

Overview of Structure & Purpose of the Online Materials

Tutors



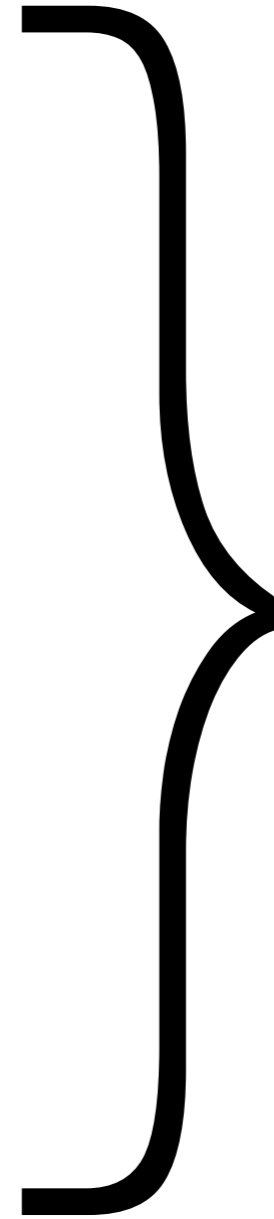
Adobe Connect



Slack

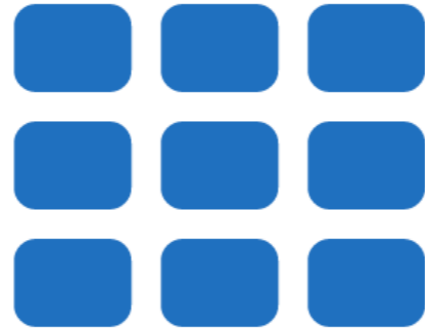


Moodle



4 Key Web Services

Tutors



open

Adobe Connect



wit email

Slack



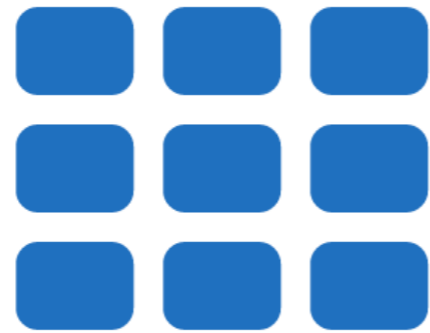
wit email

Moodle



wit email

Tutors




Primary location
of module
lectures, lab and
video material

Higher Diploma in Computer Science 2018

Department of Computing & Mathematics, WIT




Guides

Programme
Introduction 



structure · philosophy ·
materials · module
introductions

Schedules &
Handbooks 




timetables · assessment
schedules · programme
handbooks

Learning to
Learn Online 



learning resources · guides
· tools · howtos

Semester 1

Programming
Fundamentals 



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


10 Credits

Web
Development 



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

5 Credits

ICT Skills
Studio 









javascript · node · express ·
git · github · glitch

5 Credits

Programme
Home Page

Links to all
resources +
Modules

Semester 1

<p>Programming Fundamentals </p> <p></p> <p>algorithms · data structures · processing · java · classes · libraries</p> <p>10 Credits</p>	<p>Web Development </p> <p></p> <p>html · css · layout · web apps · web frameworks · deployment</p> <p>5 Credits</p>	<p>ICT Skills Studio </p> <p></p> <p>javascript · node · express · git · github · glitch</p> <p>5 Credits</p>
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Links to Individual Module Home Pages







Programme Home

Adobe Connect

Moodle

Slack

Building Modern Web Applications & Services
Eamonn de Leastar, WIT

Programme      

Topics

1: Introduction



1.1 HTML Templates **HTML**
Basics for the structural elements of web documents, including semantic markup, accessibility, and responsive design.

1.2 CSS Frameworks **CSS**
Overview of CSS Frameworks (Bootstrap, Foundation, etc.) and their use in web development.

1.3 JavaScript Orientation **JS**
Introduction to JavaScript, covering language structure and usage in the context of client-side web applications.

1.4 Ajax & APIs
Introduction to Ajax and RESTful APIs, covering data requests and responses.

1.5 Full Applications
Introduction to full web applications, covering the integration of HTML, CSS, and JavaScript.

1.6 Views
Introduction to Views, covering the separation of concerns and the role of Views in web applications.

1.7 Sessions
Introduction to Sessions, covering the management of user state and the role of Sessions in web applications.

1.8 Models
Introduction to Models, covering the management of data and the role of Models in web applications.

1.9 Validation
Introduction to Validation, covering the management of user input and the role of Validation in web applications.

1.10 Deployment
Introduction to Deployment, covering the management of web applications and the role of Deployment in web applications.

1.11 APIs
Introduction to APIs, covering the management of data and the role of APIs in web applications.

1.12 Model Binding
Introduction to Model Binding, covering the management of data and the role of Model Binding in web applications.

1.13 MVC
Introduction to MVC, covering the management of data and the role of MVC in web applications.

1.14 REST
Introduction to REST, covering the management of data and the role of REST in web applications.

1.15 Ajax
Introduction to Ajax, covering the management of data and the role of Ajax in web applications.

1.16 Web 1.0
Introduction to Web 1.0, covering the management of data and the role of Web 1.0 in web applications.

1.17 RESTful AREA
Introduction to RESTful AREA, covering the management of data and the role of RESTful AREA in web applications.

1.18 Single Page Web Sites
Introduction to Single Page Web Sites, covering the management of data and the role of Single Page Web Sites in web applications.

Introducing the module, assessment and schedule.

2: JavaScript Review



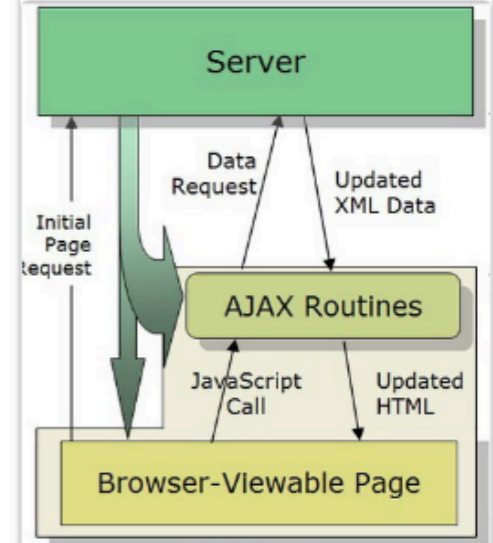
Re-introduction to Javascript. Review language structure and usage.

3: DOM & JQuery



Review the nature & structure of the DOM. Basics of JQuery library

4: Ajax & APIs



Learn how to invoke REST services in JQuery using ajax features. Explore github and foursquare APIs in this context.

Topic



5: Hani Applications

6: Views

7: Sessions

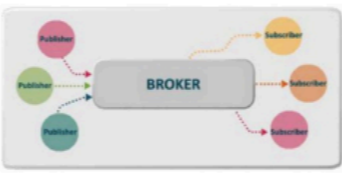

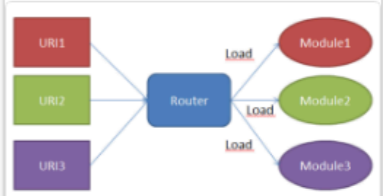



8: Models

PDFs of Slides




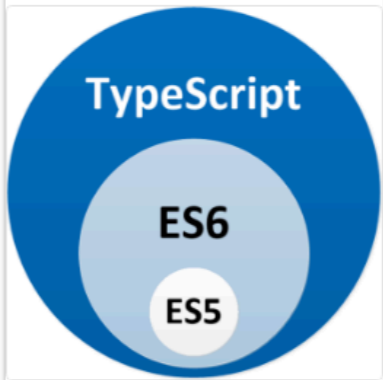
Videos of Talk
Accompanying
Slides

Labs

Slides

		
A simple Pub/Sub mechanism for Aurelia	View-Models can be composed from other view-models, creating a reusable ecosystem of pluggable building blocks.,	Client side routing in Aurelia
		
video link	video link	video link

Labs

	
	
Incorporate aurelia routers into donation-client. This will enable a more orderly evolution of the application, allowing new viewmodels to be introduced in a consistent manner.	Redevelop a version of donation-client in Typescript. This version should match the features in the Aurelia Lab 3 application.



