

# Tutors



## Open Web Learning Toolkit

### The Learner Experience



The **Learner Experience** prioritises web interactions that are **engaging, contextual, linkable, searchable, accessible** and **responsive**. In addition the experience should foster a sense of **community** and **connection** among fellow learners.



# A Programme Home Page

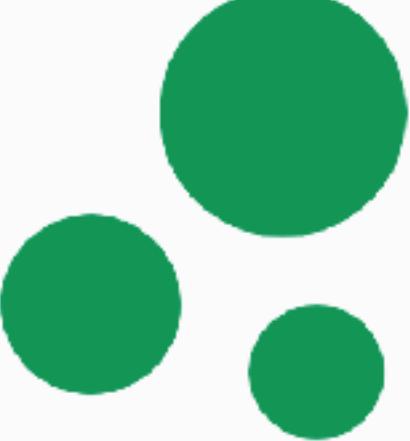
Access to all  
resources +  
Modules

Higher Diploma in Computer Science 2022  
Department of Computing & Mathematics, WIT

Current Week  
3

Semester One

HDIP 22

- Workshop One   
induction · structure · schedules · handbook
- Life etc...   
time · space · balance · experiences · tips · techniques
- Web Development   
html · css · layout · web apps · web frameworks · deployment
- Programming   
algorithms · data structures · processing · java · classes · libraries
- Semester 1 Schedule   
timetables · semester calendars · assessment schedules



# Navigator

The screenshot displays a dark-themed web application interface, likely a learning management system or a specialized browser extension. At the top, there is a header bar with various icons: a magnifying glass for search, a 'T-' logo, a circular orange icon, three vertical dots, a user profile picture of a man with glasses, and a three-line menu icon. To the left of the main content area, there is a small diagram illustrating the CSS box model, showing the relationship between content, padding, border, and margin.

**03: Box & Grid Web Development**

The main content area shows a breadcrumb navigation path: Home > Web Development > 03: Box & Grid. Below the breadcrumb, there are four circular buttons with icons: a speech bubble (comment), a graduation cap (course completion), a play button (video), and a download symbol (file download). The overall theme is dark with light-colored text and icons.



# Companions

The screenshot shows a dark-themed web interface for a course. At the top, there's a header with a magnifying glass icon, a user profile picture of a man with glasses, and a menu icon. Below the header is a breadcrumb navigation bar with icons for home, back, forward, and search, followed by the text 'Web Development' and '03: Box & Grid'. To the right of the breadcrumb bar are four circular icons: a red speech bubble, an orange graduation cap, a red play button, and a blue download icon. A vertical ellipsis icon is located to the right of these icons.

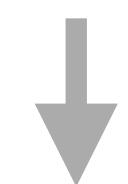
Slack  
channel  
Moodle  
resources

Youtube  
playlist



# Navigation

Module  
Syllabus



The screenshot shows a dark-themed web interface. At the top, there's a navigation bar with a magnifying glass icon, a 'T-' logo, a person icon, and a three-dot menu. Below it is a top-level navigation bar with a house icon, a 'Web Development' link, and a bookmark icon next to '03: Box & Grid'. The main content area displays the title '03: Box & Grid' and 'Web Development'. To the left of the content, there's a sidebar with a diagram illustrating the CSS box model, showing various padding and margin areas around a central 'Content' box.

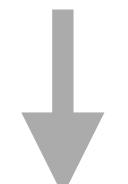
Programme  
Home

Current  
Module  
Home

Current  
Topic

Module  
Index

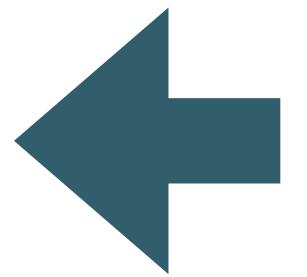
Labs Text  
Search



All  
All  
Labs  
Slides



UX



Change  
Theme

Switch to  
Compact  
Layout

03: Box & Grid  
Web Development

Web Development > 03: Box & Grid



# Time/Live

**03: Box & Grid**  
**Web Development**

> Web Development > 03: Box & Grid

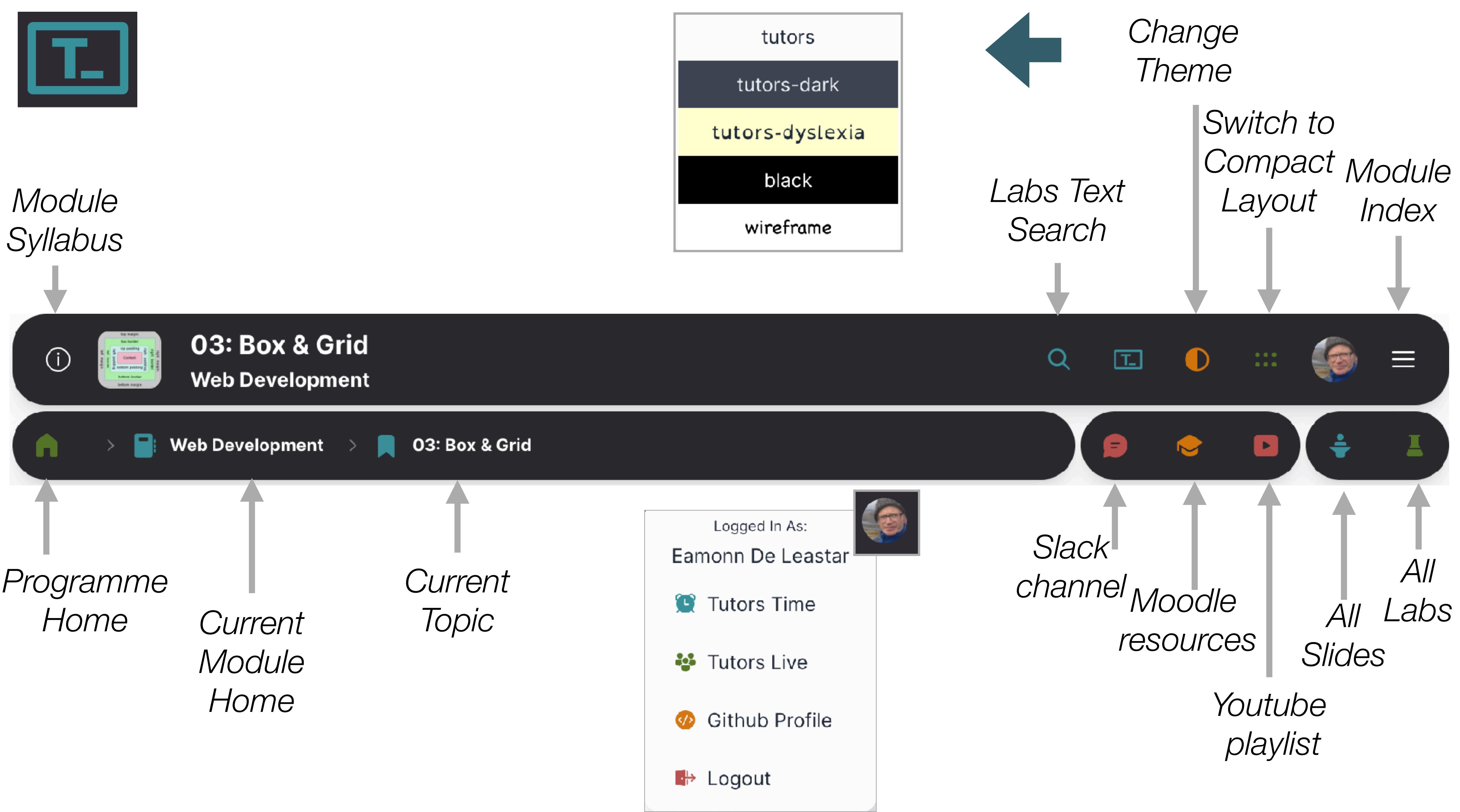
Logged In As:  
  
