

Tutors



An open source platform
for structuring and
publishing lecture, lab and
video material for a course



A Programme Home Page

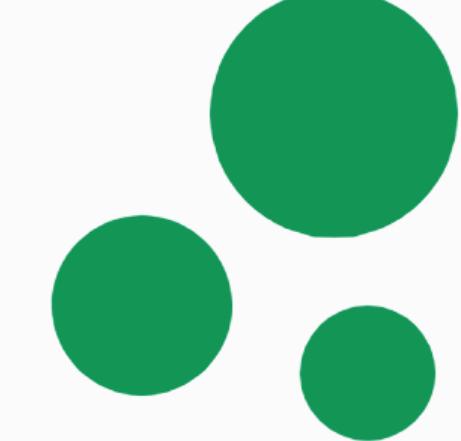
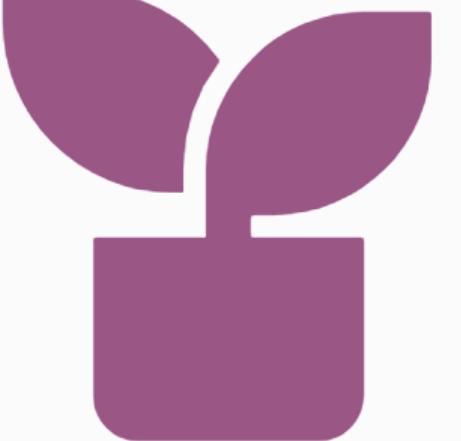
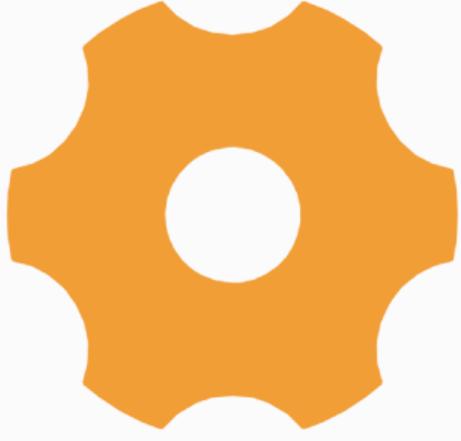
Access to all
resources +
Modules

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 user interface, likely a browser or a dedicated learning platform. At the top, there is a navigation bar with the following elements from left to right:

- A blue circular icon with a white 'i' symbol.
- A small thumbnail image of a person wearing glasses.
- A magnifying glass icon for search.
- A teal square icon with a white 'T'.
- An orange circular icon with a white 'O'.
- A green three-dot menu icon.
- A circular profile picture of a man with glasses.
- A teal three-line menu icon.

The main content area features a title "03: Box & Grid" followed by "Web Development". To the left of the title is a diagram illustrating the box model with labels: "Content", "padding", "border", and "margin". Below the title, the URL path is shown as "Web Development > 03: Box & Grid".

At the bottom, there is a footer bar with several icons:

- A green house icon.
- A red speech bubble icon.
- A blue graduation cap icon.
- A red play button icon.
- A teal download icon.
- A green trophy icon.



Companions

03: Box & Grid
Web Development

Web Development > 03: Box & Grid

Slack channel

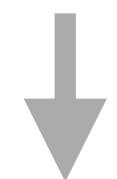
Moodle resources

Youtube playlist



Navigation

Module
Syllabus



The screenshot shows a dark-themed web application interface. At the top is a navigation bar with icons for search, module selection, and user profile. Below it is a breadcrumb trail: Home > Web Development > 03: Box & Grid. The main content area displays the title "03: Box & Grid" and "Web Development". To the left of the title is a small diagram illustrating CSS box model concepts like margin, padding, border, and content.

Programme
Home

Current
Module
Home

Current
Topic

Module
Index



Labs Text
Search

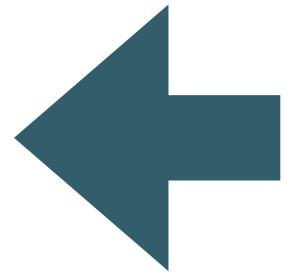
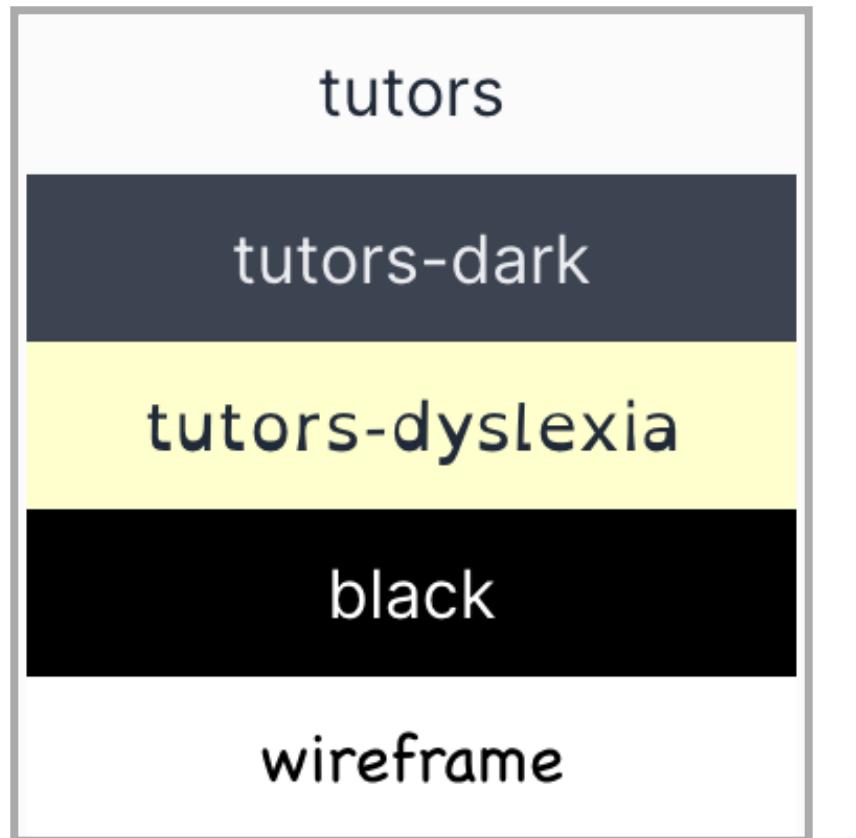


All
All
Labs
Slides





UX



Change
Theme

Switch to
Compact
Layout

The screenshot shows a dark-themed web application interface. At the top, there is a navigation bar with the following elements from left to right:

- An info icon (i).
- A small thumbnail image of a person.
- A search icon (magnifying glass).
- A theme switcher icon (blue square with white 'T-L').
- A light/dark mode switcher icon (orange circle).
- A more options icon (three dots).
- A user profile picture of a man with glasses.
- A three-line menu icon.

