



User Manual

Project Title: Intendi

Karl Duignan: 16105982

Luke Hebblethwaite: 17425212

Supervisor: Dr Michael Scriney

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Intendi

User Manual

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Students

Introduction

Welcome to Intendi, this software will help students seamlessly provide feedback to their lectures on their modules! Intendi allows students to watch lecture videos whilst providing anonymous feedback through facial analysis, focusing on improving engagement and the quality of lectures. This application aims to reform the way academic institutions gather feedback from students, with constant unbiased feedback being collected throughout the academic year compared to a single end of year questionnaire currently in place.

Using the student's webcam, multiple screenshots of the student are captured whilst watching the lecture video, and facial analysis is then run on each of these images to analyse their emotions and concentration level. Multiple other features are recorded, such as if they are on the video tab, if the video is muted, and what time of day it is being watched, among other things. This is all done without interrupting the student. All the recorded data is entirely anonymous, and all recordings of the students are instantly deleted after the facial analysis is complete. It also allows for students to leave anonymous questions and feedback comments for each lecture video.

All the feedback and data analysis is then presented to the lecturer in an easy to understand graphics report page. We hope that by lecturers utilising the constant stream of feedback it will aid them to create more engaging lectures improving course material while also identifying key areas of difficulty for students within the module. This in return can lead to higher engagement and quality of course material.

How to Sign Up

In order to sign up to Intendi you need to be on the Intendi website homepage. From here you will see the image on the right:



Please follow the steps below to sign up:

1. Click on the blue 'Create an Account' link

Email Address

We will never share your email with anyone else.

Password

[Sign In](#)

[Create an Account](#)

[Forgot Password](#)

From here you will be brought to the page as shown on the right:

2. Input your DCU email address
3. Create a password (Minimum 8 characters)
4. Click the blue 'Sign Up' button



DCU Email Address

We will never share your email with anyone else.

Password

Confirm Password

[Sign Up](#)

After this you will be brought to the page as shown on the right:

5. Please check your email for a verification code. If you did not receive a code, click the blue 'Resend Code' button.
6. Input the verification code in the box provided
7. You will then be redirected back to the homepage where you can now log in using your account details

How to Log In

Once you are signed up and have an account, you can now sign in! To sign in go to the Intendi homepage as shown on the right:

Please follow the steps below to sign in:

1. Input your DCU email address
2. Input your password created when signing up (Minimum 8 characters)
3. Click the blue 'Sign In' button
4. You will then be redirected to your account homepage



Verification Code

Verify

Resend Code



Email Address

We will never share your email with anyone else.

Password

Sign In

[Create an Account](#)

[Forgot Password](#)