Eamonn De Leastar

Tutors Time

Tutors Live

Github Profile

Logout





## Semester One

HDIP  
22

### Workshop One



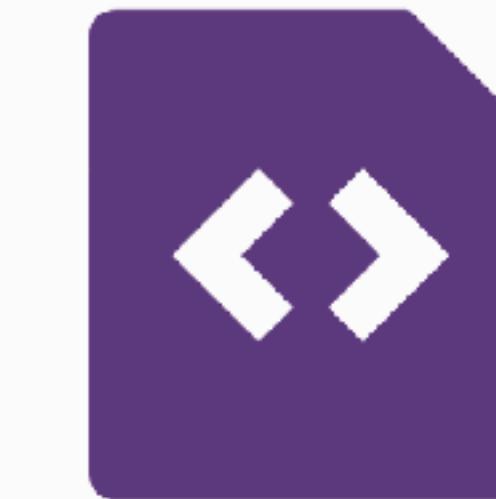
induction · structure ·  
schedules · handbook

### Life etc...



time · space · balance ·  
experiences · tips ·  
techniques

### Web Development



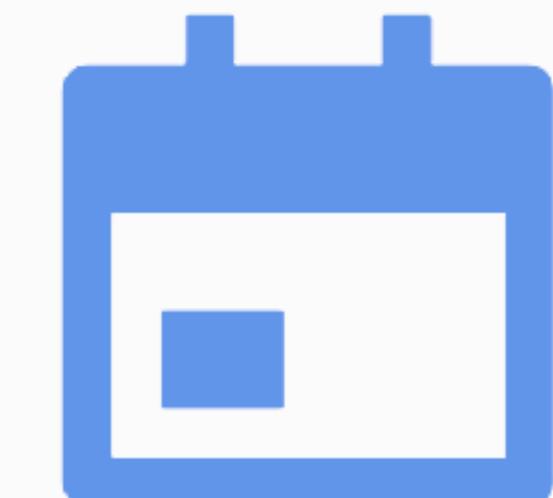
html · css · layout · web  
apps · web frameworks ·  
deployment

