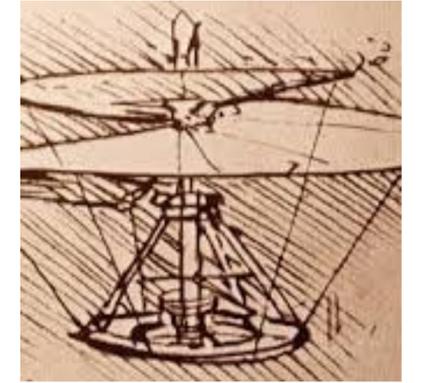




Waterford Institute of Technology  
INSTITIÚID TEICNEOLAÍOCHTA PHORT LÁIRGE

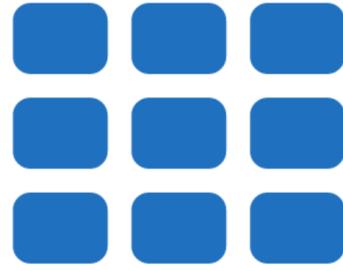


# Higher Diploma in Science in Computer Science

---

Overview of Structure & Purpose of the Online Materials

Tutors



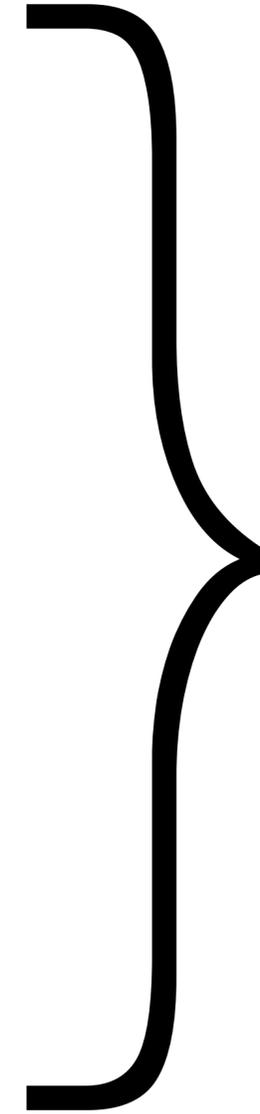
Slack



Moodle

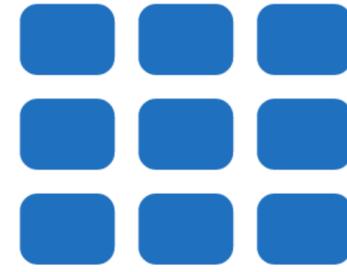


Youtube



4 Key Web Services

Tutors



open

Slack



personal email

Moodle



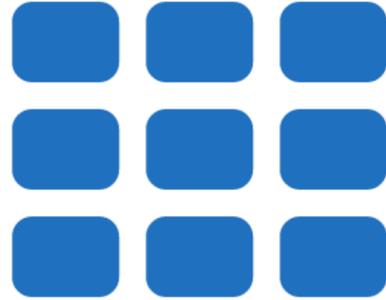
wit email

Youtube



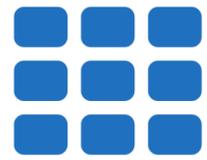
open

Tutors



Primary location  
of module  
lectures, lab and  
video material

# Tutors



Programme  
Home Page

Links to all  
resources +  
Modules

<https://wit-hdip-comp-sci-2019.github.io>

Higher Diploma in Computer Science 2019  
Department of Computing & Mathematics, WIT

Semester 1: January - June, 2019

**Programming** (10 Credits)

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

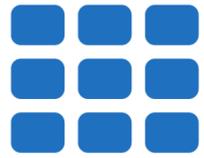
**Web Development** (5 Credits)

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

**Skills Studio 1** (2.5 Credits)

- javascript · node · express · git · github · glitch

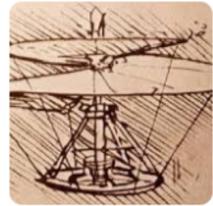
# Tutors



Moodle

Slack

Youtube



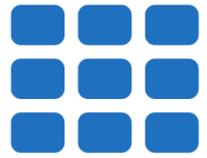
## Higher Diploma in Computer Science 2019

Department of Computing & Mathematics, WIT



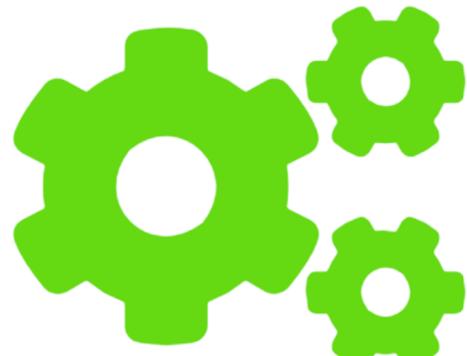
<https://wit-hdip-comp-sci-2019.github.io>

# Tutors



Semester 1: January - June, 2019

### Programming



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

10 Credits

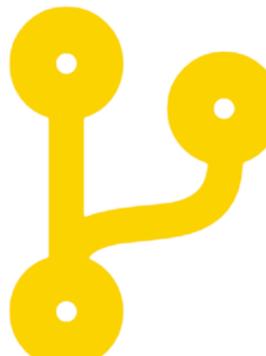
### Web Development



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

5 Credits

### Skills Studio 1



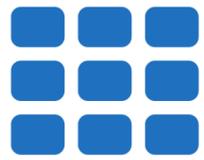
javascript · node · express ·  
git · github · glitch