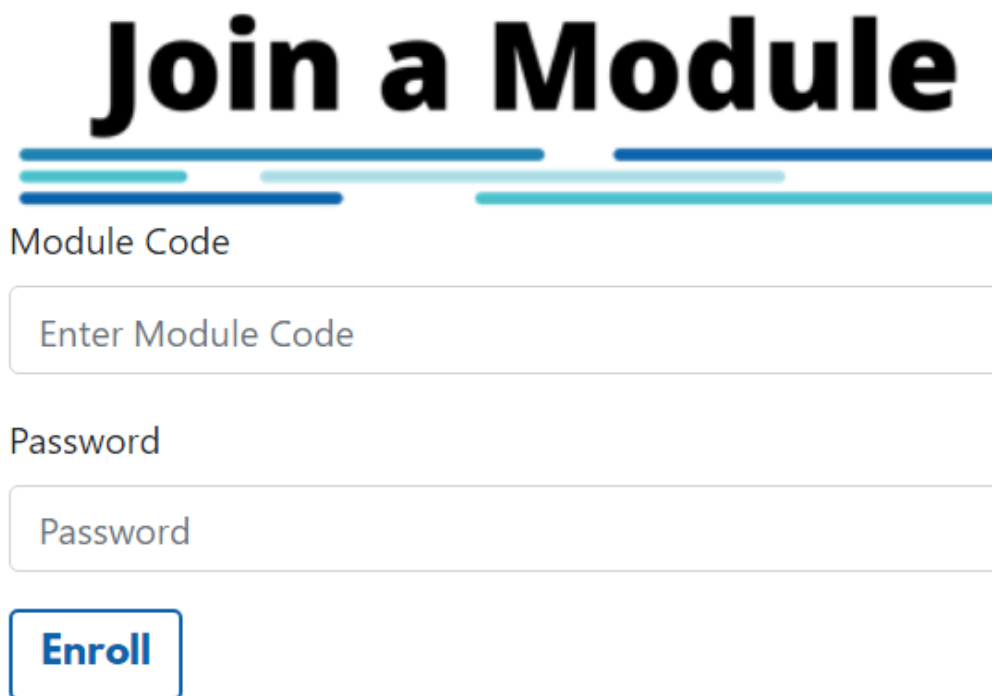
How to Sign Up for Modules

To sign up for a module please follow the steps below:

1. Once logged in you will see the navigation bar at the top of the screen, as shown below. To sign up for a module select 'Join Module'.



The page below will appear:

A form titled 'Join a Module' with a large title and decorative horizontal lines. It contains two input fields: 'Module Code' and 'Password'. Below the fields is an 'Enroll' button.