### Programming

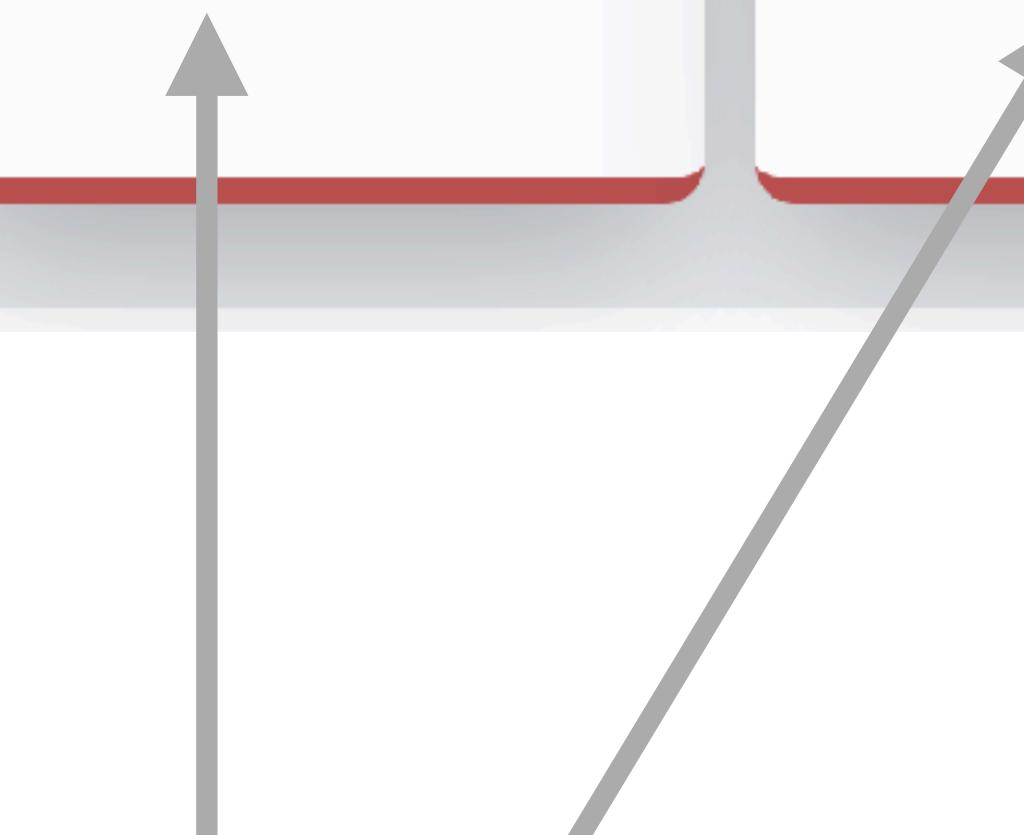


algorithms · data  
structures · processing ·  
java · classes · libraries

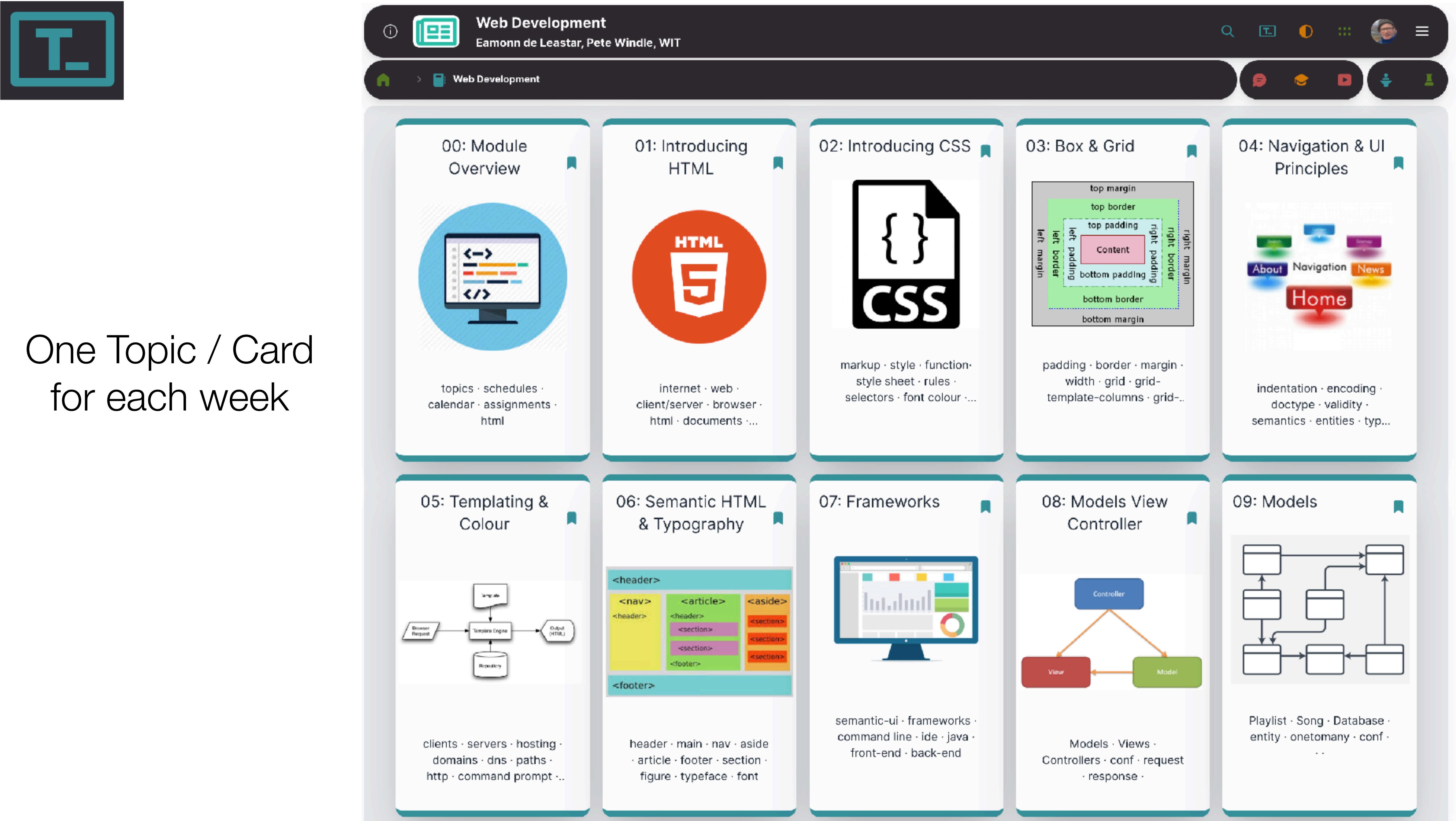
### Semester 1 Schedule



timetables · semester  
calendars · assessment  
schedules



Links to Individual Module  
Home Pages



One Topic / Card  
for each week



Single topic  
(1 week)

02: Logical Database Design  
Database

Database Design and Implementation – Live Lecture 2

Watch later Share

Higher Diploma in Computer Science

IEE Database

Watch on YouTube

02: Database Design - Logical

Concepts

- Introduction
- Relational Model

Methodology

- Logical Database Design 1
- Worked Example
- Worked Example Solution
- Logical Data Modelling Lab

Topic Video

Sub Topic 1

Sub Topic 2

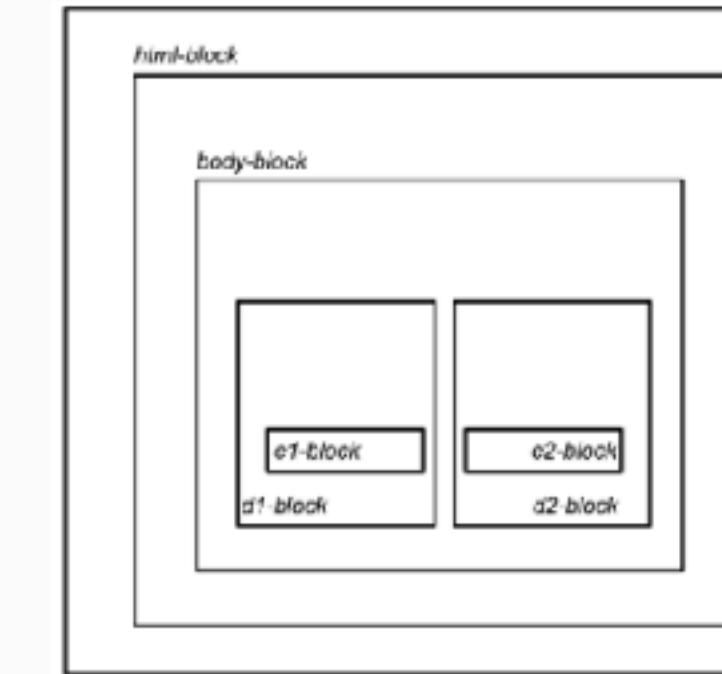


# Subtopic

Layout

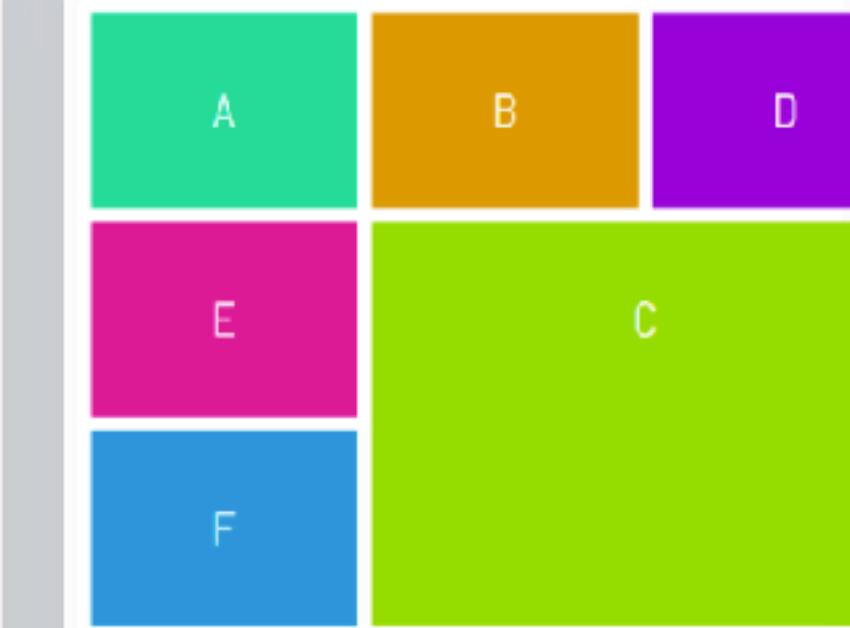


## Box Layout



Some important characteristics of the box model layout rules.

## Grid



The new Grid standard support a clean, simple way of defining multi-...