2.5 Credits

Links to Individual Module  
Home Pages

# Tutors

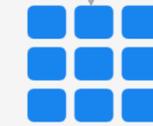
# Module Home



## Web Development

Eamonn de Leastar, Annetta Stack, WIT

Programme Home



Moodle



Youtube



Slack



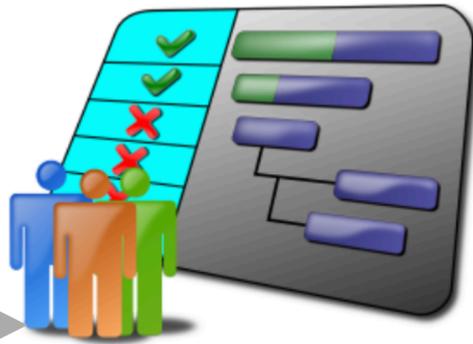
all slides shortcut



all lab shortcut



### 00: Assignment Specifications



specifications · assignments 1 · assignment 2 · grading guidelines · schedule · submission

### 00: Module Overview



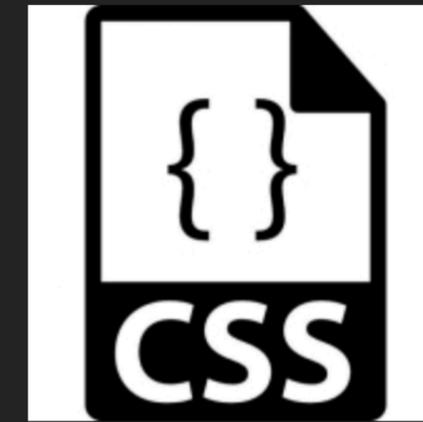
topics · schedules · calendar · assignments · first lab

### 01: Introducing HTML



web · client/server · browser · html · documents · elements · attributes · links · images · page structure · nesting · wireframing · block · inline

### 02: Introducing CSS



markup · style · function · stylesheet · rules · selectors · declarations · properties · values · classes · ids · inheritance

Topic



Current Topic



Single topic  
(1 week)

☰ 04: Navigation, Semantics & Style Guides 🏠 🧪

### Navigation

- HTML Style Guide** 🧪  
  
indentation · encoding · doctype · validity · semantics · entities · type attributes · quotations
- Navigation** 🧪  
  
nav · tab · current · padding · border · menu · li · ul
- Lab-4a Navigation** 🧪  
  
nav · tab · current · padding · border · menu · li · ul

---

### Semantic HTML

- Semantic HTML** 🧪  
  
header · main · nav · aside · article · footer · section · figure
- CSS Style Guide** 🧪  
  
validity · names · name style · selectors · shorthand · delimiters · order · stops · quotations
- Lab-4b Case Study** 🧪  
  
header · main · nav · aside · article · footer · section · figure

Sub Topic 1

Sub Topic 2

# Subtopic

## Semantic HTML

### Semantic HTML



header · main · nav · aside ·  
article · footer · section ·  
figure

### CSS Style Guide



validity · names · name style  
· selectors · shorthand ·  
delimiters · order · stops ·  
quotations

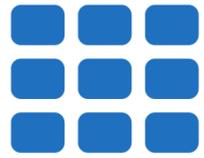
### Lab-4b Case Study



header · main · nav · aside ·  
article · footer · section ·  
figure

Slide PDFs

Lab



06: CSS Frameworks	Lab-6a Semantic UI 1	01	02	03	04	05	06	07	08	09	Exercises
--------------------	----------------------	----	----	----	----	----	----	----	----	----	-----------

### First Steps...

Open index.html and introduce a link to the style sheet we downloaded in the last step:

```
<link rel="stylesheet" href="assets/semantic/semantic.css">
```

This goes into the <head> section of index such that it will look like this:

### index.html

```
<head>  
<meta charset="UTF-8">  
<link rel="stylesheet" type="text/css" href="http://fonts.googleapis.com/css?family=Open+Sans" />  
<link rel="stylesheet" href="assets/semantic/semantic.css">  
<link type="text/css" rel="stylesheet" href="style.css" media="screen"/>  
<title>BSc in the Internet of Things</title>  
</head>
```

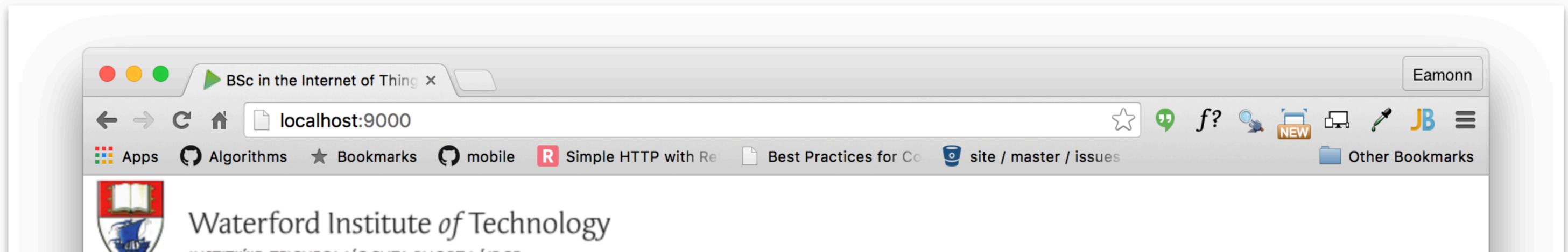
We will also replace the current stylesheet with the following:

### style.css

```
.banner {  
  background: url("assets/images/banner.jpg") top center;  
  background-position: top center;  
  color: white;  
  height: 300px;  
}
```

The page is now back to being unformatted - where we started last week - as we have removed almost all of the style sheet rules.