The main content area has a breadcrumb navigation at the top:

- Home icon.
- > Web Development.
- > 03: Box & Grid.

The main title of the page is "03: Box & Grid" under the heading "Web Development".

At the bottom right, there are four circular icons representing different actions or features:

- Red speech bubble icon.
- Orange graduation cap icon.
- Red play button icon.
- Blue download/circular arrow icon.



Time/Live

03: Box & Grid
Web Development

> Web Development > 03: Box & Grid

Logged In As:
Eamonn De Leastar

Tutors Time

Tutors Live

Github Profile

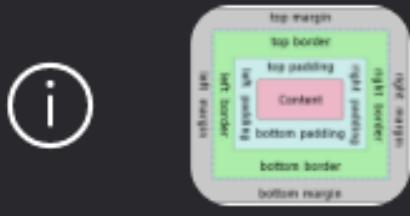
Logout



Module Syllabus

03: Box & Grid

Web Development



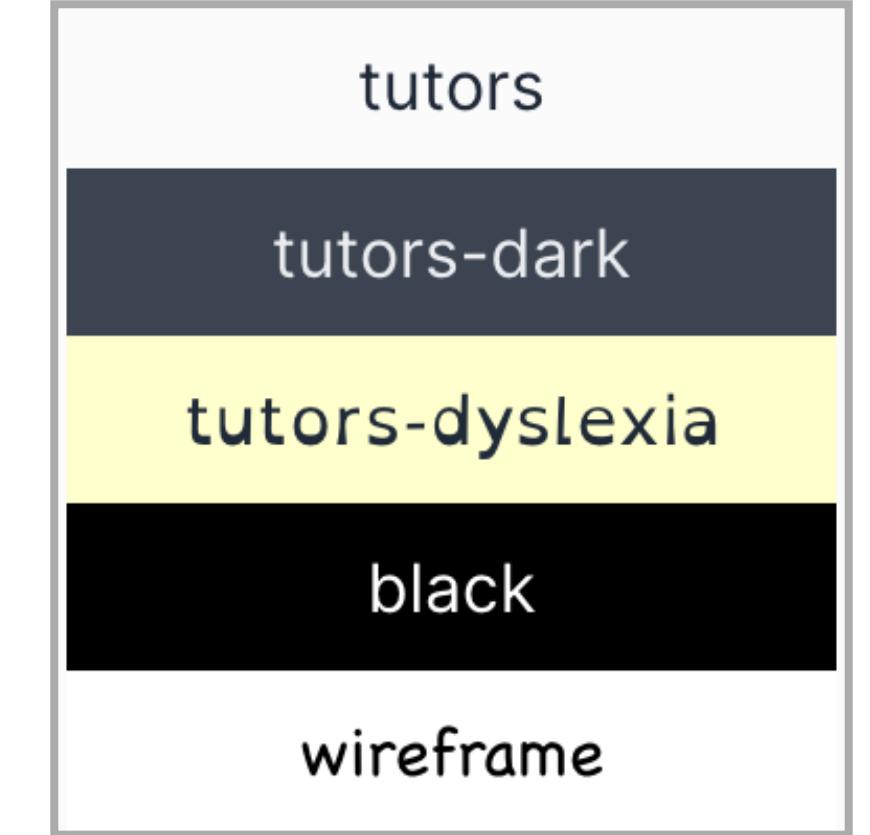
Web Development > 03: Box & Grid

Programme

Home

Current Module Home

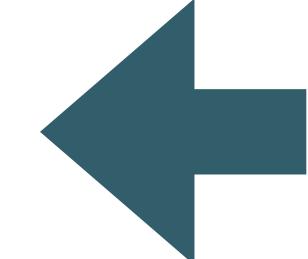
Current Topic

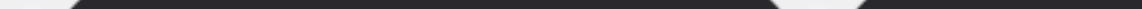


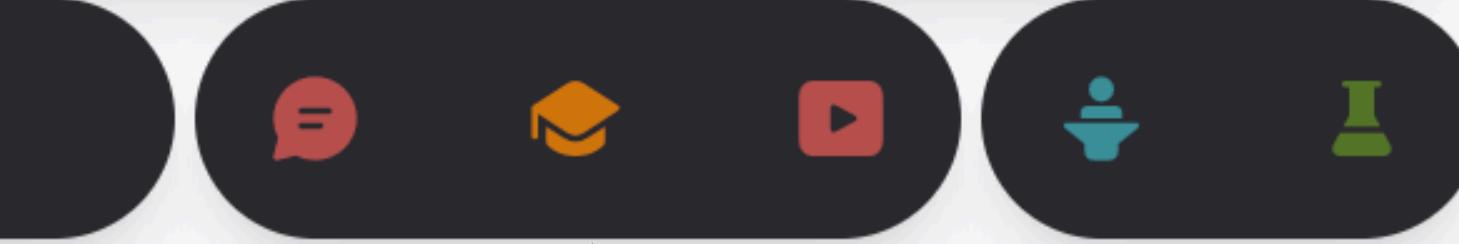
Labs Text Search

Change Theme

Switch to Compact Module Layout Index







Logged In As:
Eamonn De Leastar



- ⌚ Tutors Time
- 👥 Tutors Live
- ithub Github Profile
- Logout

Slack channel

Moodle resources

All Labs Slides

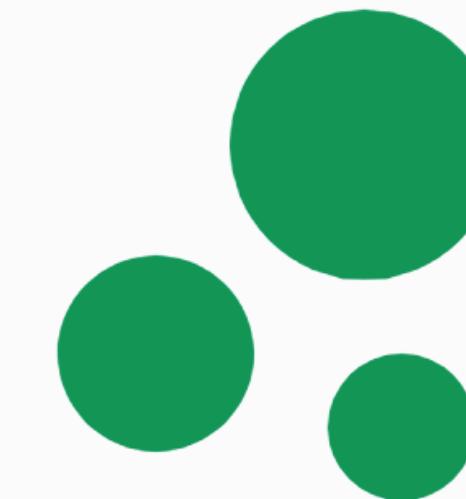
Youtube playlist



Semester One

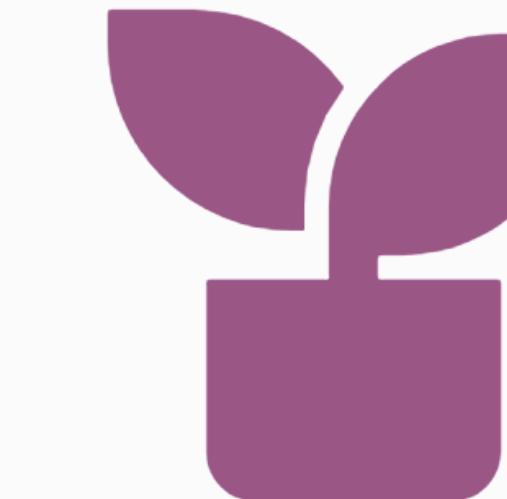
HDIP
22

Workshop One



induction · structure ·
schedules · handbook

Life etc...



