding Challenge 15m

- TR ID Verification with TypeScript

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Coffee Break 10m

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Video of the Week 10m

- How to Install and Compile Typescript with Visual Studio Code

Case study/Project 15m

- To Do App with React TypeScript

Retro Meeting on a personal and team level 10m

Ask the questions below:

- What went well?
- What could be improved?
- What will we commit to do better in the next week?

Closing 5m

- Next week’s plan
- QA Session