## Lab-03b Multicolumn

### **LOREM IPSUM DOLOR SIT**

<ul style="list-style-type: none"><li>Mauris</li><li>Cras</li><li>Proin</li><li>Integer</li><li>Cras</li><li>Integer</li><li>Suspendisse</li><li>Quisque</li></ul>	<p>Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Sed feugiat nisi at sapien. Phasellus varius incident ligula. Praesent nisi. Duis sollicitudin. Donec dignissim, est vel auctor blandit, ante est laoreet neque, non pellentesque mauris turpis eu purus.</p> <p>Suspendisse mollis leo nec diam. Vestibulum pulvinar tellus sit amet nulla fringilla semper. Aenean aliquam, urna et accumsan sollicitudin, tellus pede lobortis velit, nec placerat dolor pede nec nibh. Donec fringilla. Duis adipiscing diam at enim. Vestibulum nibh.</p>
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header · maincontent ·  
navigation · footer ·  
primary · secondary

Slide PDFs

Lab



Introduction Database

Database > 02: Logical Database Desi... > Concepts > Introduction

1 of 1

Logical Database Design

Introduction

02: Logical Database Design

Logical Database Design

E-R Diagram

Relational Data Model

- 02: Database Design - Logical
- Concepts
- Introduction
- Relational Model
- Methodology
- Logical Database Design 1
- Worked Example
- Worked Example Solution
- Logical Data Modelling Lab
- Final Steps
- Logical Database Design 2

Topic  
Navigator

← Topic  
Resources



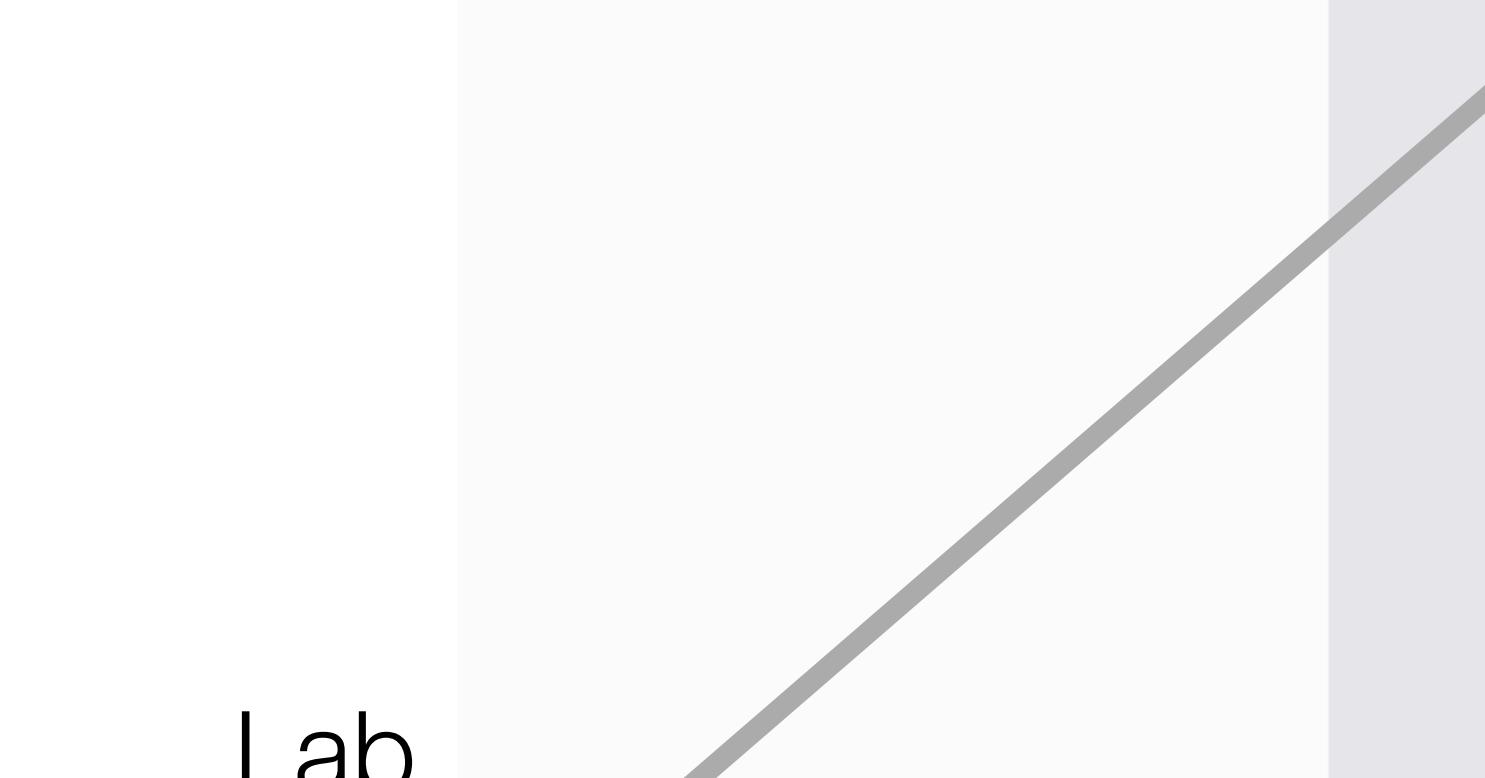
Lab-02b CSS Paths & Links  
Web Development

Web Development > 02: Introducing CSS > CSS Fundamentals > Lab-02b CSS Paths & Links

Search icon, Filter icon, Filter icon, More icon, User profile icon, Home icon, Chat icon, Email icon, YouTube icon, Help icon, User icon

# Lab

Lab Steps  
+ Exercises



Lab  
Instructions

Objectives

Setup

Relative Paths I

Relative Paths II

Classes

Indentation

Exercises

## Indentation

We should carefully inspect our html and verify that we are laying it out correctly, and in particular that we are obeying consistent indentation rules in the structure of the html itself.

Indentation is simply a consistent placement of spaces before each element, such that it flows in an ordered manner reflecting the opening/closing of tags. We prefer to use 2 spaces for each 'level'.

### Example Inconsistent indentation:

```
<html>
  <head>
    <title>APP Store</title>
    <link type="text/css" rel="stylesheet" href="style.css" media="screen" />
  </head>
  <body>
    
    <h1>Score: Apps, Movies, Music, Books</h1>
    <ol>
      <li><a href="apps.html">Apps</a></li>
      <li><a href="music.html">Music</a></li>
      <li><a href="movies.html">Movies</a></li>
    </ol>
    <h2>New Games</h2>
    <ul>
      <li>Clear All</li>
      <li>Squinks</li>
    </ul>
  </body>
</html>
```



# Live Stream

Live stream of  
webinar for given  
topic



08: Messaging  
Computer Systems & Networks

Computer Systems & Netw... > 08: Messaging

Application Layer, IoT Massaging

2021 Computer Systems and Networks

## Device/Service Discovery

MORE VIDEOS

4:33 / 1:35:38

Watch later Share

- Automatic detection of devices and services on a computer network (usually a LAN).
- Requires a common language for interoperability.
- Many different protocols, based on physical layer implementations and domains:
  - Dynamic Host Configuration Protocol (DHCP)
  - Bluetooth Service Discovery Protocol (SDP)
  - Universal Description Discovery and Integration (UDDI)
  - [Simple Service Discovery Protocol \(SSDP\)](#)