time · space · balance ·
experiences · tips ·
techniques

Web Development



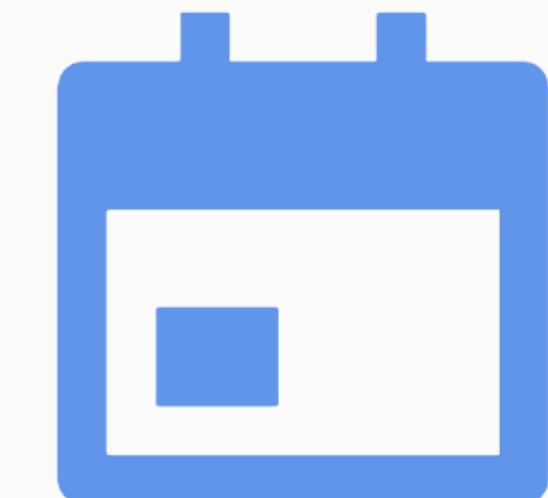
html · css · layout · web
apps · web frameworks ·
deployment

Programming

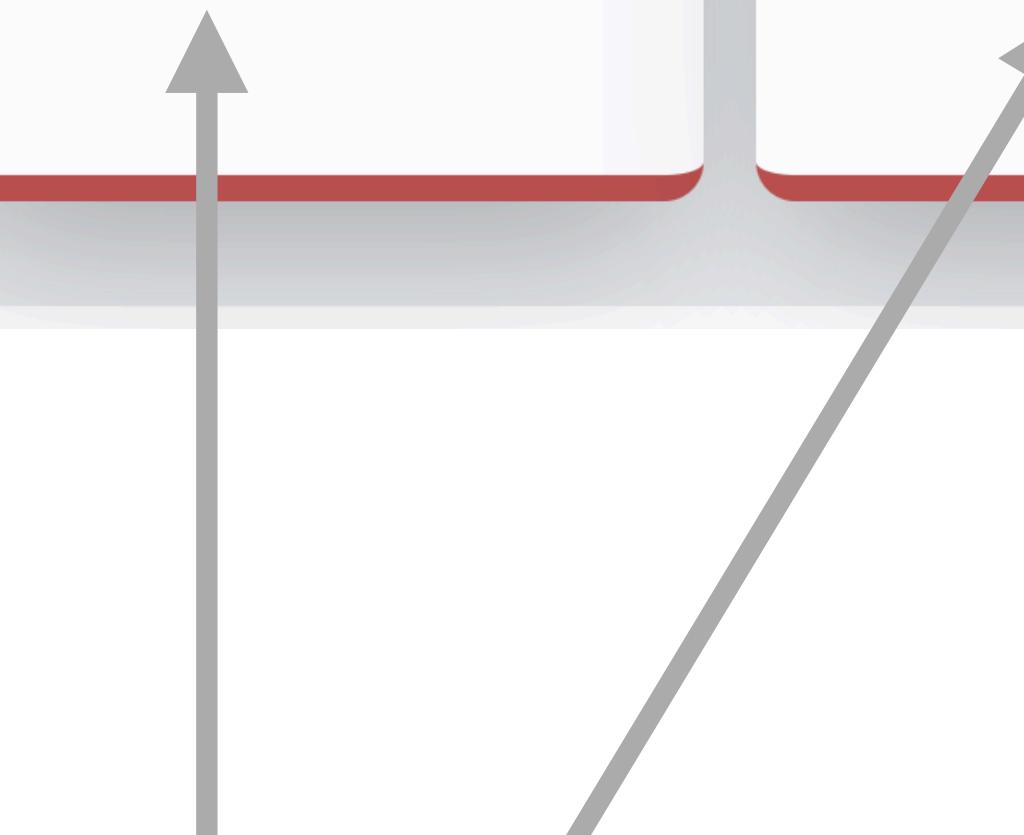


algorithms · data
structures · processing ·
java · classes · libraries

Semester 1 Schedule



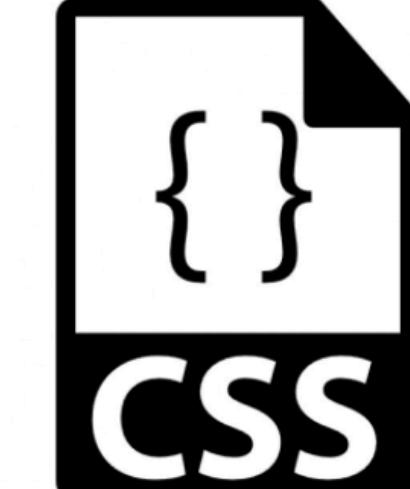
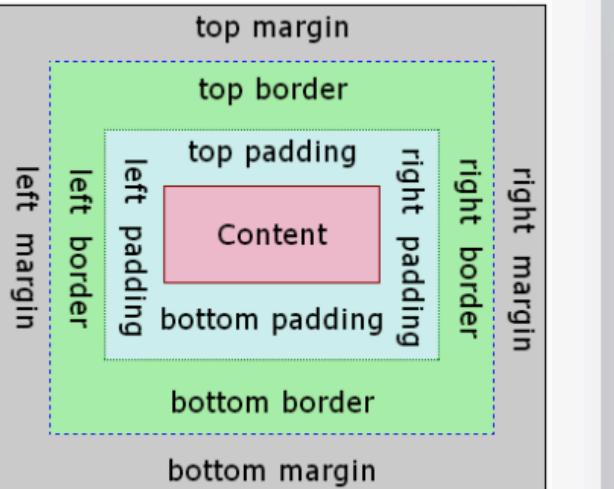
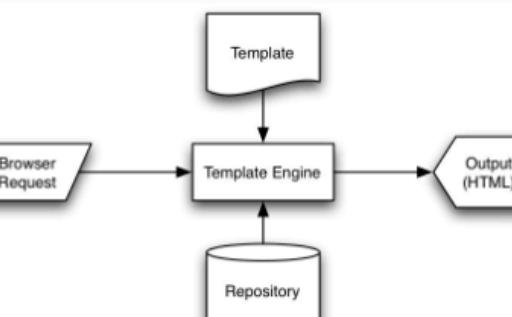
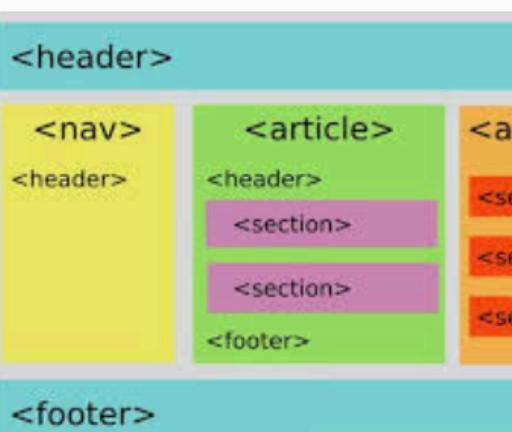
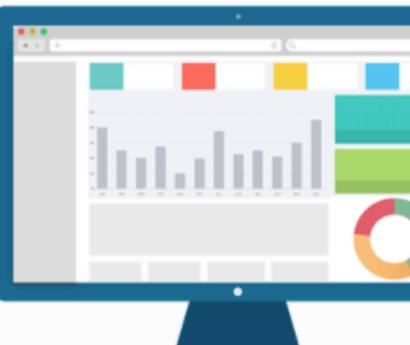
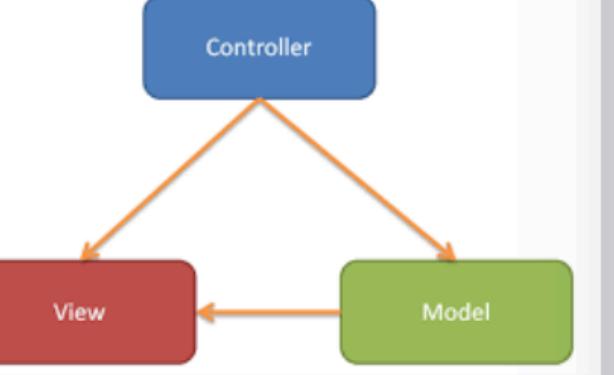
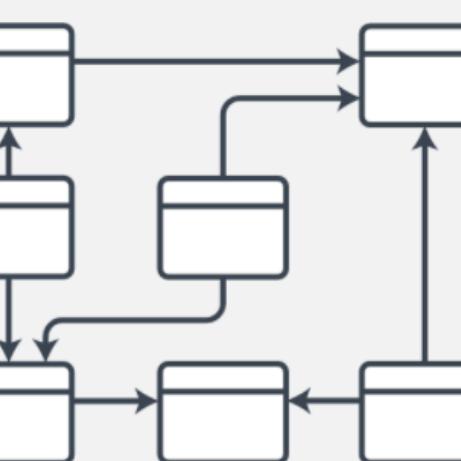
timetables · semester
calendars · assessment
schedules



Links to Individual Module
Home Pages



One Topic / Card
for each week

<p>00: Module Overview</p>  <p>topics · schedules · calendar · assignments · html</p>	<p>01: Introducing HTML</p>  <p>internet · web · client/server · browser · html · documents ...</p>	<p>02: Introducing CSS</p>  <p>markup · style · function-style sheet · rules · selectors · font colour ...</p>	<p>03: Box & Grid</p>  <p>padding · border · margin · width · grid · grid-template-columns · grid-...</p>	<p>04: Navigation & UI Principles</p>  <p>indentation · encoding · doctype · validity · semantics · entities · typ...</p>
<p>05: Templating & Colour</p>  <p>clients · servers · hosting · domains · dns · paths · http · command prompt ..</p>	<p>06: Semantic HTML & Typography</p>  <p>header · main · nav · aside · article · footer · section · figure · typeface · font</p>	<p>07: Frameworks</p>  <p>semantic-ui · frameworks · command line · ide · java · front-end · back-end</p>	<p>08: Models View Controller</p>  <p>Models · Views · Controllers · conf · request · response ·</p>	<p>09: Models</p>  <p>Playlist · Song · Database · entity · onetomany · conf · ..</p>



Single topic
(1 week)

02: Logical Database Design
Database

Database Design and Implementation - Live Lecture 2

Watch later Share

Higher Diploma in Computer Science

Database

Watch on YouTube

02: Database Design - Logical

Concepts

Introduction

Relational Model

Here we introduce the section Logical Databases...

In this lecture you will learn about the Relation...

Methodology

Logical Database Design 1

Worked Example

Worked Example Solution

Logical Data Modelling Lab

In this lecture you will learn about mapping ER diagrams to a set of...

Step by step transformation of an ER diagram into a set of...

Step by step transformation of an ER diagram into a set of...

In this lab, you will gain practice at translating Entity Relationship (ER)...