The site will look like this again:

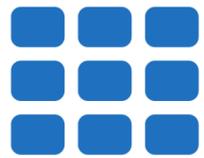


Youtube Live



Live Webinars  
Delivery

# Tutors



## Live Stream

Live stream of webinar for given topic



Slides & Labs for the topic



The screenshot shows a YouTube live stream interface. At the top, the video title is "04: Navigation, Semantics & Style Guides". The main content area displays a course portal for "Higher Diploma in Computer Science 2018". The portal includes a navigation sidebar on the left with a tree view of course content. The main content area is divided into sections: "Guides" with three cards for "Programme Introduction", "Schedules & Handbooks", and "Learning to Learn Online"; "Semester 1" with four cards for "Programming Fundamentals", "Web Development", "ICT Skills", and "June Onsite". Below the portal, there are three navigation cards: "HTML Style Guide" with a large yellow checkmark icon, "Navigation" with a diagram of navigation elements, and "Lab-4a Navigation" with a blue flask icon. The video player controls at the bottom show a progress bar at 2:55 / 11:28 and a "MORE VIDEOS" button.



04: Navigation, Semantics & Style Guides



Navigation

The screenshot shows the course portal content. At the top, it says "HDip in Computer Science" and "Higher Diploma in Computer Science 2018". Below this, there are three guide cards: "Programme Introduction", "Schedules & Handbooks", and "Learning to Learn Online". Under "Semester 1", there are four course cards: "Programming Fundamentals", "Web Development", "ICT Skills", and "June Onsite". The video player controls at the bottom show a progress bar at 2:55 / 11:28 and a "MORE VIDEOS" button.

Open Course Portal

[wit-hdip-comp-sci.github.io](https://wit-hdip-comp-sci.github.io)

[wit-hdip-comp-sci-2018.github.io](https://wit-hdip-comp-sci-2018.github.io)

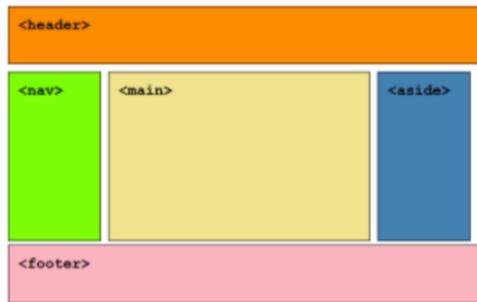
Navigation

The screenshot shows three navigation cards. The first card is "HTML Style Guide" with a large yellow checkmark icon and the text "HTML". The second card is "Navigation" with a diagram of navigation elements including "About", "Navigation", "News", and "Home". The third card is "Lab-4a Navigation" with a blue flask icon and placeholder text "Lorem ipsum dolor sit".

nav · tab · current · padding

# Semantic HTML

## Semantic HTML



PLAY VIDEO

header · main · nav · aside ·  
article · footer · section ·  
figure

## CSS Style Guide



PLAY VIDEO

validity · names · name  
style · selectors · shorthand  
· delimiters · order · stops ·  
quotations

## Lab-4b Case Study

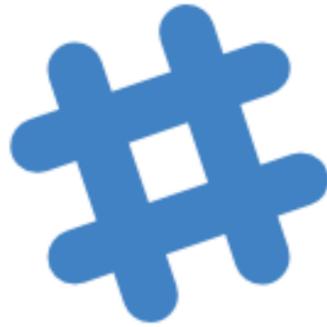


PLAY VIDEO

header · main · nav · aside ·  
article · footer · section ·  
figure

Pre-recorded Videos  
for selected slides &  
labs

Slack



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



# Slack – main things to remember

1. CHANNELS

2. DIRECT MESSAGES

3. TYPE HERE

4. CLICK TO SELECT FILES/CONTENT TO UPLOAD

The screenshot displays the Slack interface. On the left is a sidebar with a list of channels and direct messages. The main area shows a conversation in the #programming\_test channel. The conversation includes code snippets, a thumbs-up emoji, and a drawing of a computer monitor. A user profile for Colm Dunphy is shown on the right. A blue box highlights the input area at the bottom of the channel view, which contains a plus sign, the text 'Message programming\_test', and icons for mentions and emojis.

**Channels:**

- admin
- # general
- # hdip-programming
- # hdip-webdev
- prog\_curriculum
- programming\_test

**Direct Messages:**

- slackbot
- Colm Dunphy (WIT Lecturer)
- Des O'Donovan
- Diarmuid (WIT Lecturer)
- Eamonn de Leastar (WIT Lecturer)
- James
- Ken McCarthy
- Martina Mullally
- Niall Lonergan
- Pete (WIT Support)
- Siobhán Drohan

**Channel Conversation:**

```
16 //Drawing an circle
17 ellipse(250,130,25,25);
18
```

Here it is - "syntax error"

**Diarmuid (WIT Lecturer)** 1:59 PM  
i got it ... let me have a look ... 1 sec

**Colm Dunphy (WIT Lecturer)** 1:59 PM  
👍

**Diarmuid (WIT Lecturer)** 2:04 PM  
Their is a small syntax error on line 12 - missing semicolon. see if that fixes it

**Colm Dunphy (WIT Lecturer)** 2:04 PM  
let me try.thanks

Yes that got rid of the error

**Colm Dunphy (WIT Lecturer)** 2:06 PM  
uploaded and commented on this image: [image.png](#)

Is this what the program should produce?

**Diarmuid (WIT Lecturer)** 2:09 PM  
Lets continue this on DM. ok?

**Colm Dunphy (WIT Lecturer)** 2:09 PM  
Yes

**Workspace Directory:**

**cdunphy** •  
Lecturer

Edit Profile

Status: What's your status?