24: Aurelia Routers Aurelia Lab 3 TS 01 02 03 04 05 06 Exercises

Starter Project

If you are not familiar with Typescript - it might be worth a quick review of the language here:

- <https://www.typescriptlang.org/docs/handbook/typescript-in-5-minutes.html>

Make sure you have the latest typescript and aureli-cli installed on your workstation:

```
npm install typescript -g
npm install aurelia-cli -g
```

Create a new Aurelia project:

```
au new donstion-client-ts
```

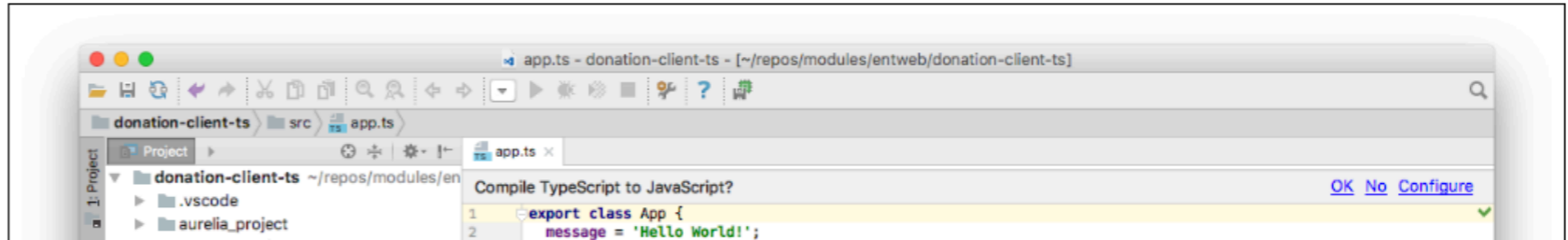
Make sure to select [2] for typescript:

```
aurelia CLI
Would you like to use the default setup or customize your choices?
1. Default ESNext (Default)
  A basic web-oriented setup with Babel and RequireJS for modern JavaScript development.
2. Default TypeScript
  A basic web-oriented setup with TypeScript and RequireJS for modern JavaScript development.
3. Custom
  Select loaders (requirejs/systemjs), bundlers (cli/webpack), transpilers, CSS pre-processors and more.
[Default ESNext]>2
```

Accept all other defaults.

You should be able to immediately open the project in Webstorm.

When invited to compile Typescript to Javascript - press 'OK'



Lab Instructions



Adobe Connect



Live Webinars
Delivery

Adobe Connect



Presenter

Meeting | Meeting | Help

Share 4 - Eamonn Delestar

Video (1)

Attendees (2)

Active Speakers

Hosts (1)

Eamonn Delestar

Presenters (0)

Participants (1)

Student

Chat (Everyone)

Krish: Thank you

Kev: Thanks Eamonn

Eamonn Delestar: enjoy the turkey!

Anjali: Thanks Eamonn

Peter: thanks Eamonn

Eamonn Delestar: the building i am in is closing here - so i am going to have to step out

Eamonn Delestar: catch up tomorrow if you have any issues in the lab?

Everyone

Web Development

- Understand the fundamentals of the HTML markup language.
- Understand the role of Human Computer Interaction and manipulate CSS to present HTML content.
- Be able to integrate HTML, CSS and Java script to structure simple web sites.
- Understand how a dynamic web page is generated and be familiar with the role of html templating techniques
- Have an initial exposure to a web application framework and understand the roles of Models, Views and Controllers in this context.

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

5 Credits

HTML

CSS

IJ

Java

14

Topic Slides of
demonstrations

Attendees + chat



Adobe Connect

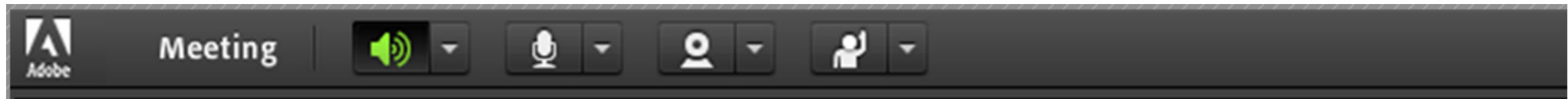
- 1: Main Share Area
- 2: Presenter Camera
- 3: List of Hosts & Attendees
- 4: Chat

The screenshot shows the Adobe Connect interface with four numbered callouts:

- 1:** Main Share Area, containing a grid of application icons: Tutors (grid icon), Adobe Connect (logo icon), Slack (hashtag icon), and Moodle (graduation cap icon). Each icon is followed by a closing curly brace and the text "wit email".
- 2:** Presenter Camera, showing a video feed of a man in a blue shirt presenting a slide titled "Java Annotations".
- 3:** List of Hosts & Attendees, showing a sidebar with sections: Attendees (7), Active Speakers, Hosts (2) (listing Eamonn Delestar and Peter Windle), Presenters (0), and Participants (5) (listing Brenda Mullally).
- 4:** Chat, showing a chat window with messages from participants like Ali Jilani, Dan Smith, and Eamonn Delestar.



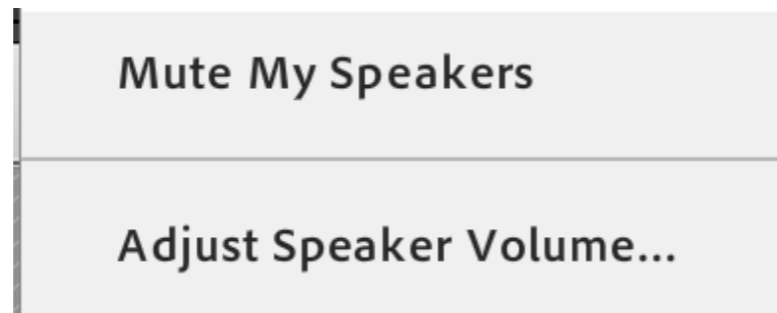
Adobe Connect Audio



Configure Speakers and microphone in the Audio Setup Wizard



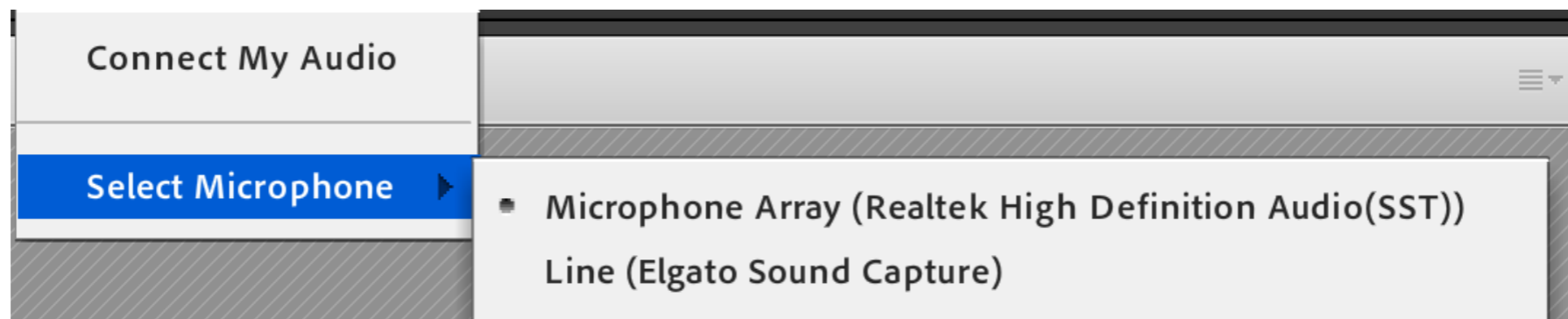
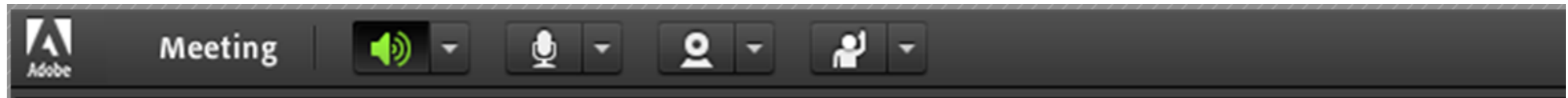
Adobe Connect Volume