Topic Video

Sub Topic 1

Sub Topic 2

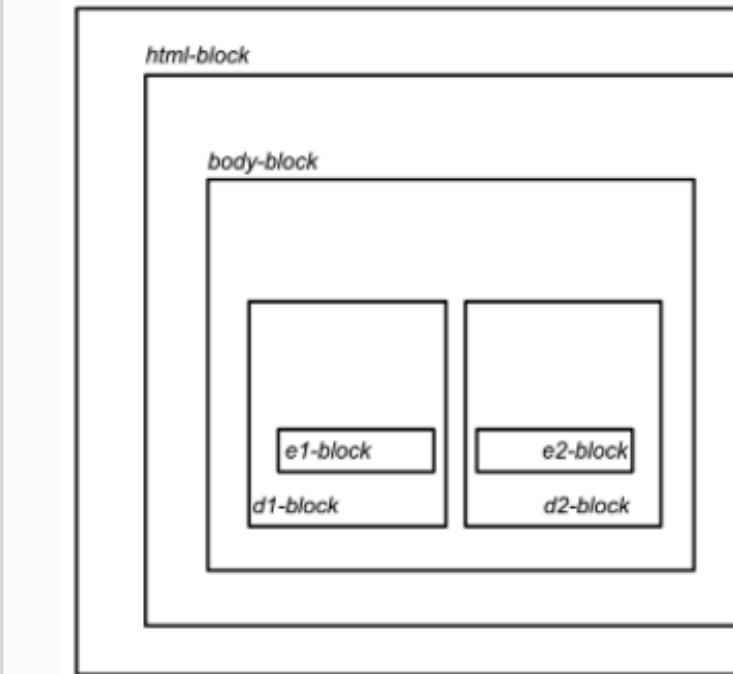


Subtopic

Layout

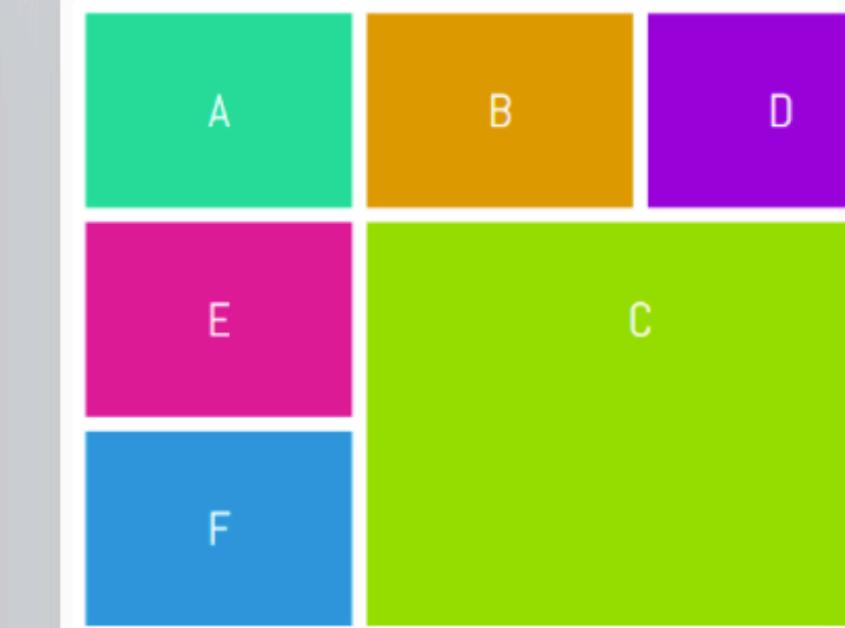


Box Layout



Some important characteristics of the box model layout rules.

Grie



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

Lab-03b

Multicolumn

Lorem ipsum dolor sit

- • •

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, Text icon, Orange circle icon, More icon, User profile icon, Chat icon, Cap icon, YouTube icon, Chat 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



Application Layer, IoT Messaging

2021 Computer Systems and Networks

Device/Service Discovery

- 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 \(SSDP\)](#)