Display name: Colm Dunphy (WIT Lecturer)  
Timezone: 4:03 PM local time (change)  
Email: cdunphy@wit.ie  
Role: Owner of WIT HDip in Computer Science

```
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"

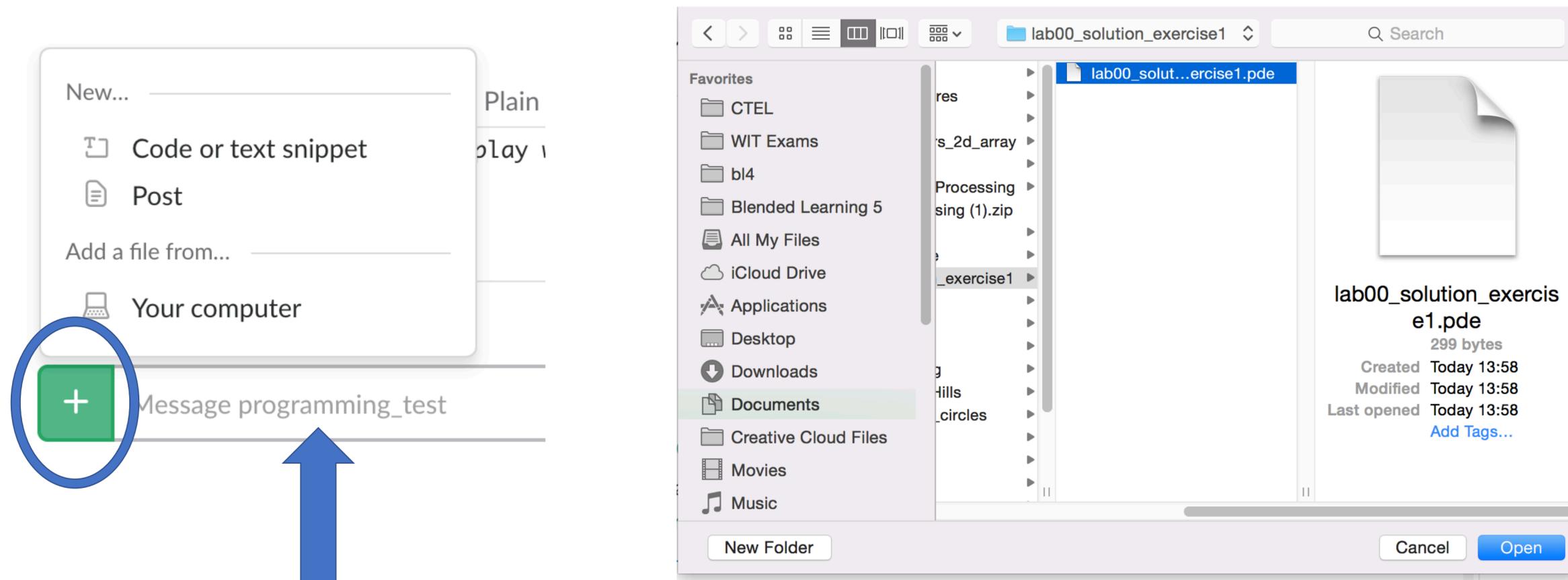
**Diarmuid O Connor** 1:55 PM  
Ok. want to send me the code and i'll have a look

**cdunphy** 1:55 PM  
yes. 1 sec

+ Message programming\_test

Select the Channel in Slack & post your issue

# Uploading content for discussion



OR

drag n' drop the file to here

# 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...t
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 - message (DM)

Channels

- # hdip-programming
- # hdip-webdev
- prog\_curriculum
- programming\_test

Direct Messages (+)

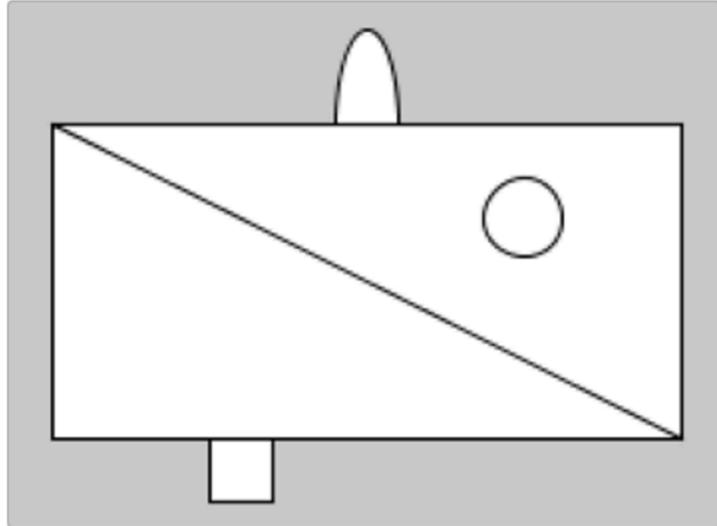
- slackbot
- cdunphy (you)
- Des O'Donovan
- Diarmuid O Connor
- Eamonn de Leastar
- James
- Ken McCarthy
- Martina Mullally
- Niall Lonergan
- Pete (WIT)
- Siobhán Drohan

+ Invite People

Apps (+)

Yes that got rid of the error

**cdunphy** 2:06 PM  
uploaded and commented on this image: [image.png](#)