Mute Speakers and Change Volume



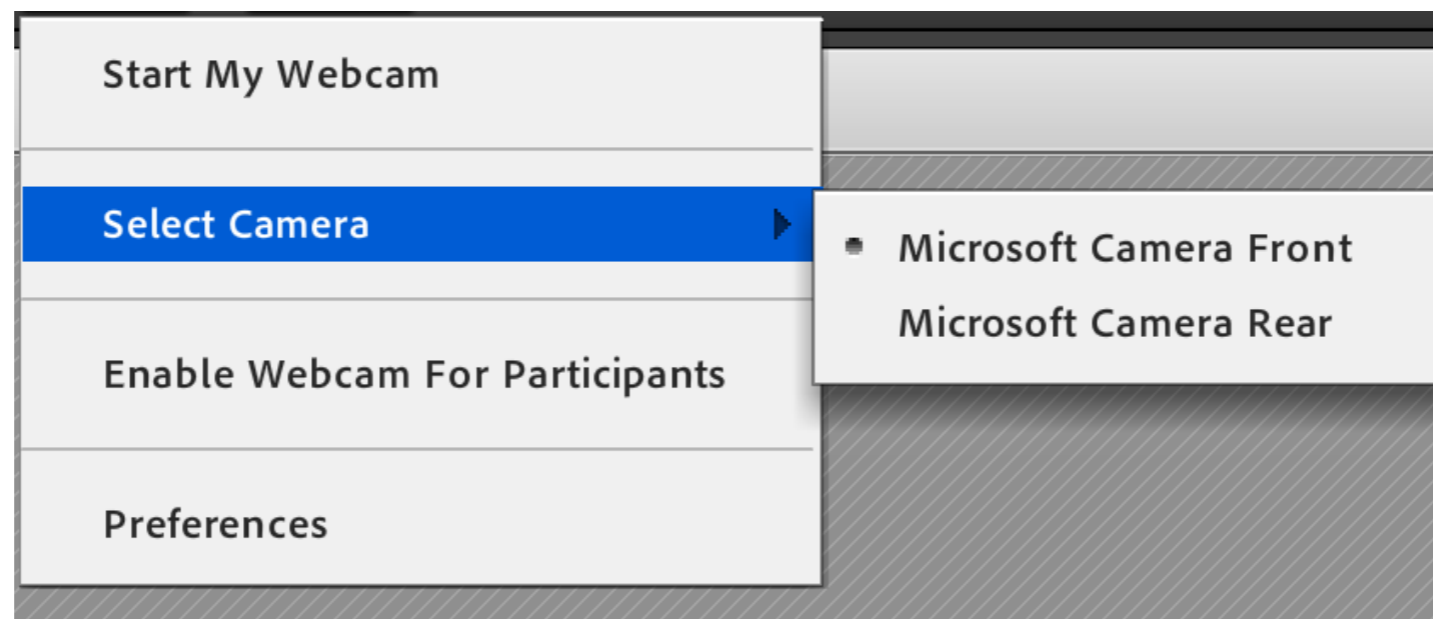
Adobe Connect Volume



Mute microphone or select audio source



Adobe Connect Volume



Mute microphone or select audio source



Adobe Connect Actions



Get the lecturer's attention or ask them to perform an action like Speak Louder or Slow Down





Maximise Area



The screenshot shows the Adobe Connect interface. The top menu bar includes 'Meeting', 'Layouts', 'Pods', 'Audio', and 'Help'. The main content area is divided into two sections: 'Share' and 'Video (1)'. The 'Share' section contains a grid of blue squares labeled 'Tutors', a blue icon of a person at a computer labeled 'Adobe Connect', and a blue thumbs-up icon. The 'Video (1)' section shows a video feed of a man named 'Eamonn Deleastar' presenting a slide titled 'Java notations'. Below the video feed is a list of attendees: 'Active Speakers', 'Hosts (2)' (Eamonn Deleastar, Peter Windle), 'Presenters (0)', and 'Participants (5)' (Brenda Mullally). An orange arrow points from the 'Expand' icon in the top right corner of the 'Share' area to the 'Maximise Area' icon in the top right corner of the 'Video (1)' area.

Maximise screenshare area or presenter video with the expand icon

Slack



Lab Tuition
Support + peer-
to-peer
communications
& self help

Slack

Slack – main things to remember

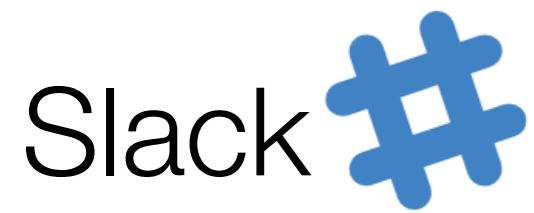


1. CHANNELS

2. DIRECT MESSAGES

The screenshot shows the Slack interface. On the left, the sidebar contains a list of channels and direct messages. The 'Channels' section is highlighted with a blue box, and the 'Direct Messages' section is also highlighted with a blue box. The main area shows a conversation in the '# programming_test' channel. The conversation includes a code snippet, a discussion about a syntax error, and an image of a drawing. A blue box highlights the input field at the bottom of the channel, with the text '3. TYPE HERE' overlaid. On the right, a 'Workspace Directory' window is open, showing the profile of 'cdunphy', a Lecturer. The profile includes an 'Edit Profile' button and a status field.

4. CLICK TO SELECT FILES/CONTENT TO UPLOAD



```
lab00_solution_exercise1 | Processing 3.3.6  
lab00_solution_exercise1  
3 background(200);  
4  
5 //Drawing an ellipse  
6 ellipse(200,100,20,60);  
7  
8 //Drawing a rectangle  
9 rect(100,100,200,100);  
10  
11 //Drawing a square  
12 rect(150,200,20,20);  
13  
14 //Drawing a line  
15 line(100,100,300,200);  
16  
17 //Drawing an circle  
18 ellipse(250,130,25,25);  
19  
20  
21  
22  
23  
24
```

Syntax error, maybe a missing semicolon?

expecting SEMI, found 'line'

Console Errors

Channels

- admin
- # general
- # hdip-programming
- # hdip-webdev

cdunphy 1:54 PM
"I'm having trouble with ex 1 - syntax error"