Watch later Share

MORE VIDEOS

▶ 4:33 / 1:36:38

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

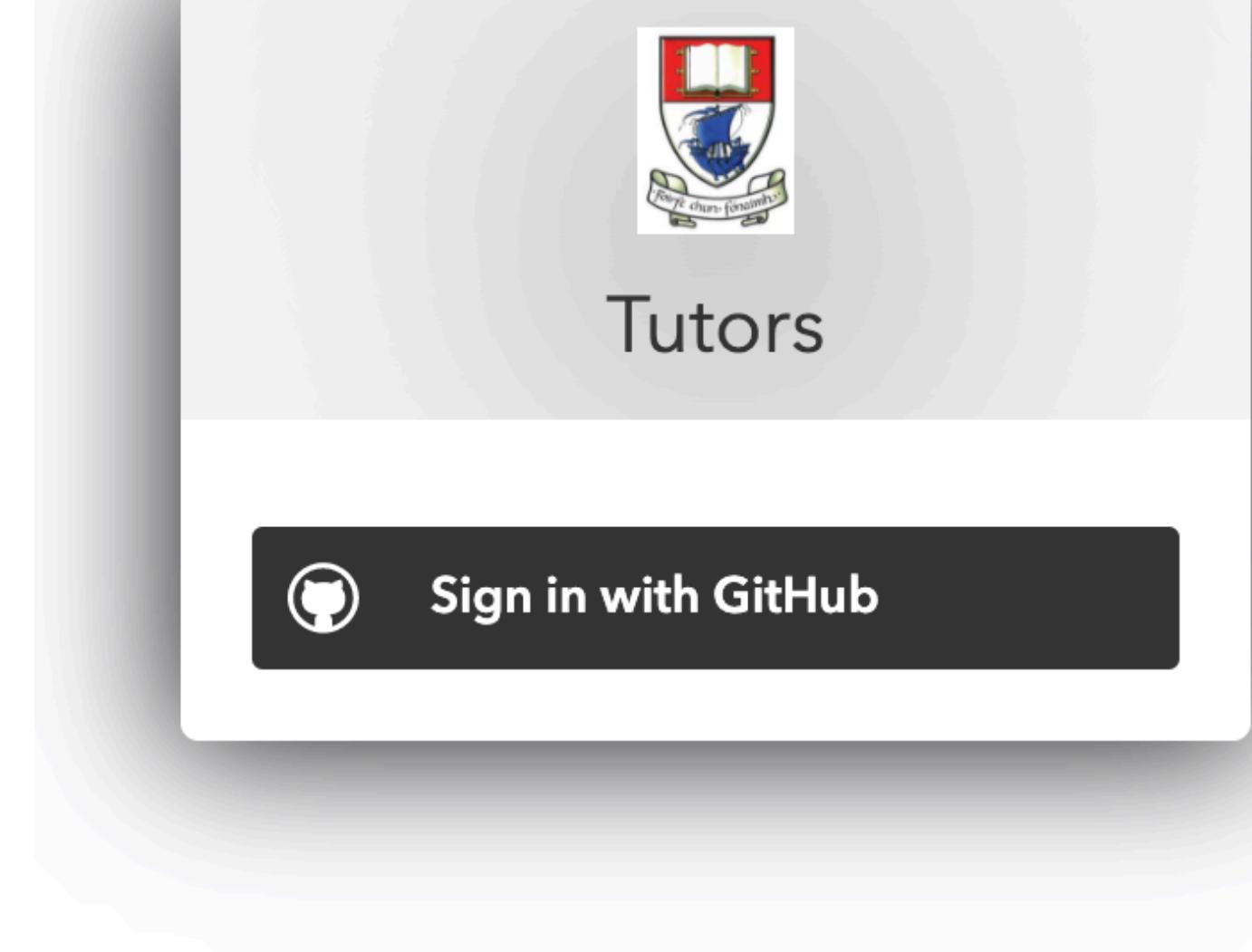


TutorsTime



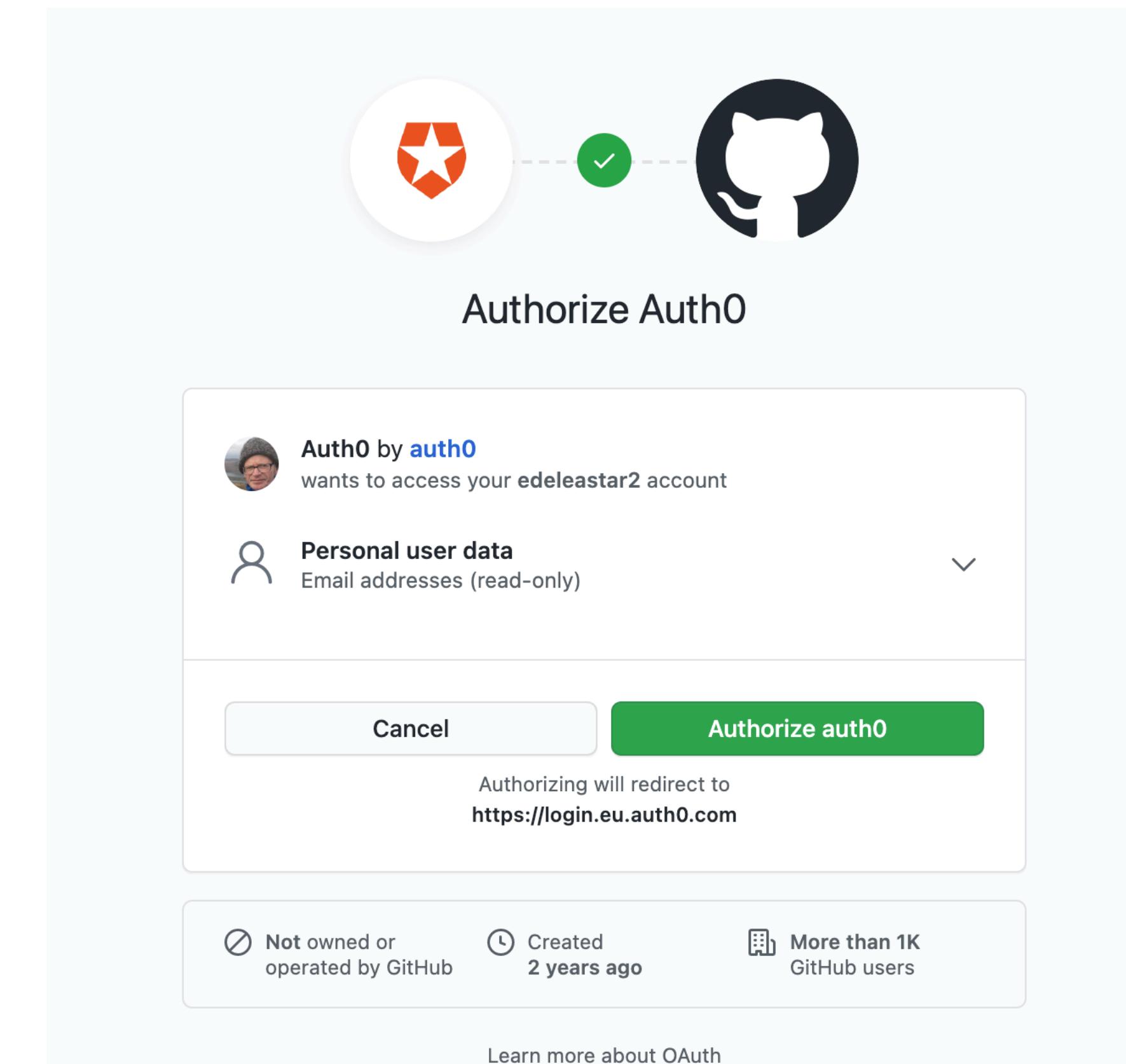
TutorsLive





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

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



Github Profile

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

The top navigation bar includes the GitHub logo, a search bar, and links for Pull requests, Issues, Marketplace, and Explore. On the far right are icons for notifications, a plus sign, and a user profile.

A message banner at the top states: "Your profile picture has been updated. It may take a few moments to update across the site." with a close button.

The main content area is titled "Public profile".

Name: Eamonn de Leastar

Profile picture: A circular photo of a man with glasses and a textured hat, set against a backdrop of hills and water.