“ Is this what the program should produce?

**Diarmuid O Connor** 2:09 PM  
Lets continue this on DM. ok?

**cdunphy** 2:09 PM  
Yes

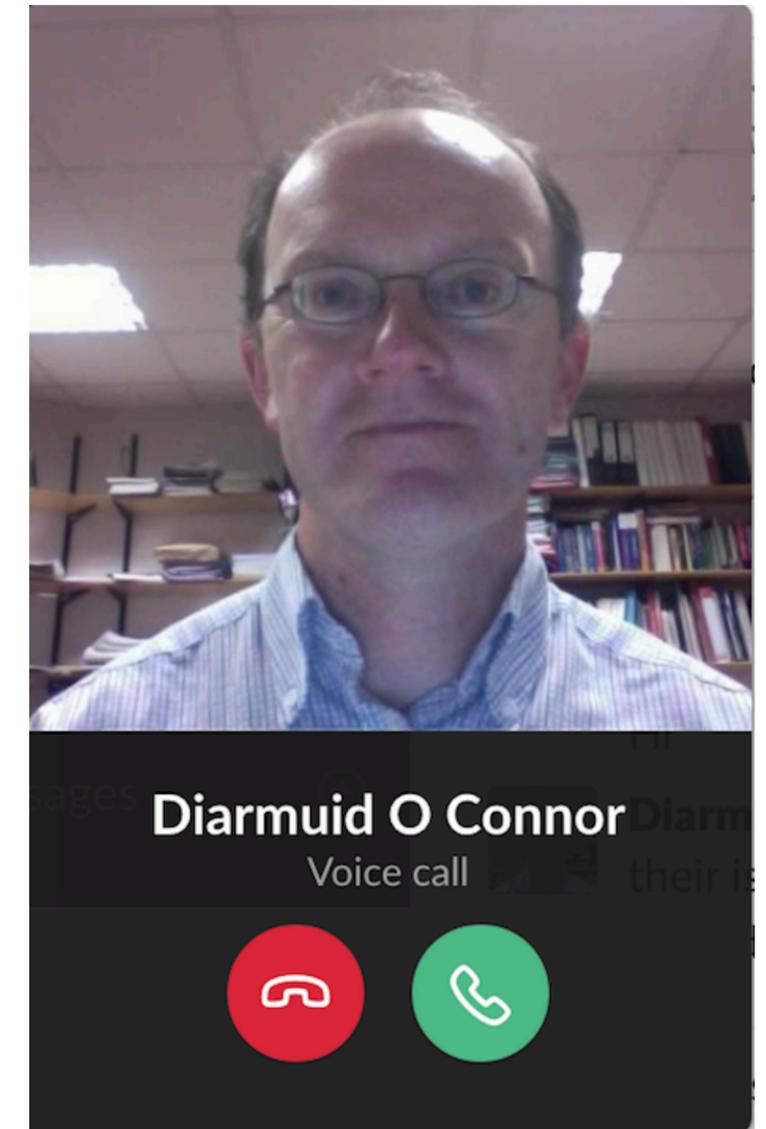
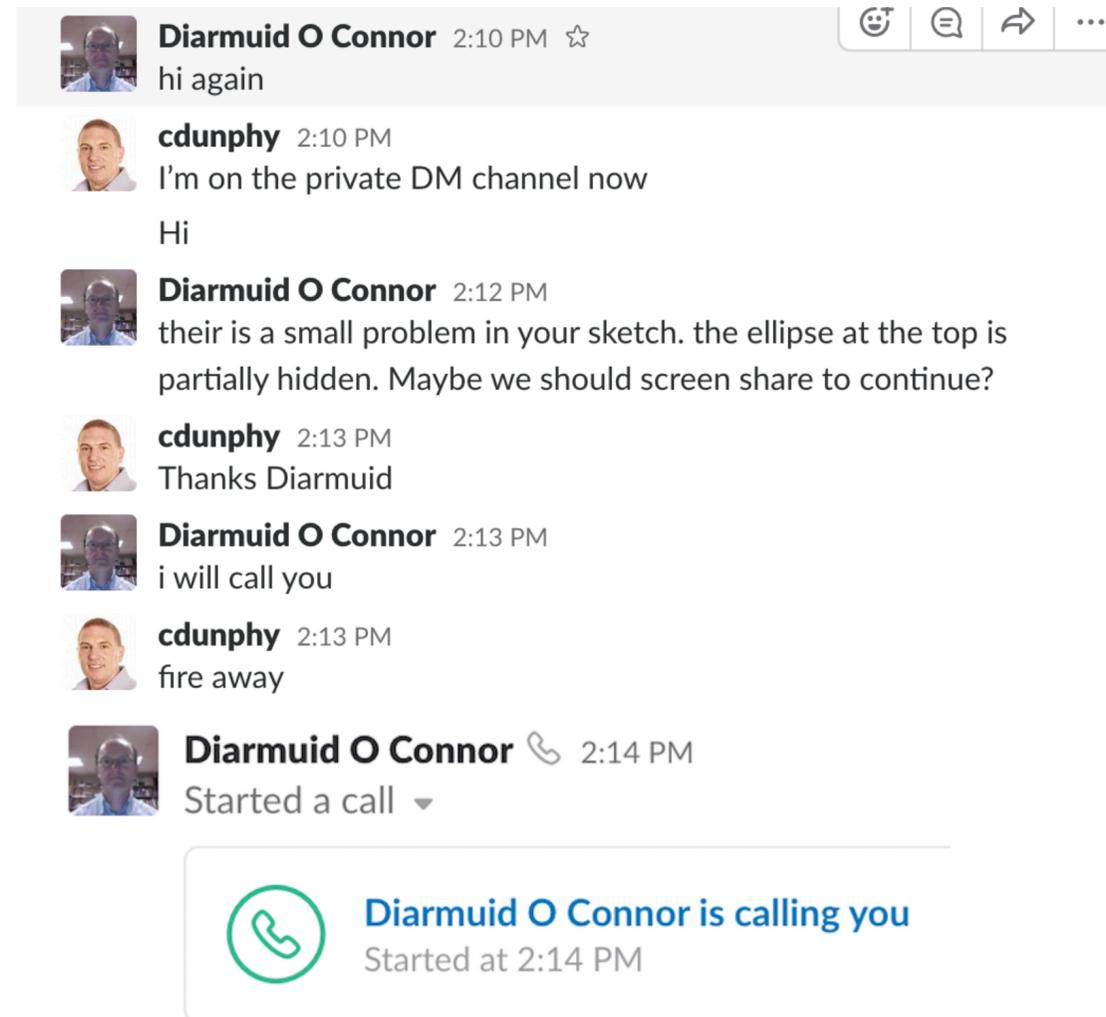
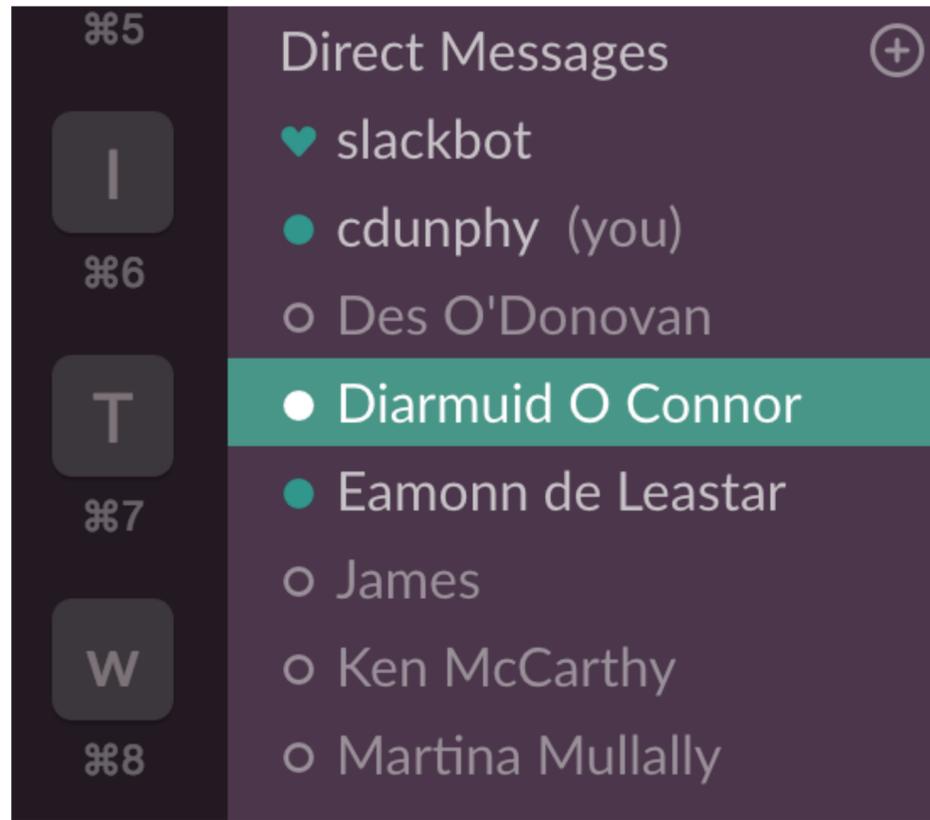
+ Message programming\_test @

Direct Messages (+)

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



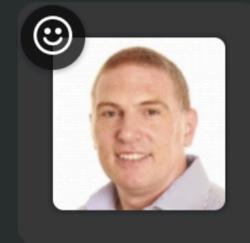
# Lecturer sharing screen (call required)



00:00



Diarmuid O Connor



Mic

Video  
Webcam

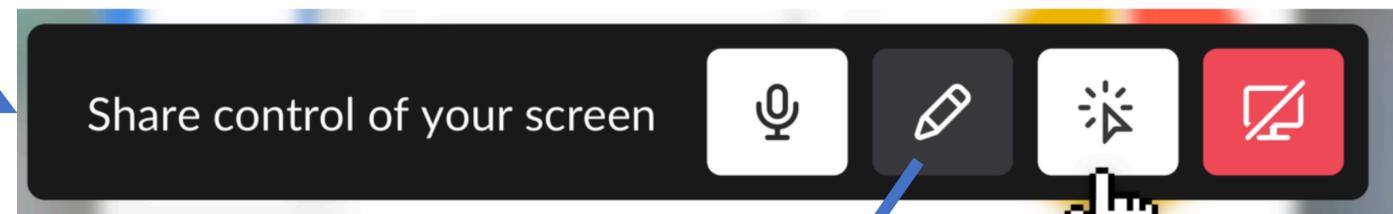
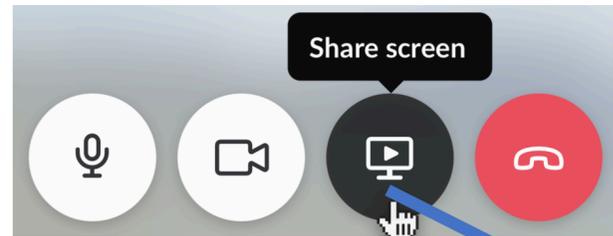
Screen  
Desktop



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

The screenshot shows a Slack call interface on a Mac. The main window displays a Processing IDE with a code editor for 'lab00\_solution\_exercise1'. The code includes comments and function calls for drawing shapes: `size(400,300); background(200); ellipse(200,100,20,60); rect(100,100,200,100); rect(150,200,20,20); line(100,100,300,200); ellipse(250,130,20,60);`. The Slack