Diarmuid O Connor 1:55 PM
Ok. want to send me the code and i'll have a look

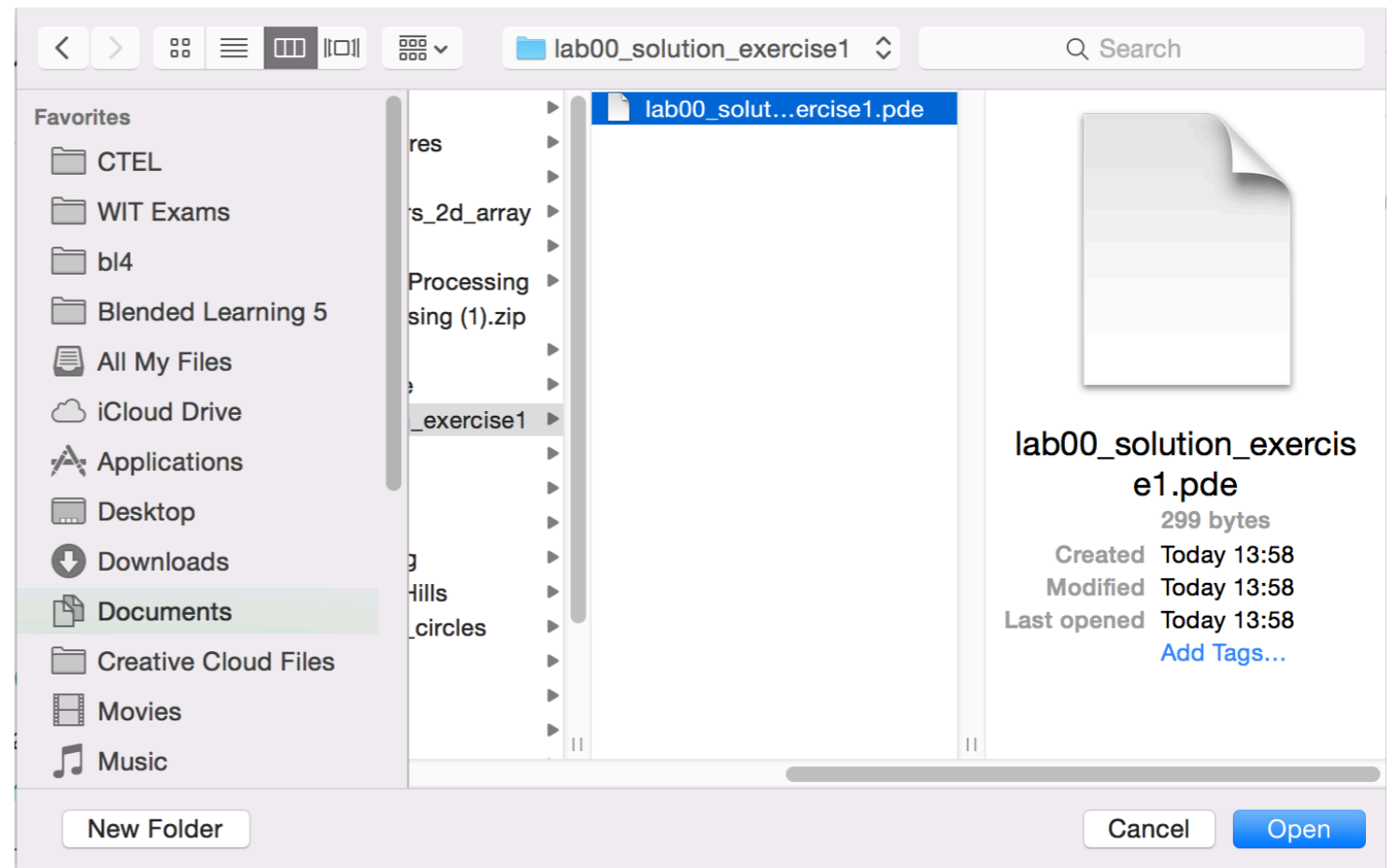
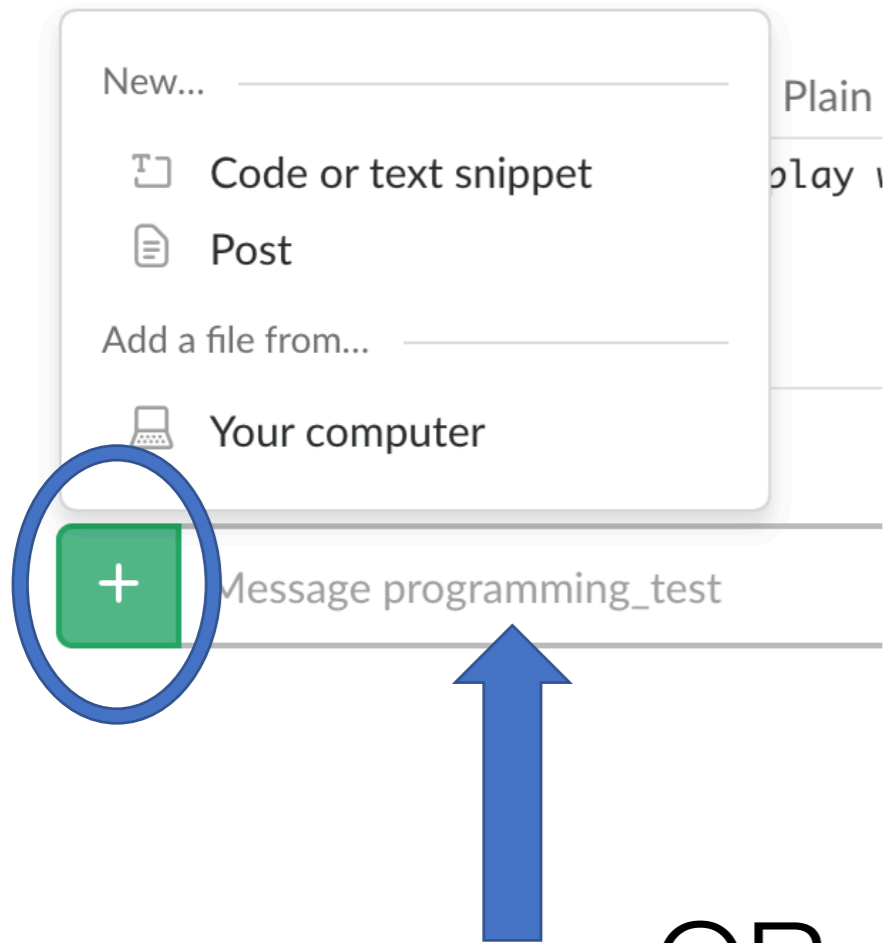
cdunphy 1:55 PM
yes. 1 sec

+ Message programming_test

Select the Channel in Slack & post your issue

Slack #

Uploading content for discussion

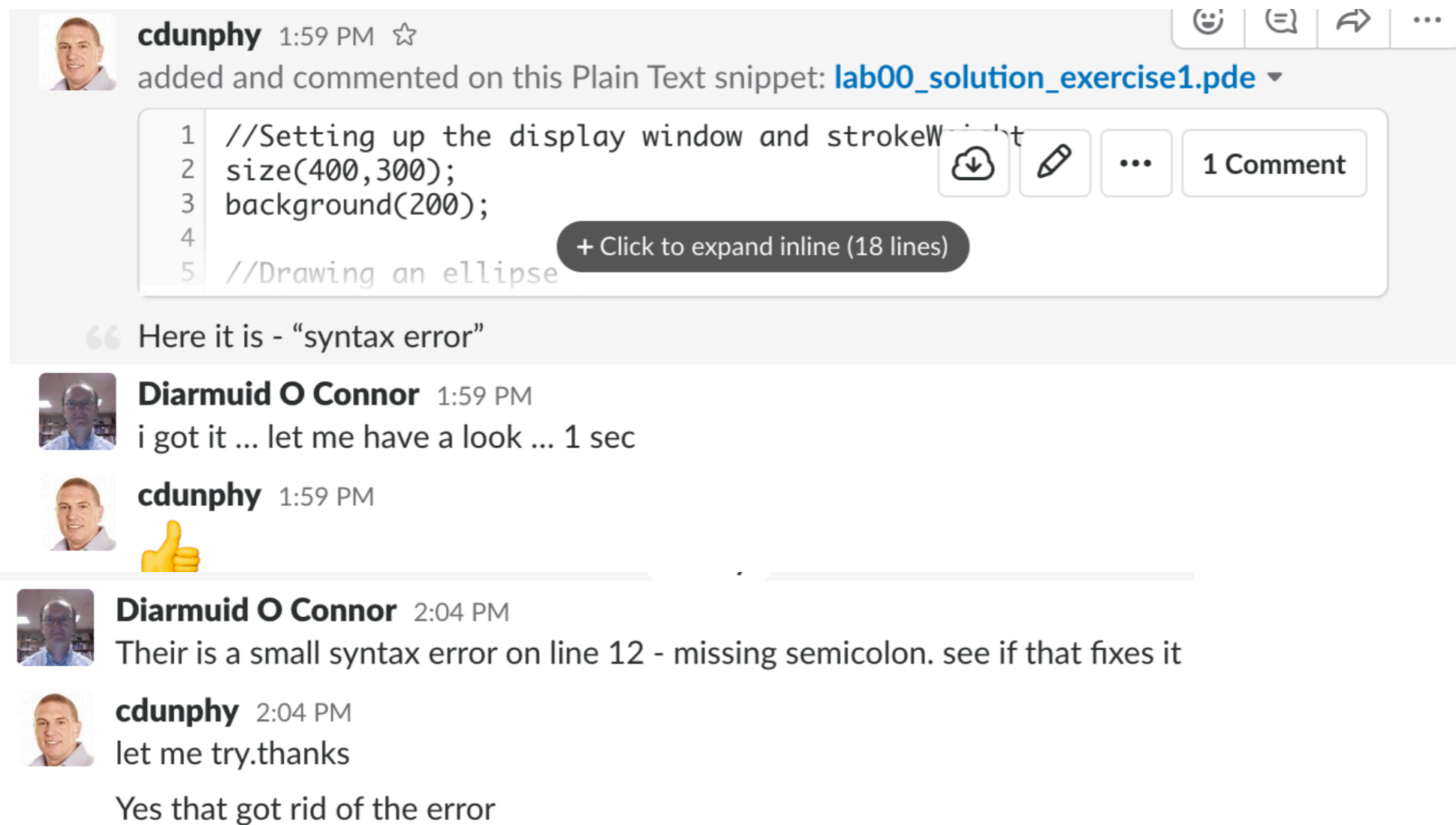


OR

drag n' drop the file to here

Slack

Simple issue resolved on chat text by peers or tutor



cdunphy 1:59 PM ☆
added and commented on this Plain Text snippet: [lab00_solution_exercise1.pde](#)

```
1 //Setting up the display window and strokeW...ht
2 size(400,300);
3 background(200);
4
5 //Drawing an ellipse
```

+ Click to expand inline (18 lines)

“ Here it is - “syntax error”