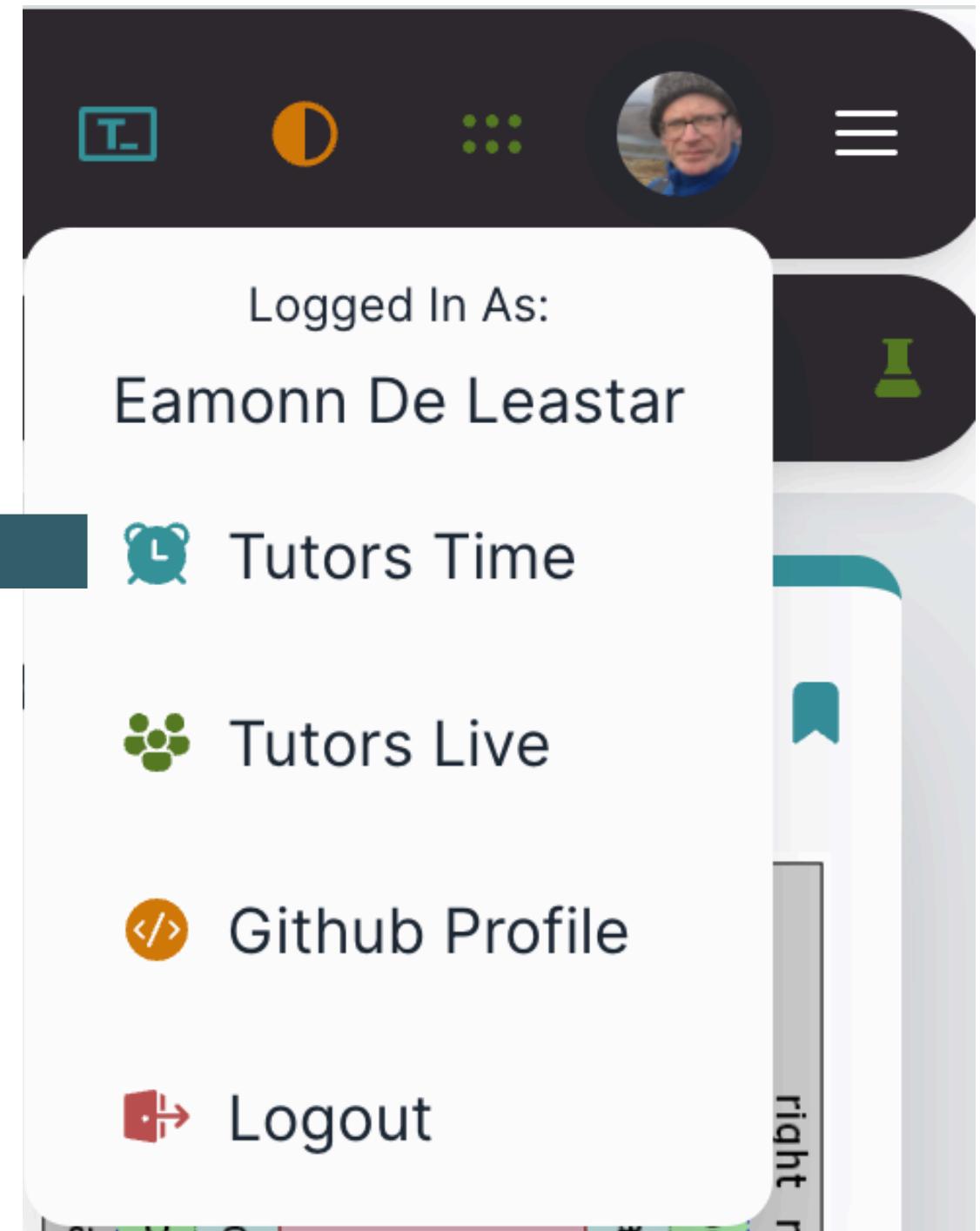
Profile sidebar: Includes links for Profile (selected), Account, Appearance (with a "New" badge), Account security, Billing & plans, Security log, and Security & analysis.

Public email: A dropdown menu showing "Select a verified email to display" with an arrow icon. Below it, a note