interface shows a sidebar with a channel list, a top bar with call controls, and a bottom bar with a message input field. A call notification at the bottom indicates 'On a call with Diarmuid O Connor ... Started at 2:14 PM'. The system tray at the bottom shows various application icons and the time 'Fri 14:18'.

# 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

# Moodle



- Higher Diploma in Computer Science
- Participants
- Grades

Grades

## Higher Diploma in Computer Science

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

### Programming



- Assignment 1
- Assignment 2
- Assignment 3

### Web Development



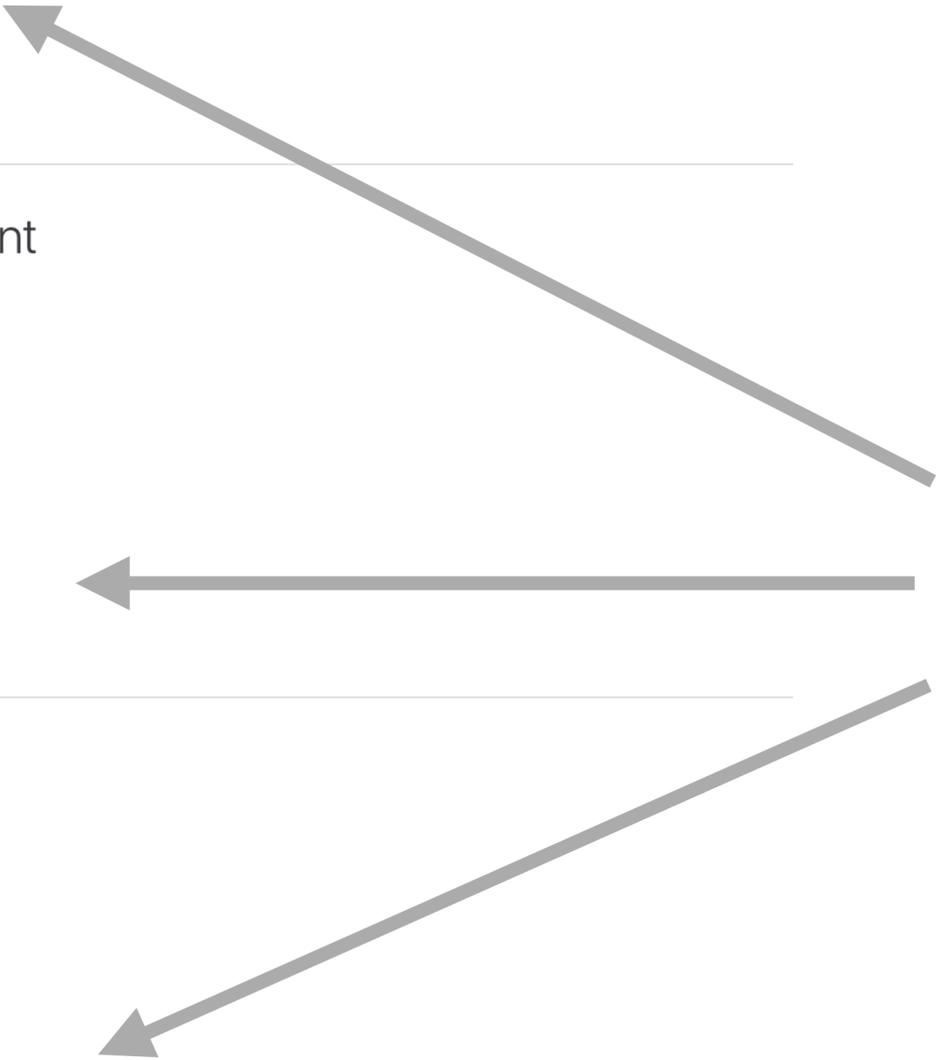
- Assignment 1
- Assignment 2

### Skills Studio 1



- Assignment

Assignment Submissions



# Moodle



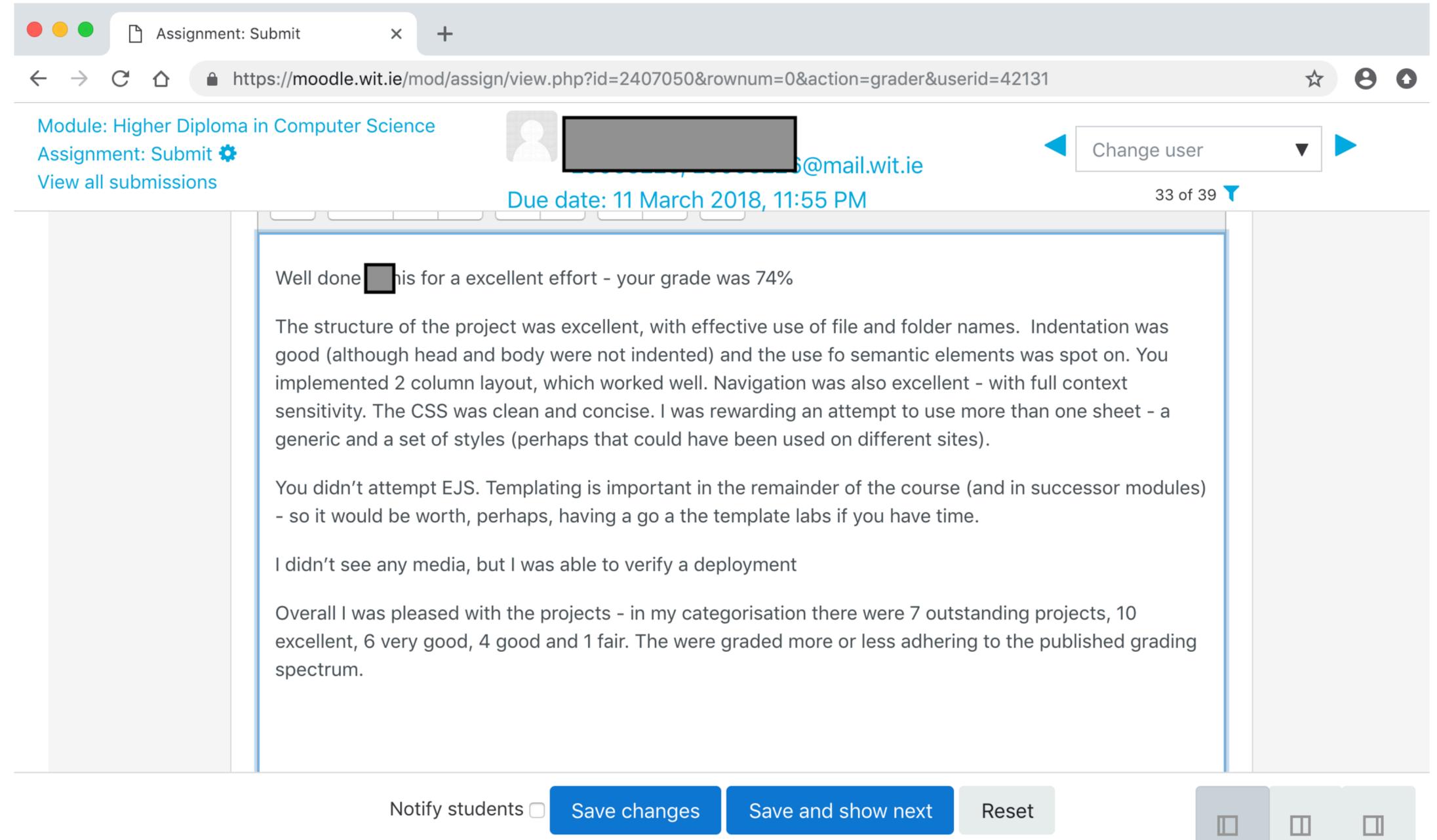
## Web Development



 [Assignment 1](#)

 [Assignment 2](#)

## Assessment feedback



The screenshot shows a Moodle interface for grading an assignment. The browser address bar shows the URL: `https://moodle.wit.ie/mod/assign/view.php?id=2407050&rownum=0&action=grader&userid=42131`. The