Diarmuid O Connor 1:59 PM
i got it ... let me have a look ... 1 sec

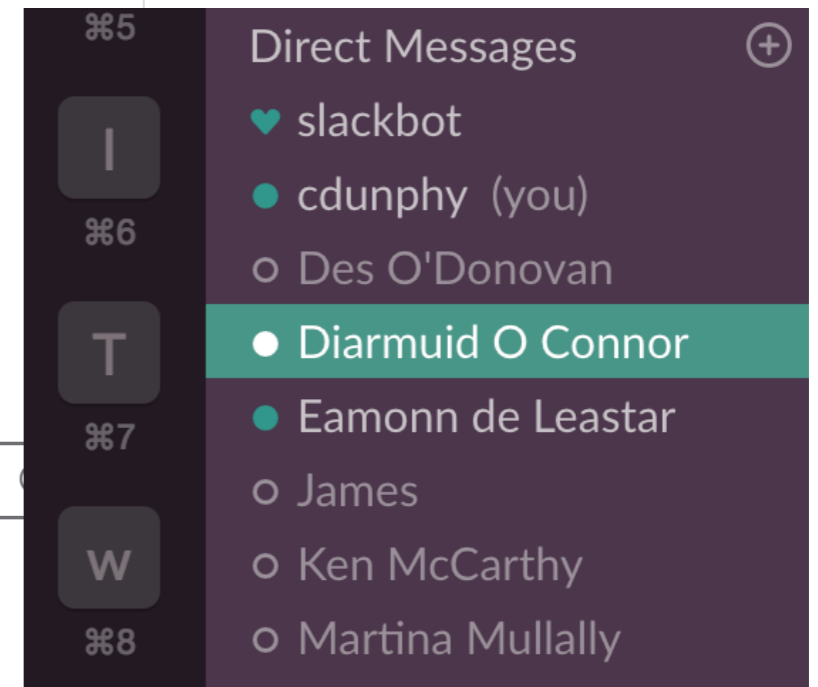
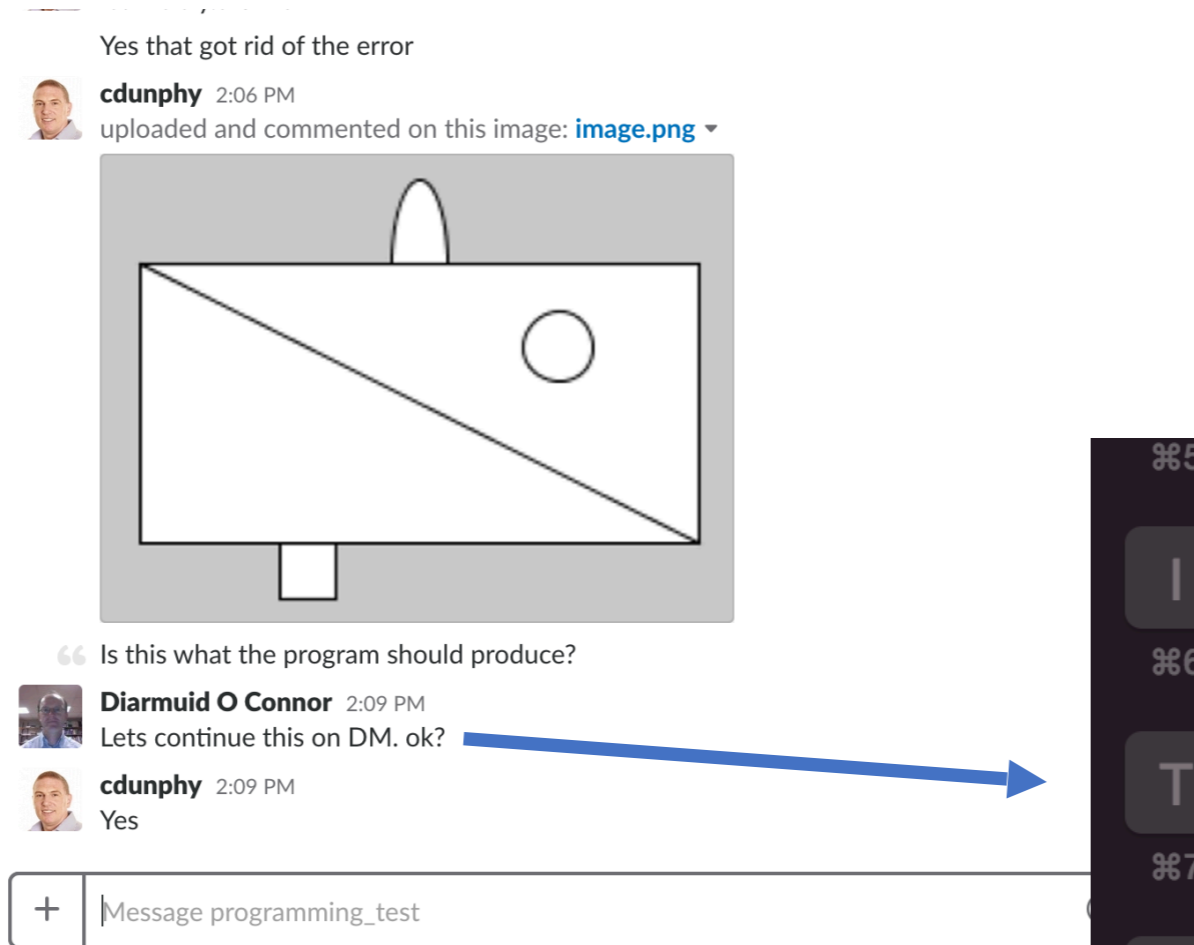
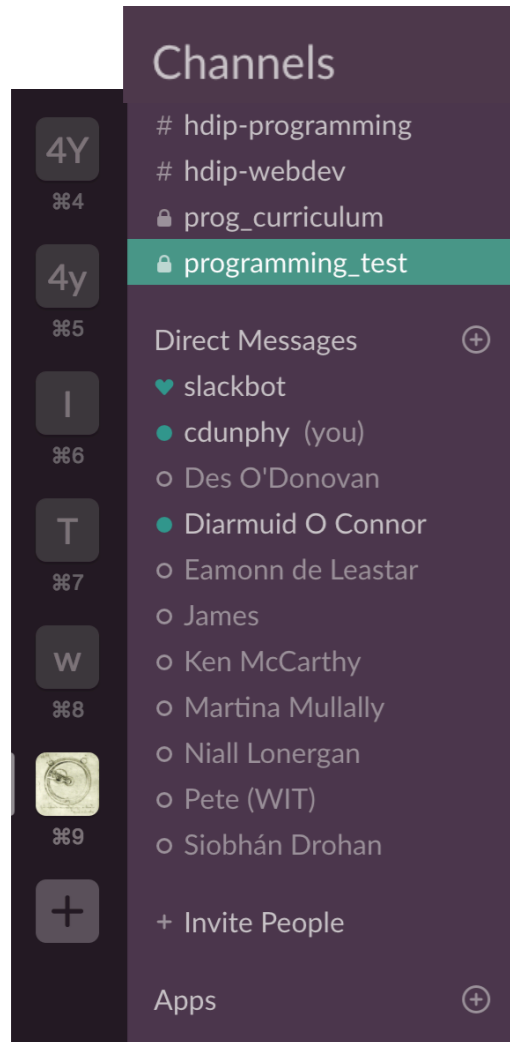
cdunphy 1:59 PM
👍

Diarmuid O Connor 2:04 PM
Their is a small syntax error on line 12 - missing semicolon. see if that fixes it

cdunphy 2:04 PM
let me try.thanks

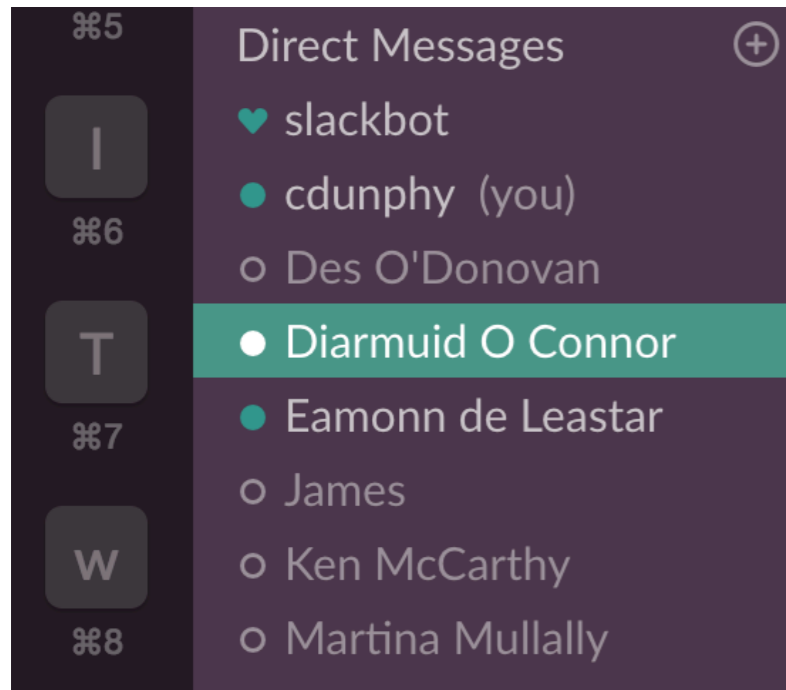
Yes that got rid of the error

Private 1 on 1 help required - > Direct Message (DM)