says: "You have set your email address to private. To toggle email privacy, go to [email settings](#) and uncheck 'Keep my email address private.'"

Bio: A blank input field with an "Edit" button containing a pencil icon.



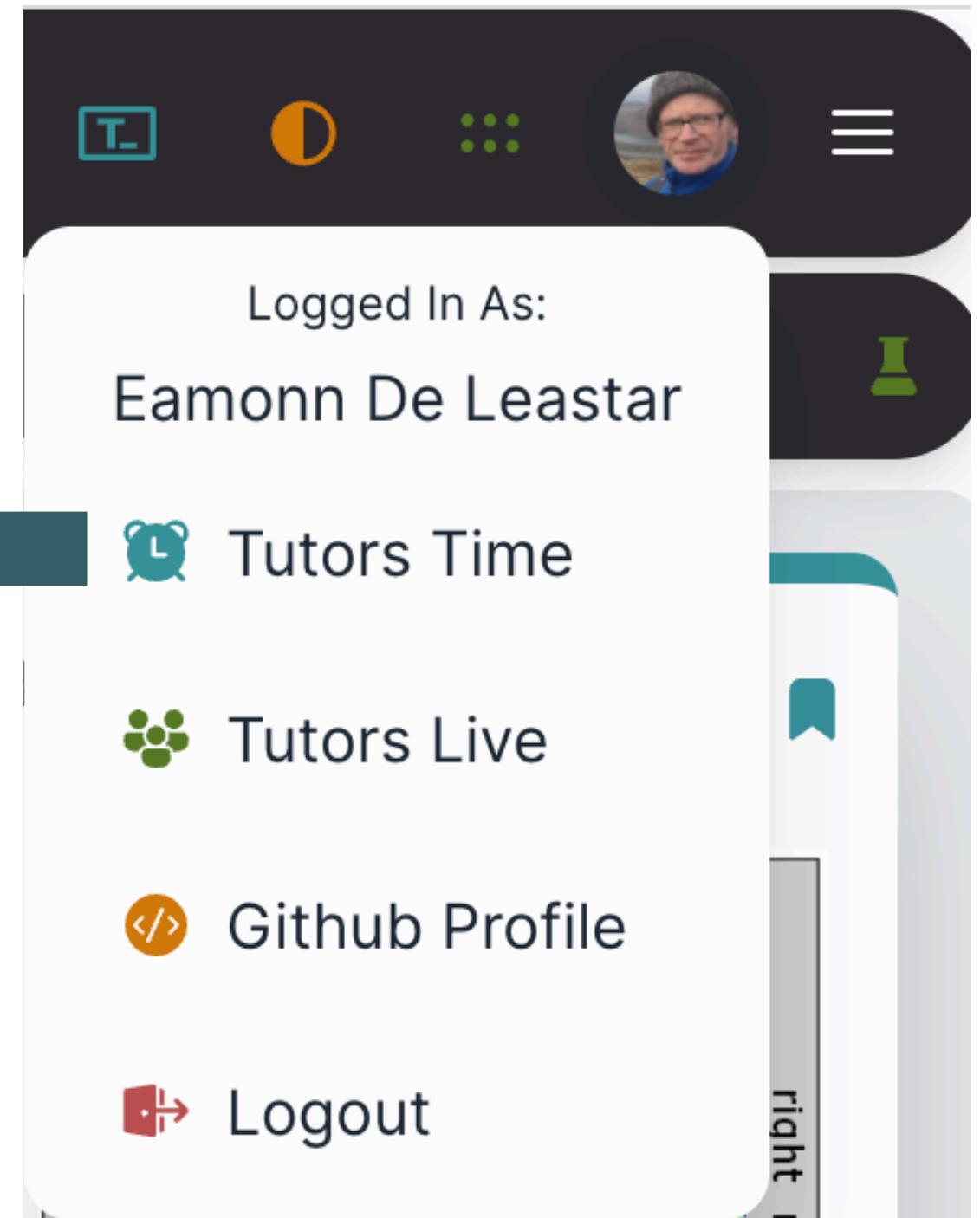
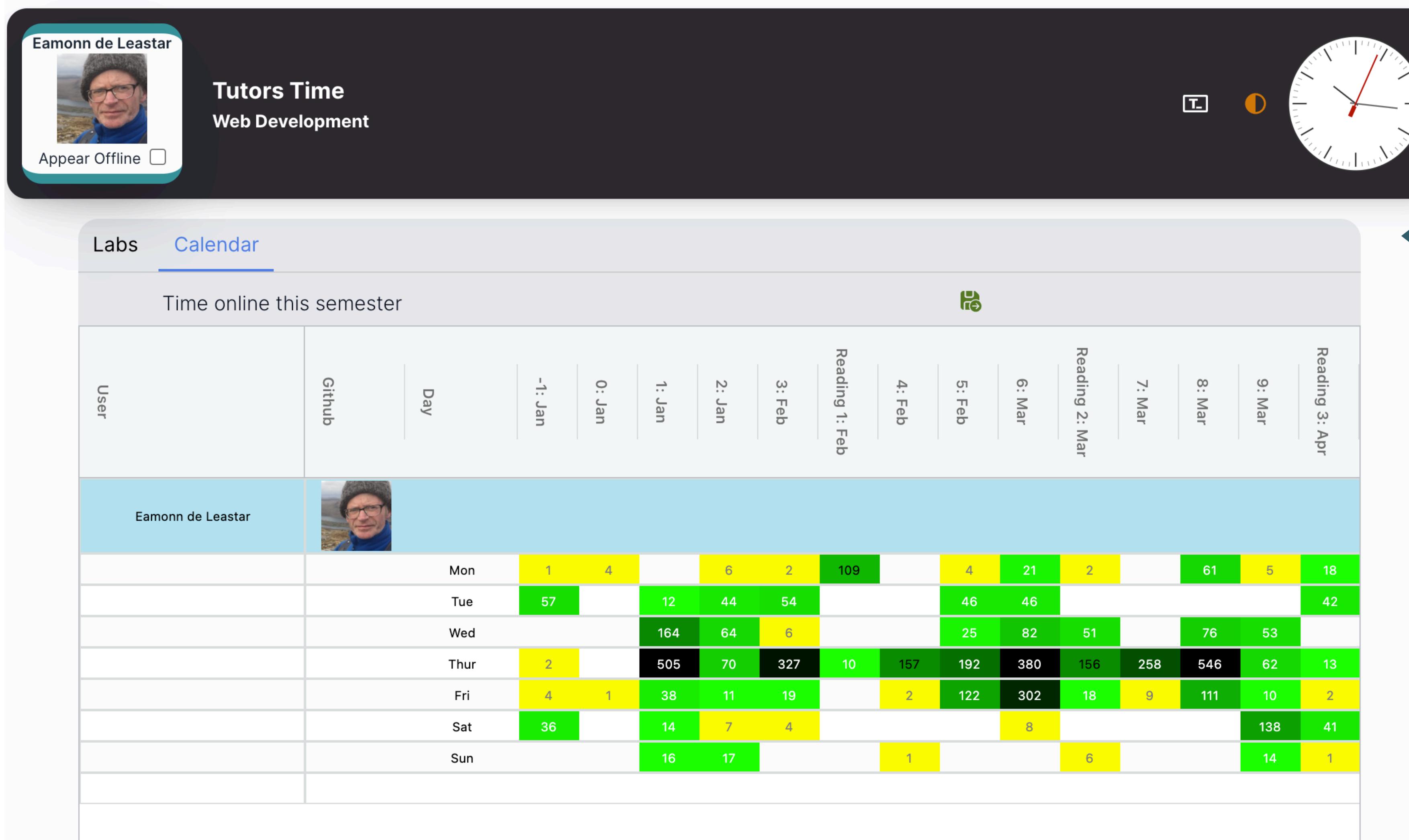
TutorsTime - Labs