YouTube

07: Application Layer: Messaging

Slides & Labs for  
the topic



MQTT and HTTP

Publisher → MQTT Broker → Subscriber

Data Representation · Publish Subscribe · Web APIs

Lab Messaging

Broker

Use MQTT to connect a device



## Physical database design



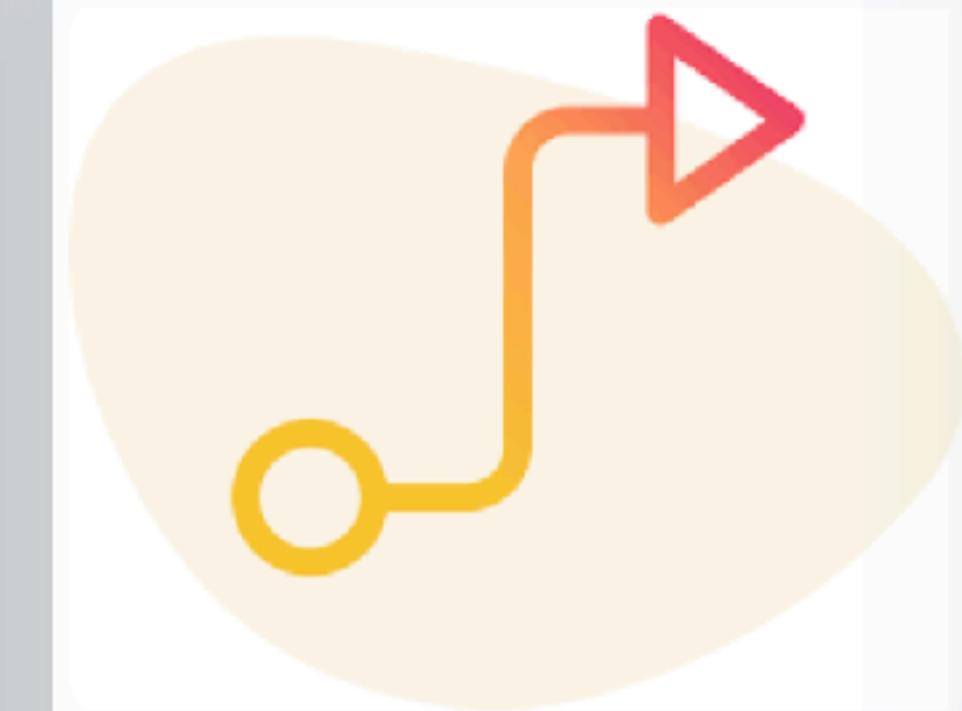
Pre-recorded  
Videos for  
selected slides  
& labs

### Physical Database Design



In this lecture we describe  
a physical database...

### Triggers



This lecture explains the  
use of triggers in MySQL

### Triggers Lab

```
SQLQuery1.sql - SH...C\Shreeharsh (52)* X
CREATE TRIGGER InsertAccounts
    ON PersonalDetails
    FOR INSERT
AS
BEGIN
    INSERT INTO Accounts
        (Salary, PPFReduction, PersonalDetailsId)
    VALUES
        (0, 0, SCOPE_IDENTITY())
END
110 % < > Messages
Command(s) completed successfully.
```

In this lab, we will look at  
Triggers

Tutors

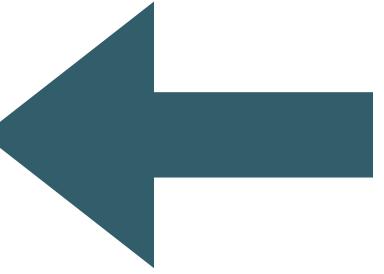
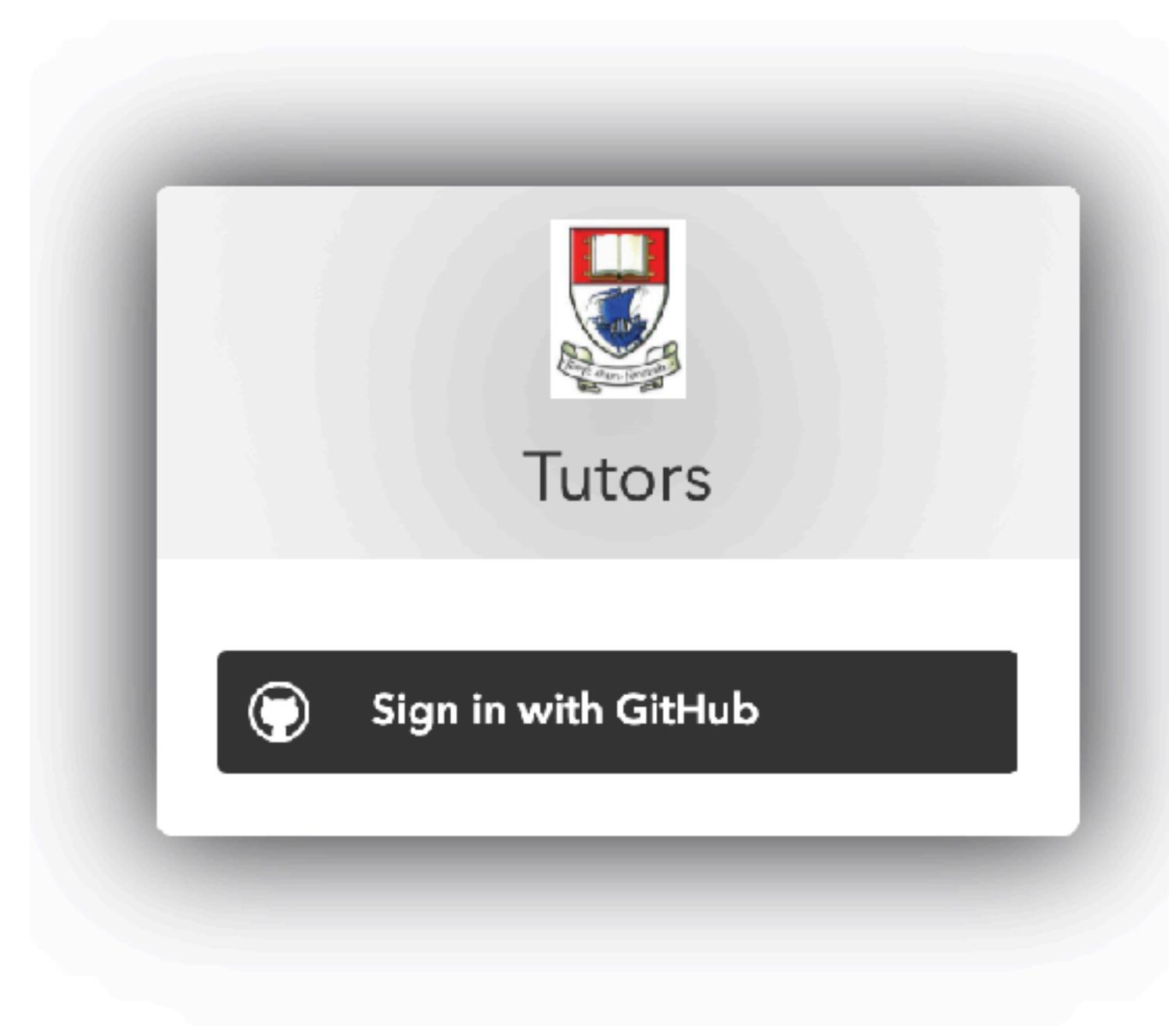