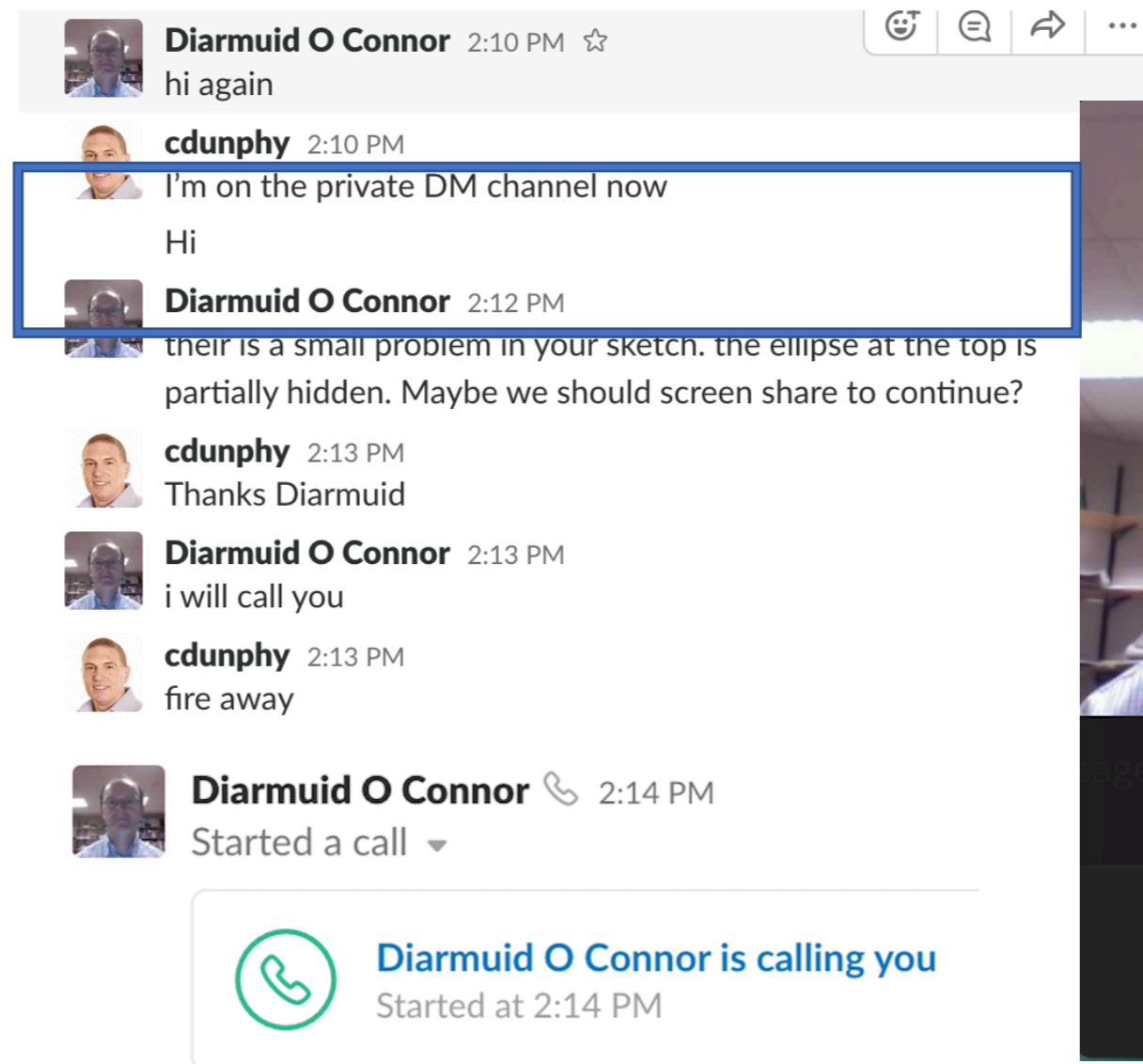
Slack

Lecturer sharing screen (call required)



Slack sidebar showing Direct Messages:

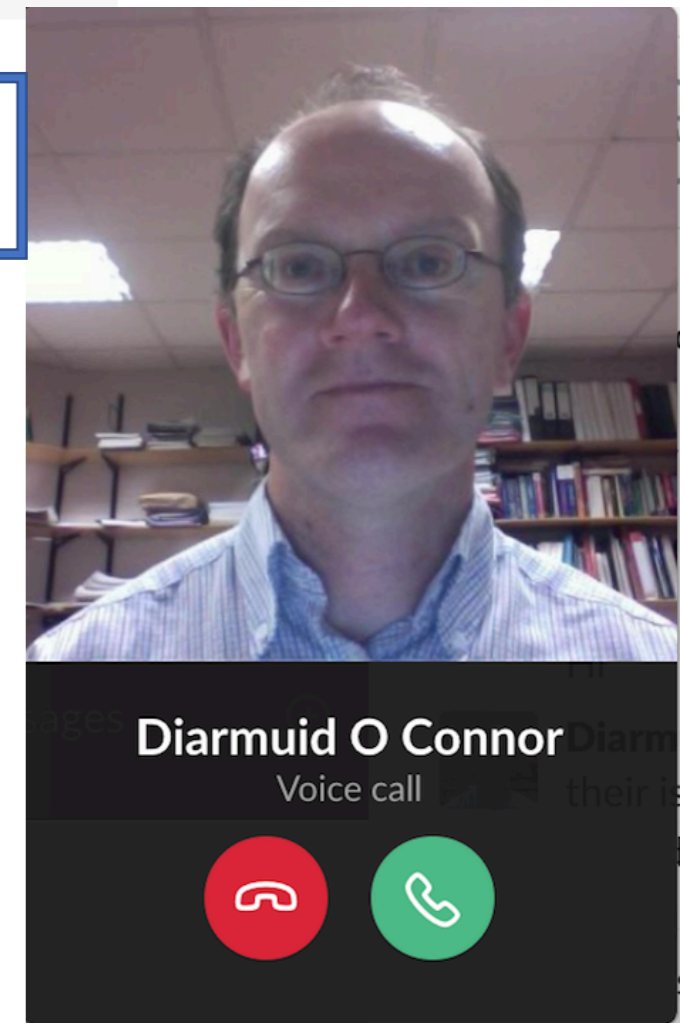
- Direct Messages (+)
- slackbot
- cdunphy (you)
- Des O'Donovan
- Diarmuid O Connor**
- Eamonn de Leastar
- James
- Ken McCarthy
- Martina Mullally