page title is "Assignment: Submit". The user is logged in as a grader, with a "Change user" dropdown menu. The assignment is titled "Assignment: Submit" and is part of the "Higher Diploma in Computer Science" module. The due date is "11 March 2018, 11:55 PM". The feedback text is as follows:

Well done [redacted] his for a excellent effort - your grade was 74%

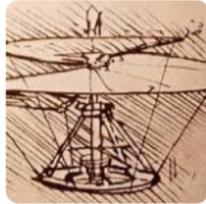
The structure of the project was excellent, with effective use of file and folder names. Indentation was good (although head and body were not indented) and the use fo semantic elements was spot on. You implemented 2 column layout, which worked well. Navigation was also excellent - with full context sensitivity. The CSS was clean and concise. I was rewarding an attempt to use more than one sheet - a generic and a set of styles (perhaps that could have been used on different sites).

You didn't attempt EJS. Templating is important in the remainder of the course (and in successor modules) - so it would be worth, perhaps, having a go a the template labs if you have time.

I didn't see any media, but I was able to verify a deployment

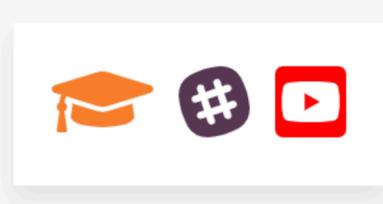
Overall I was pleased with the projects - in my categorisation there were 7 outstanding projects, 10 excellent, 6 very good, 4 good and 1 fair. The were graded more or less adhering to the published grading spectrum.

At the bottom of the page, there are buttons for "Notify students" (with a checkbox), "Save changes", "Save and show next", and "Reset". There are also three small square icons on the right side of the bottom bar.



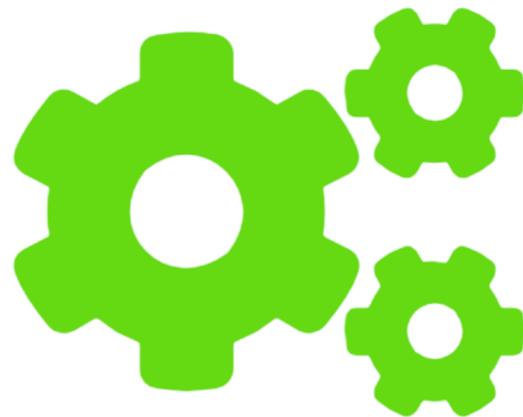
# Higher Diploma in Computer Science 2019

Department of Computing & Mathematics, WIT



## Semester 1: January - June, 2019

### Programming



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

10 Credits

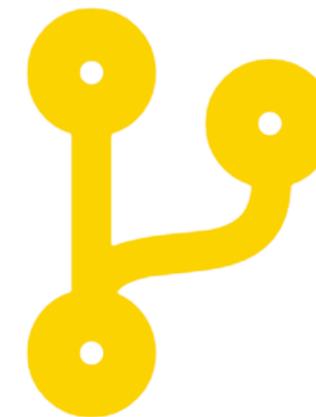
### Web Development



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

5 Credits

### Skills Studio 1



javascript · node · express ·  
git · github · glitch

2.5 Credits