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



TutorsTime - Calendar



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

The screenshot shows a mobile application interface. At the top left is a profile card for "Eamonn de Leastar" with a photo, name, and an "Appear Offline" switch. Below it is a title "Tutors Live: Web Development" and a subtitle "Web Development". A large blue arrow points upwards from the bottom of the screen towards this section. The main area displays six student profiles in a grid:

- Joe**: Shows an array diagram with indices 0, 1, 2, 3, 4, 5. Details: 12:38:55, 05: Arrays Lab-05a.
- Mary**: Shows a class hierarchy diagram. Details: 12:47:54, 04: Classes Lab-04a.
- Mike**: Shows an array diagram with indices 0, 1, 2, 3. Details: 12:39:14, 05: Arrays Lab-05a.
- Frank**: Shows an array diagram with indices 0, 1, 2, 3. Details: 12:47:54, 05: Arrays Lab-05a.
- Elizabeth**: Shows an array diagram with indices 0, 1, 2, 3. Details: 12:38:57, 05: Arrays.
- Sean**: Shows an array diagram with indices 0, 1, 2, 3. Details: 12:47:54, 05: Arrays.

A large blue arrow points downwards from the bottom of the screen towards the right side of the interface. On the right side, there is a vertical navigation menu with the following items:

- Logged In As: Eamonn De Leastar
- Tutors Time
- Tutors Live
- Github Profile
- Logout

A small vertical bar with the text "right" is visible on the far right edge of the screen.

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



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Pete Windle



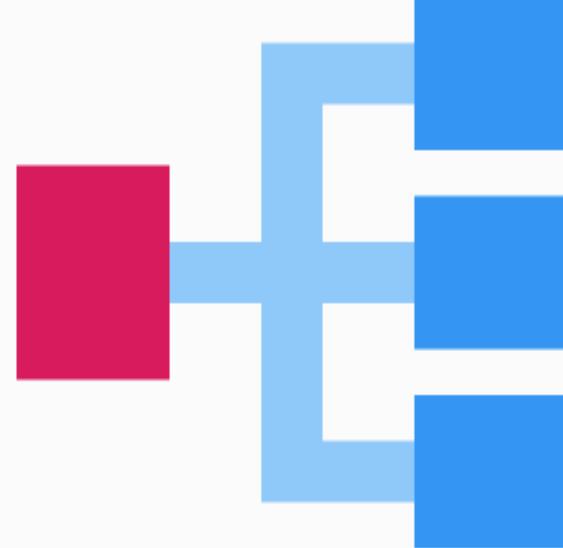
<https://tutors.dev>

<https://tutors-docs.netlify.app>

Tutors Documentation
Tutors Team

Tutors Documentation

Search icon, Tutors icon, Orange circle icon, Three dots icon, Three lines icon

Create  

Creating, editing and publishing a course

Design  

Explore the Design of Tutors

Accessibility  

What does it mean and why is it important

Source  

Sample Courses + Tutors
Open Source Project