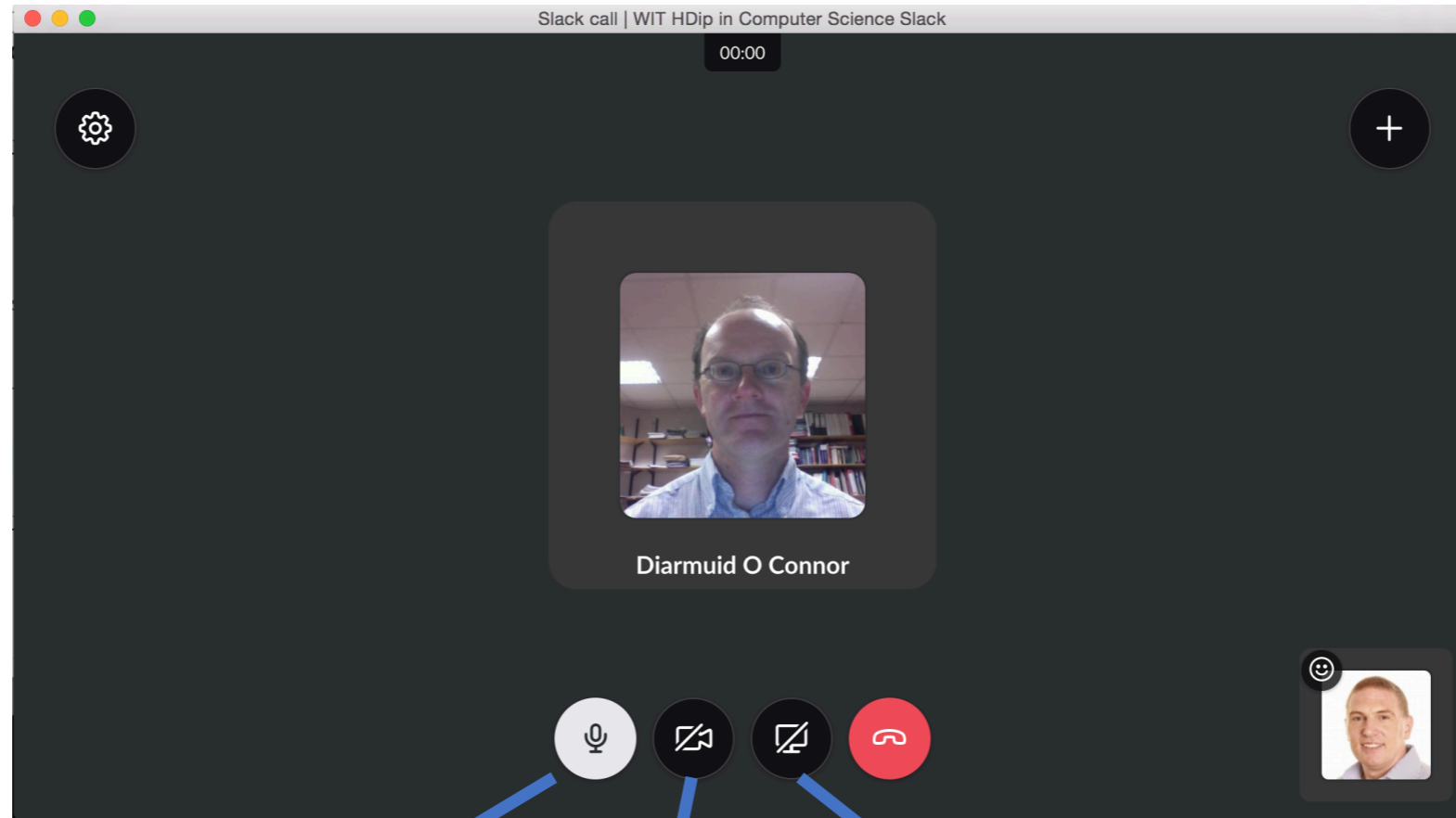
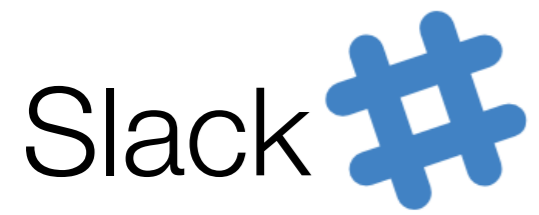
Slack message history in a DM channel:

- Diarmuid O Connor** 2:10 PM ☆ hi again
- cdunphy** 2:10 PM I'm on the private DM channel now
- Diarmuid O Connor** 2:12 PM their is a small problem in your sketch. the ellipse at the top is partially hidden. Maybe we should screen share to continue?
- cdunphy** 2:13 PM Thanks Diarmuid
- Diarmuid O Connor** 2:13 PM i will call you
- cdunphy** 2:13 PM fire away
- Diarmuid O Connor** 2:14 PM Started a call

Notification: **Diarmuid O Connor is calling you** Started at 2:14 PM



Video call interface showing Diarmuid O Connor. The call is labeled "Voice call". There are red and green call control buttons at the bottom.



Mic

Video
Webcam

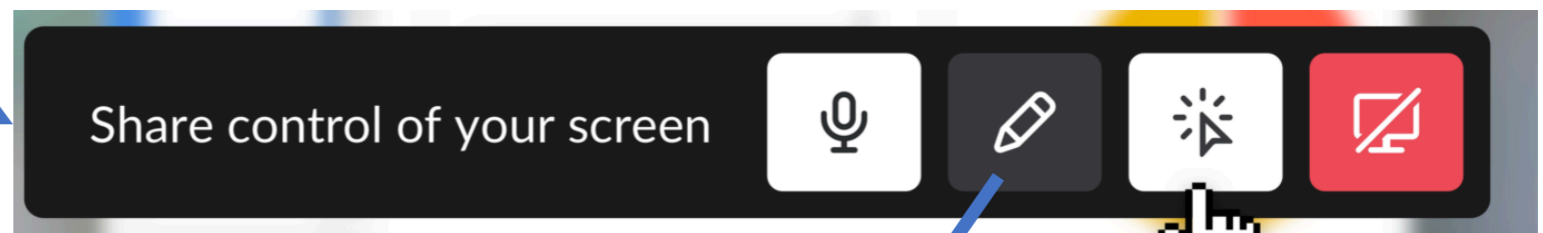
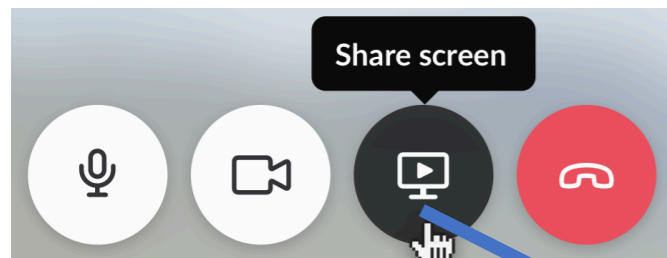
Screen
Desktop



Call in Progress with lecturer's screen shared (call required)

The screenshot shows a Slack interface during a video call. The main window displays a Processing IDE with a code editor for a file named 'lab00_solution_exercise1'. The code includes comments and function calls for drawing geometric shapes: an ellipse, a rectangle, a square, a line, and a circle. The IDE's interface includes a menu bar (File, Edit, Sketch, Debug, Tools, Help), a toolbar with play and stop buttons, and a console area at the bottom. The Slack interface is overlaid on the IDE, showing a sidebar with a channel list (including #general, #prog_curriculum, and #programming_test) and a list of direct messages. A call control bar at the bottom of the Slack window shows 'Current speaker Diarmuid O Connor' and 'Current speaker cdunphy'. A notification banner at the bottom of the Slack window reads 'On a call with Diarmuid O Connor ... Started at 2:14 PM'. The system tray at the bottom of the screen shows various application icons, including a music player and a file explorer.

Student screen sharing options



Enable others to draw on your screen

Full Control

Stop Sharing

Moodle




WIT E-Learning
Platform

Used for Assignment
Submission +
feedback + grades

Occasionally used for
additional document
distribution

Supplementary Programme Information Area

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Programming Fundamentals

Web Development

Administration 

▼ Module administration

 Grades

▶ Question bank

 Competencies

▶ Switch role to...



