

Introduction

PROGRAMMING WITH TYPESCRIPT



Overview

- Objectives
 - To explain the aims and objectives of the course
- Contents
 - Course administration
 - Course objectives and assumptions
 - Introductions
 - Any questions?
- Exercise
 - Locate the exercises
 - Locate the help files

Administration

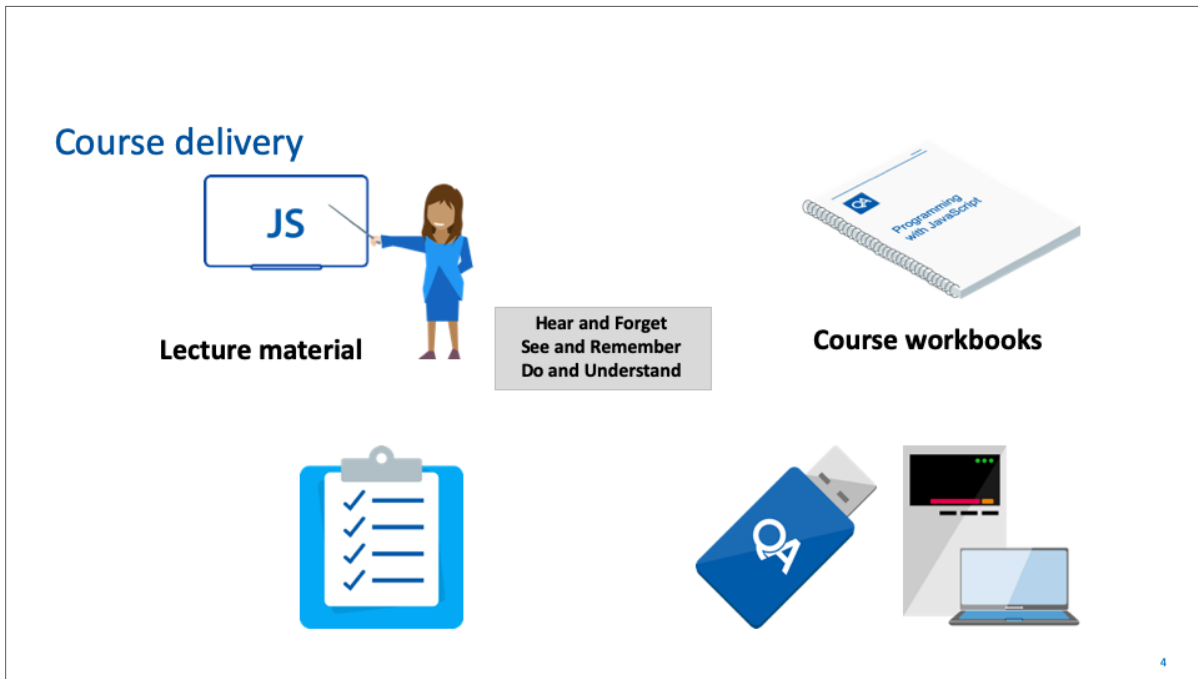
- Front door security
- Name card
- Chairs
- Fire exits
- Toilets
- Coffee Room
- Timing
- Breaks
- Lunch
- Downloads and viruses
- Admin. support
- Messages
- Taxis
- Trains/Coaches
- Hotels
- First Aid
- Telephones/Mobiles

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We need to deal with practical matters right at the beginning.

Above all, please ask if you have any problems regarding the course or practical arrangements. If we know early on that something is wrong, we have the chance to fix it. If you tell us after the course, it's too late! We ask you to fill in an evaluation form at the end of the course. If you alert us to a problem for the first time on the feedback form at the end of the course, we won't have had the opportunity to put it right.

If this course is being held at your company's site, much of this will not apply or will be outside our control.



The course will be made up of lecture material coupled with the course workbook, informal questions and exercises, and structured practical sessions. Together, these different teaching techniques will help you absorb and understand the material in the most effective way.

The course notebooks contain all the overhead foils that will be shown, so you do not need to copy them. In addition, there are extra textual comments (like these) below the foils, which are there to amplify the foils and provide further information. Hopefully, these notes mean you will not need to write too much and can listen and observe during the lectures. There is, however, space to make your own annotations too.

The appendices cover material that is beyond the scope of the course, together with some help and guidelines. There are also appendices on bibliography and Internet resources to help you find more information after the course.

In the practical exercise sessions, you will be given the opportunity to experiment and consolidate what has been taught during the lecture sessions. Please tell the instructor if you are having difficulty in these sessions. It is sometimes difficult to see that someone is struggling, so please be direct.

A training experience

A course should be

- A two-way process
- A group process
- An individual experience



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The best courses are not those where the instructor spends all of his/her time pontificating at the front of the class. Things get more interesting if there is dialogue, so please feel free to make comments or ask questions. At the same time, the instructor has to think of the whole group, so if you have many queries, you might be asked to deal with them off-line.

Work with other people during practical exercise sessions. The person next to you may have the answer, or you may know the remedy for them. Obviously do not simply 'copy from' or 'jump-in on' your neighbour, but group collaboration can help with the enjoyment of a course.

We are also individuals. We work at different paces and may have special interests in particular topics. The aim of the course is to provide a broad picture for all. Do not be dismayed if you do not appear to complete exercises as fast as the next person. The practical exercises are there to give plenty of practical opportunities; they do not have to be finished and you may even choose to focus for a long period on the topic that most interests you. Indeed, there will be parts labelled 'if time allows' that you may wish to save until later to give yourself time to read and absorb the course notes. If you have finished early, there is a great deal to investigate. Such 'hacking' time is valuable. You may not get the opportunity to do it back in the office!

Course aims and objectives

By the end of the course, you will be able to:

- Set up a scalable development environment for using TypeScript
- Apply appropriate types to variables
- Create and use classes, inheritance, access modifiers, abstracts and static
- Create and use interfaces
- Implement generics with functions, classes, constraints and interfaces
- Use JavaScript modules within TypeScript development
- Understand and use decorators

Assumptions

- This course assumes the following prerequisites
 - JavaScript experience equivalent to the skills covered in Web Development Fundamentals - JavaScript
- If there are any issues, please tell your instructor now

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If you are not sure of any of these, please inform the instructor as soon as you can and they will do their best to help you.

Introductions

Please say a few words about yourself

- What is your name and job?
- What is your current experience of
 - Computing?
 - Programming?
 - Web development?
- What is your main objective for attending the course?

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One of the great benefits of courses is meeting other people. They may have similar interests, have encountered similar problems and may even have found the solution to yours. The contacts made on the course can be very useful.

It is useful for us all to be aware of levels of experience. It will help the instructor judge the level of depth to go into and the analogies to make to help you understand a topic. People in the group may have specialised experience that will be helpful to others.

It is worth highlighting particular interests, as we may be able to address them during the course. However, it is a general course that aims to cover a broad range of topics, so the instructor may have to deal with some areas during a coffee break or over lunch.

Any questions

- Golden Rule
 - "There is no such thing as a stupid question"
- First amendment to the Golden Rule
 - "... even when asked by an instructor"
- Corollary to the Golden Rule
 - "A question never resides in a single mind"

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Please feel free to ask questions.

Teaching is a much more enjoyable and productive process if it is interactive. You will no doubt think of questions during the course. If so, ask them!