TutorsTime

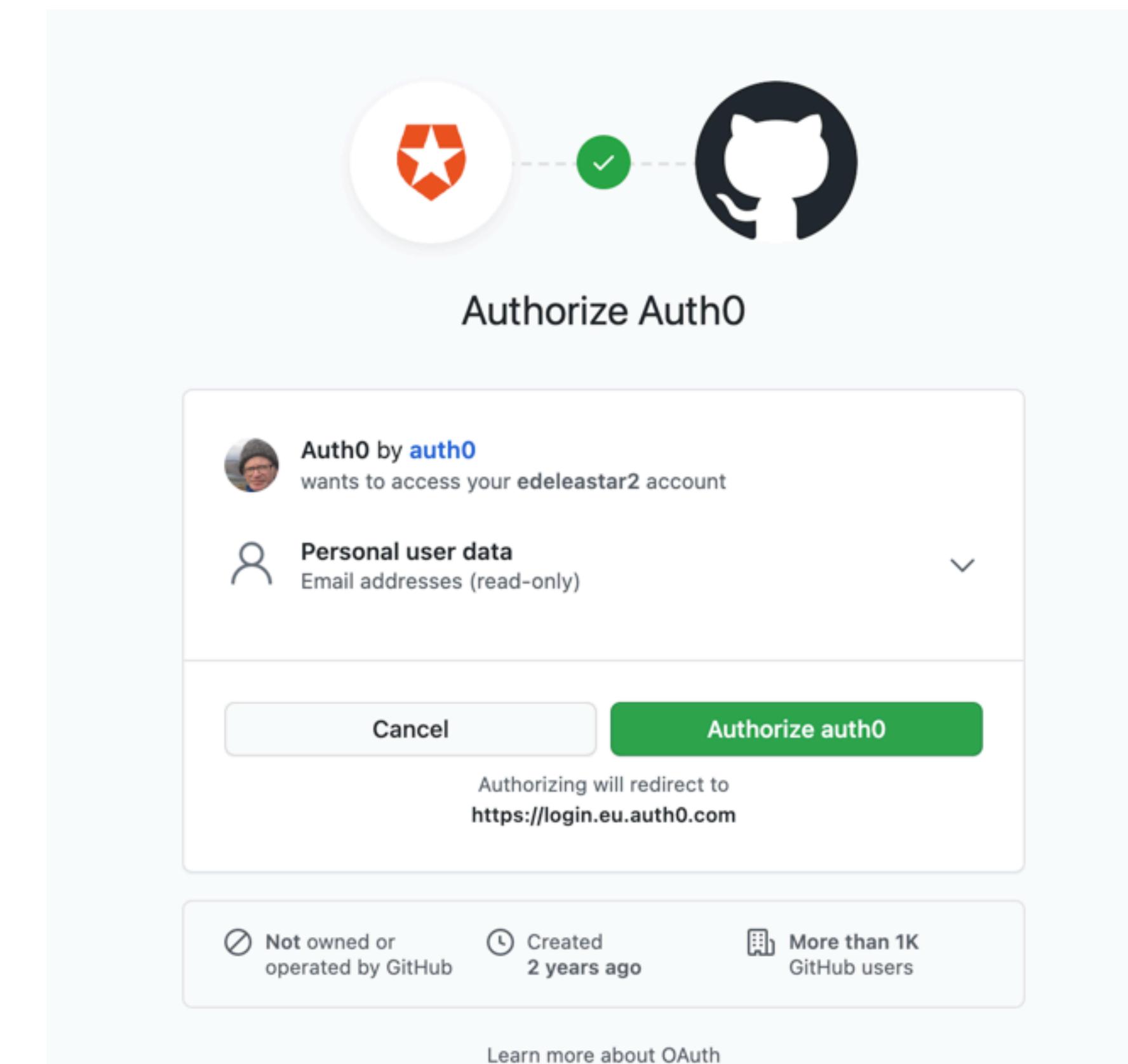


TutorsLive

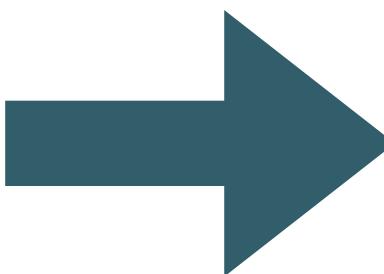




When accessing module, you will be asked to sign in with Github



... first time you will have to authorise ...



# Github Profile

Screenshot of a GitHub profile page for user 'edeleastar2'.

The top navigation bar includes: Search or jump to..., Pull requests, Issues, Marketplace, Explore, a notifications icon, a '+' button, and a user profile picture.

A message通知: Your profile picture has been updated. It may take a few moments to update across the site. (X)

The main content area is titled Public profile.

Left sidebar menu (Profile tab selected):

- Profile
- Account
- Appearance (New)
- Account security
- Billing & plans
- Security log
- Security & analysis

Main profile details:

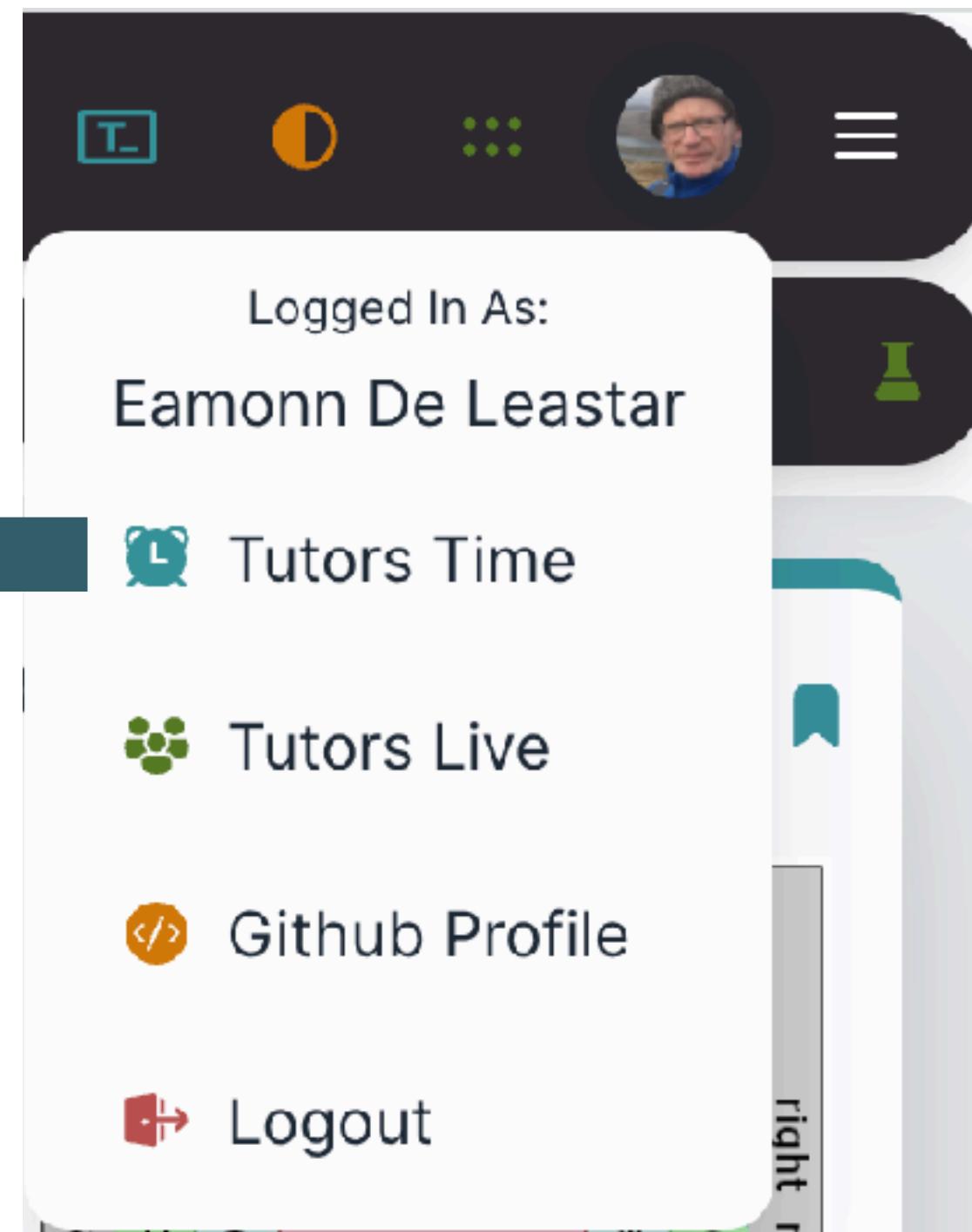
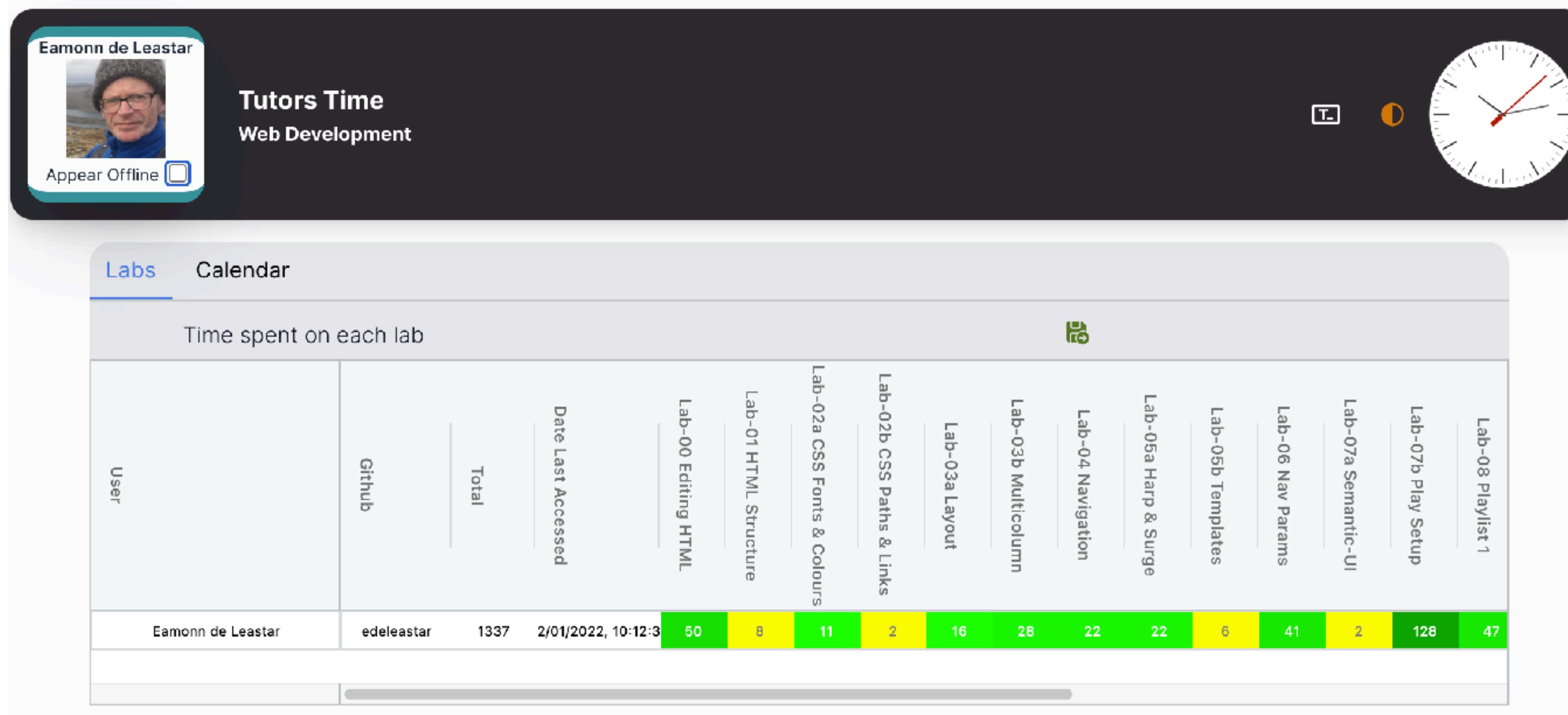
Name: Eamonn de Leastar  
Profile picture: A circular photo of a man wearing glasses and a dark beanie, set against a backdrop of a body of water and hills.

Public email: Select a verified email to display ▾  
A note: You have set your email address to private. To toggle email privacy, go to [email settings](#) and uncheck "Keep my email address private."