Higher Diploma in Computer Science

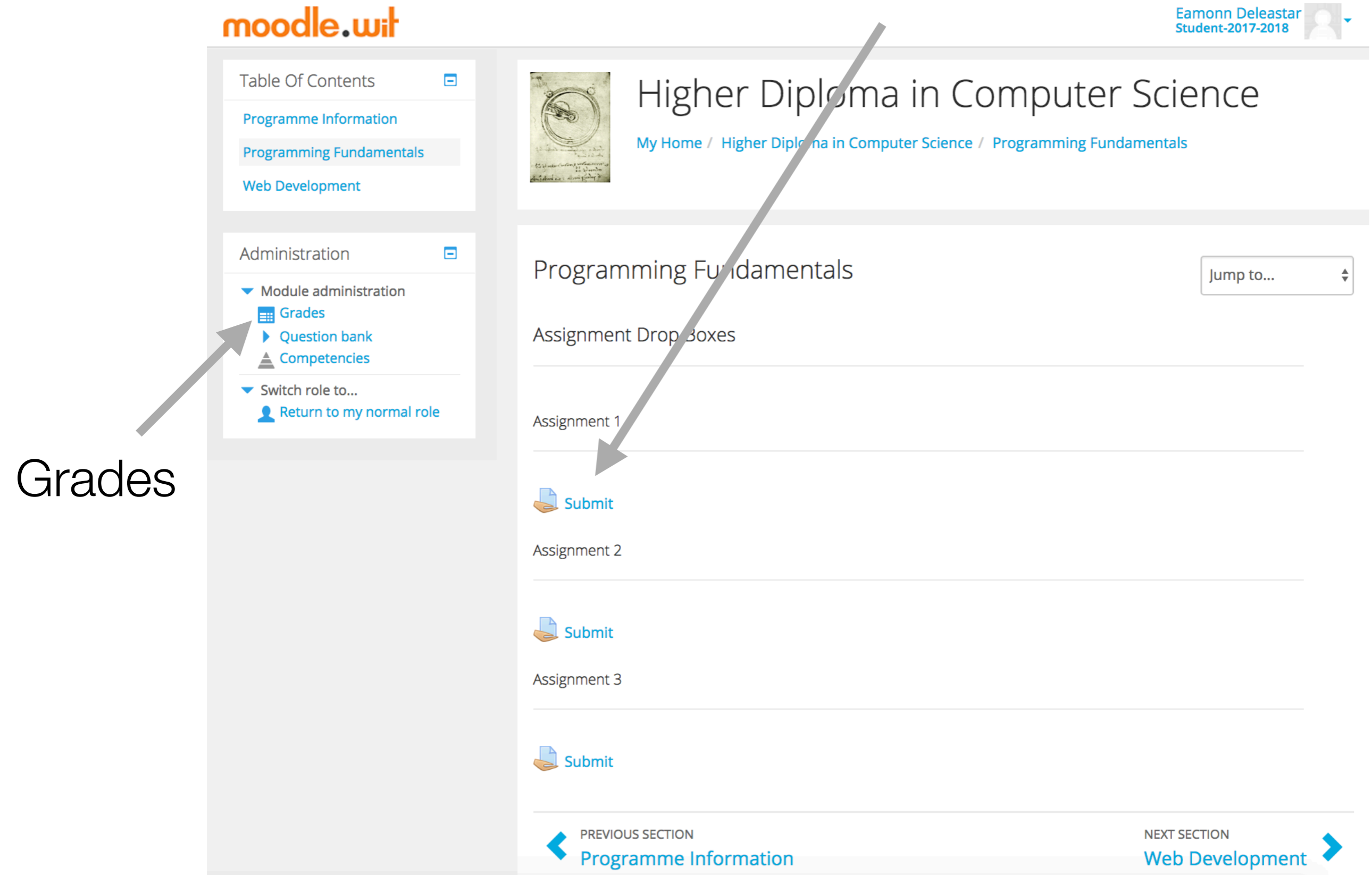
[My Home](#) / [Higher Diploma in Computer Science](#)

Programme Information

Jump to... 

NEXT SECTION

[Programming Fundamentals](#) 



The screenshot shows the Moodle LMS interface for a user named Eamonn Delestar, Student-2017-2018. The page title is 'Higher Diploma in Computer Science' and the current section is 'Programming Fundamentals'. The left sidebar contains a 'Table Of Contents' and an 'Administration' menu. The 'Administration' menu is expanded, showing 'Module administration' with sub-items 'Grades', 'Question bank', and 'Competencies'. A large grey arrow points from the word 'Grades' on the left to the 'Grades' item in the 'Module administration' menu. Another large grey arrow points from the top right of the page down to the 'Submit' button for 'Assignment 1'. The main content area shows a list of assignments: 'Assignment 1', 'Assignment 2', and 'Assignment 3'. Each assignment has a 'Submit' button with a document icon. At the bottom, there are navigation links for 'PREVIOUS SECTION Programme Information' and 'NEXT SECTION Web Development'.

moodle.wit

Eamonn Delestar
Student-2017-2018

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- Grades
- Question bank
- Competencies

Switch role to...

- Return to my normal role

Higher Diploma in Computer Science

My Home / Higher Diploma in Computer Science / Programming Fundamentals

Programming Fundamentals

Jump to...

Assignment Drop Boxes

Assignment 1

Submit

Assignment 2

Submit

Assignment 3

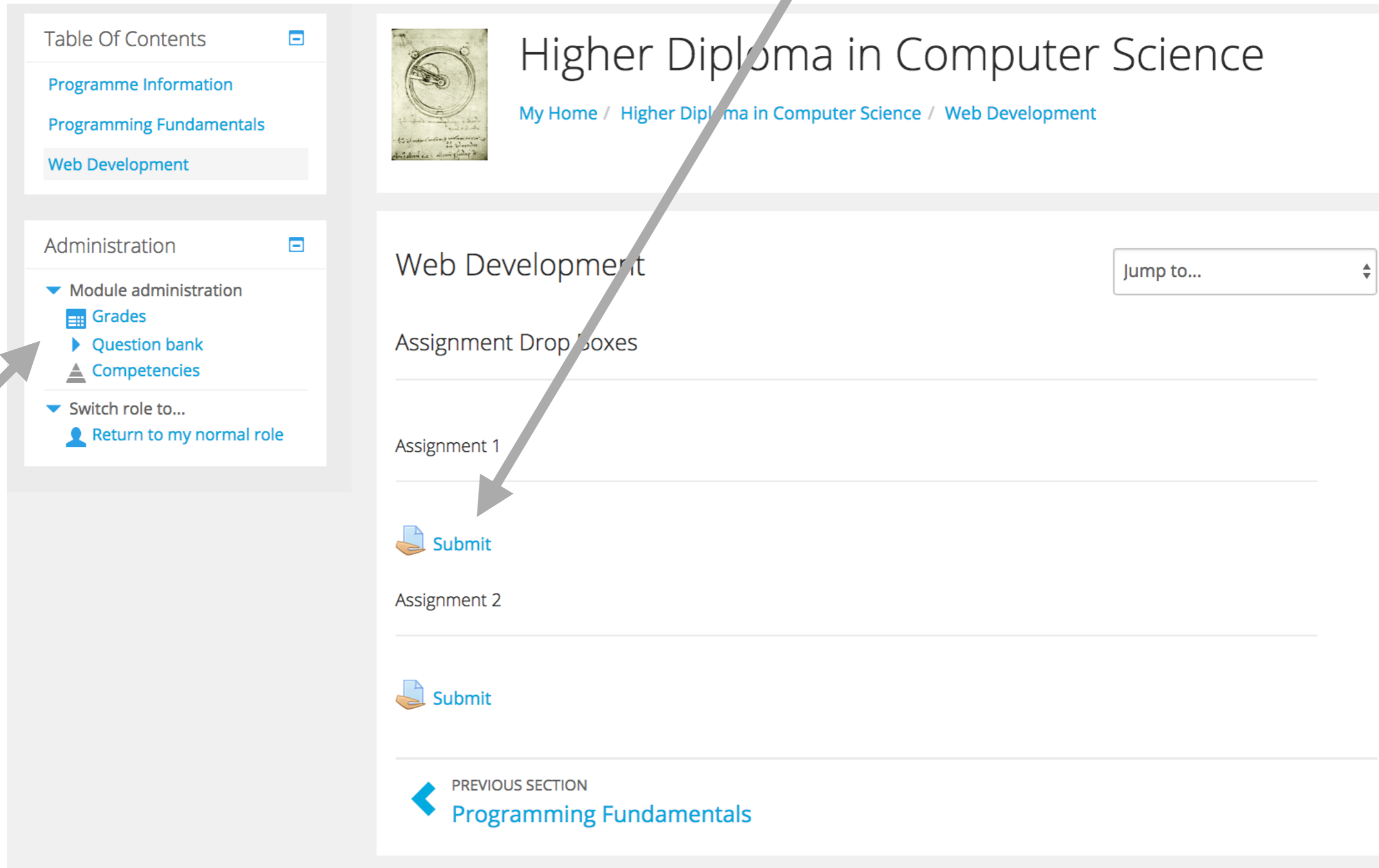
Submit

PREVIOUS SECTION
Programme Information

NEXT SECTION
Web Development

Grades

Web Development Assignment Submissions



The screenshot shows the Moodle interface for a course titled "Higher Diploma in Computer Science". The breadcrumb trail is "My Home / Higher Diploma in Computer Science / Web Development". The left sidebar contains a "Table Of Contents" with "Web Development" selected, and an "Administration" menu with "Grades" highlighted. The main content area shows "Web Development" with a "Jump to..." dropdown. Below this are "Assignment Drop Boxes" for "Assignment 1" and "Assignment 2", each with a "Submit" button. At the bottom, there is a "PREVIOUS SECTION" link for "Programming Fundamentals".

Grades