Bio: (empty)



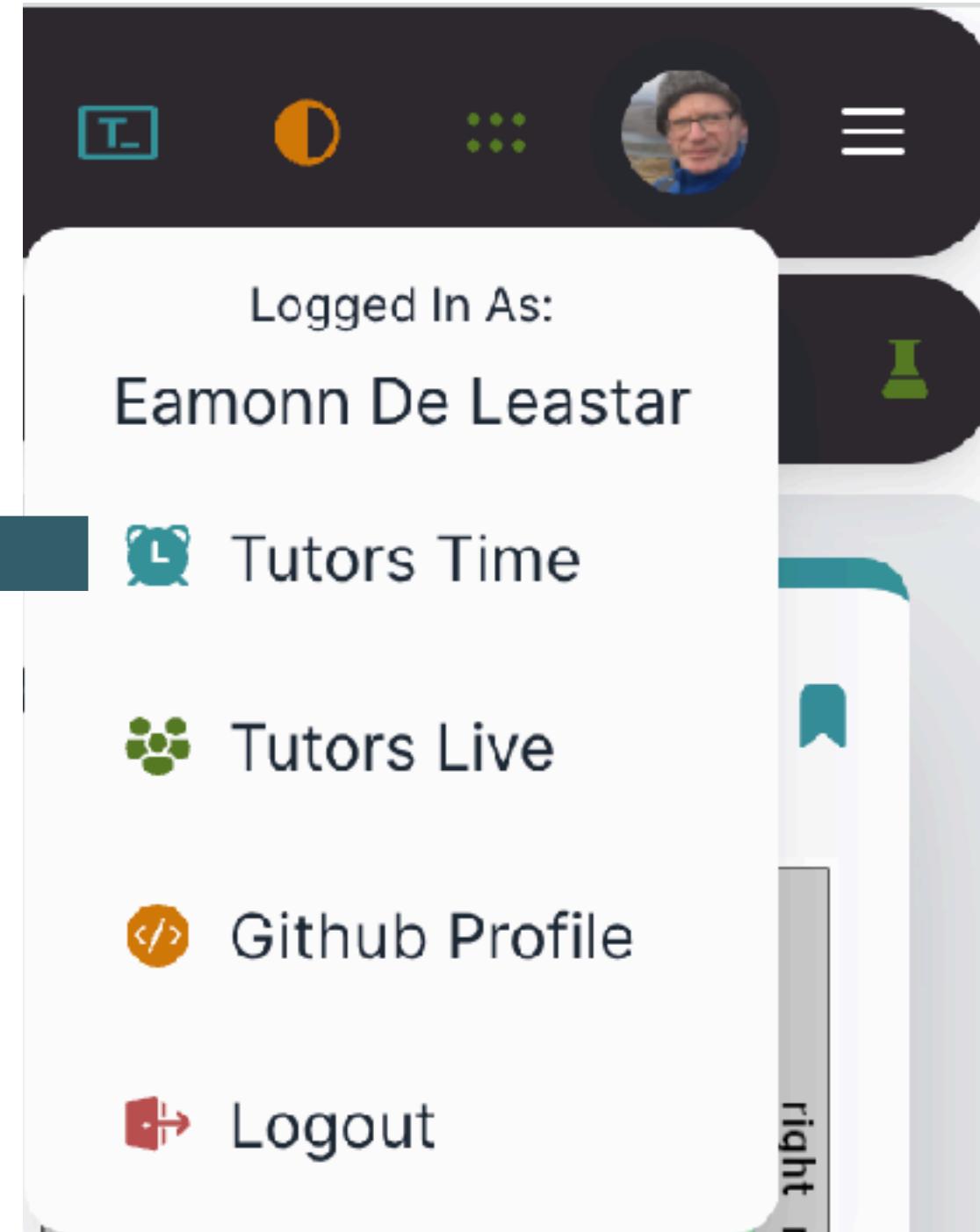
# TutorsTime - Labs



Number of minutes the Each lab has been active in your browser (estimate)



# TutorsTime - Calendar



Number of minutes  
the course has  
been active in your  
browser (estimate)

The screenshot shows a web application interface for monitoring student activity. At the top left, a profile card for "Eamonn de Leastar" displays a photo, name, and an "Appear Offline" button with a checkbox. The main title is "Tutors Live: Web Development" under "Web Development". On the right, a sidebar shows the user is logged in as "Eamonn De Leastar" with icons for "Tutors Time", "Tutors Live", "Github Profile", and "Logout". A large blue arrow points upwards from the sidebar towards the top left. Below the title, six student cards are displayed in a grid:

- Joe**: Shows a pink profile picture, a diagram of an array with indices 0-3, and a message box: "Message X Welcome to your swing and array lab".
  - Topic: 05: Arrays
  - Lab: Lab-05a
- Mary**: Shows a yellow profile picture, a diagram of a class hierarchy, and a message box: "Message X Welcome to your swing and array lab".
  - Topic: 04: Classes
  - Lab: Lab-04a
- Mike**: Shows a teal profile picture, a diagram of an array with indices 0-3, and a message box: "Message X Welcome to your swing and array lab".
  - Topic: 05: Arrays
  - Lab: Lab-05a
- Frank**: Shows a pink profile picture, a diagram of an array with indices 0-3, and a message box: "Message X Welcome to your swing and array lab".
  - Topic: 05: Arrays
  - Lab: Lab-05a
- Elizabeth**: Shows a yellow profile picture, a diagram of an array with indices 0-3, and a message box: "Message X Welcome to your swing and array lab".
  - Topic: 05: Arrays
  - Lab: Lab-05a
- Sean**: Shows a teal profile picture, a diagram of an array with indices 0-3, and a message box: "Message X Welcome to your swing and array lab".
  - Topic: 05: Arrays
  - Lab: Lab-05a

A large blue arrow points downwards from the sidebar towards the bottom right.

You may choose to not appear on this page if you prefer to 'appear offline'

Any students currently online will appear here, indicating the topic/lab they may be working on



## Welcome to the website of the Tutors Open Source Project

The Tutors Open Source Project is a collection of software packages developed to create and deliver online courses, through lectures, labs, videos & course materials. It is currently used to run over 160 courses.

[VIEW DOCUMENTATION](#)

[VIEW ON GITHUB](#)

### Contributors



Eamonn De Leastar



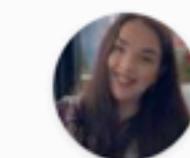
Colm Dunphy



Jordan Harrison



Ben Capper



Emma Kidney



Pete Windle





## Tutors: An Open Learning Web Toolkit

A collection of open source components & services supporting the creation of transformative learning experiences using open web standards.

EXPLORE

The project supports three complimentary perspectives

<https://tutors.dev/>

### The Learner Experience



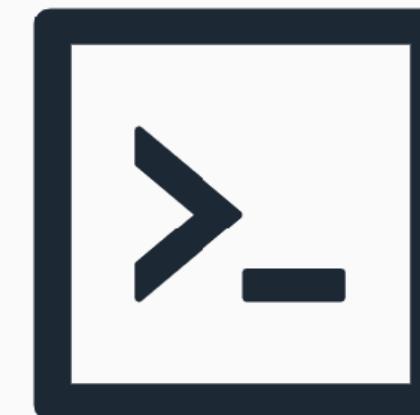
The **Learner Experience** prioritises web interactions that are **engaging, contextual, linkable, searchable, accessible** and **responsive**. In addition the experience should foster a sense of **community** and **connection** among fellow learners.

### The Educator Experience



The **Educator Experience** prioritises the creation of a **guided paths** through a curriculum via the creation of learning materials that are **autonomous, structurally aligned, composable, auditable, extensible, versioned** and **independent**.

### The Developer Experience



The **Developer Experience** prioritises the specification and implementation of **robust, well documented, loosely coupled components & services**, integrated into a **coherent toolkit** open to contributions from **diverse skill sets**.