Join a Module

Module Code

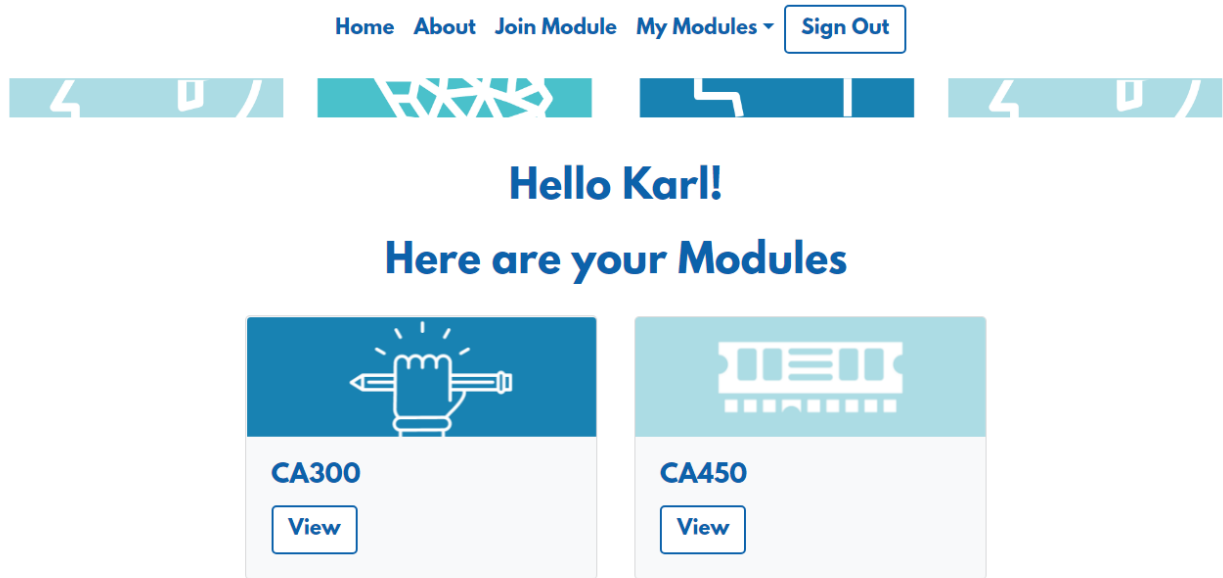
Password

Enroll

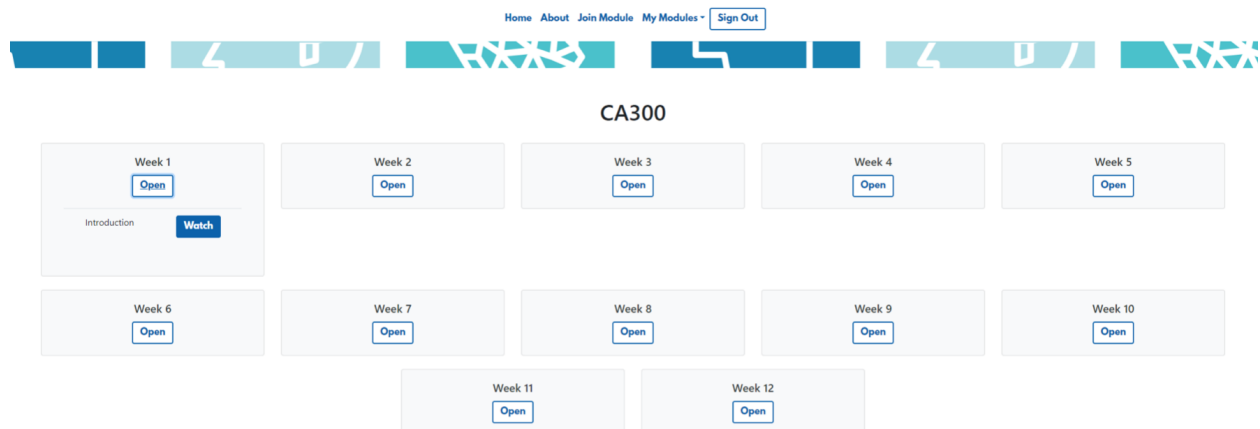
2. Please input the module code and password as provided by your lecturer
3. Click the 'Enroll' button

How to Access Your Modules

The modules you have joined will be visible from your home screen. Please see the example below:

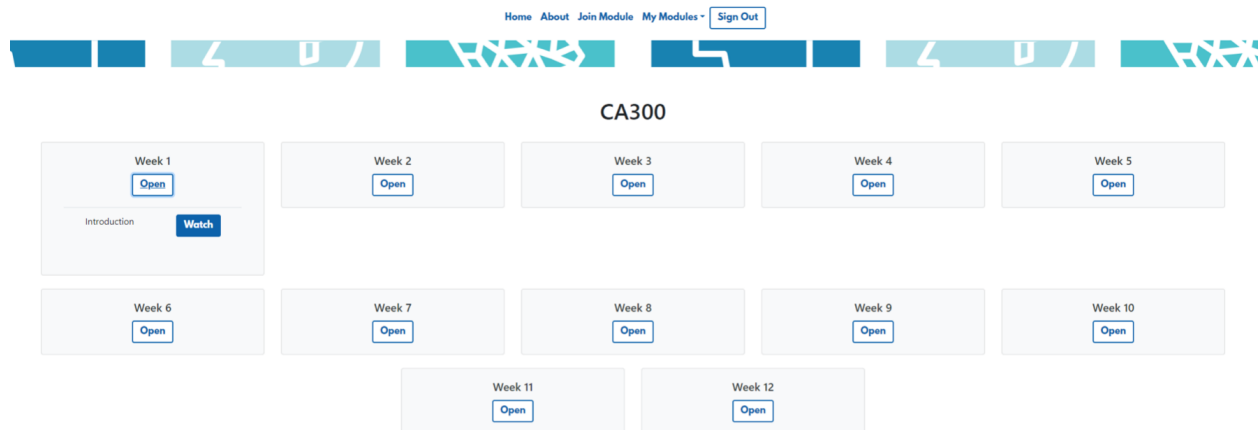


Click the 'View' button to enter the module you wish to view. You will then be brought to the page below, showing each week within the module



How to Watch Lecture Videos

Go to the relevant module homepage such as the image below:



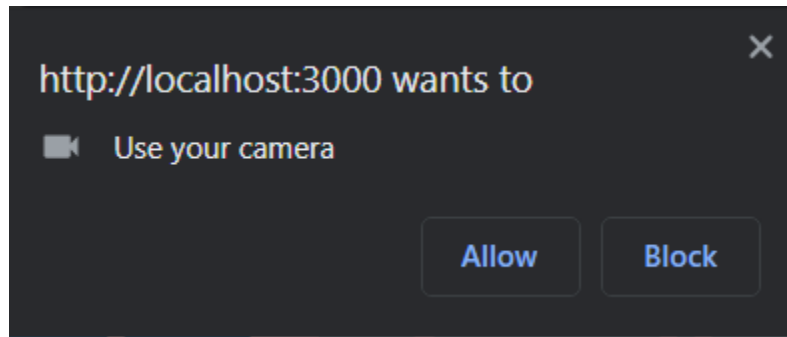
1. Click the 'Open' button for the relevant week
2. The uploaded videos by the lecturer will then appear
3. Click the blue 'Watch' button beside the video you wish to watch

You will then be redirected to the video player page as seen below:



You may be asked for permission to allow access to your webcam

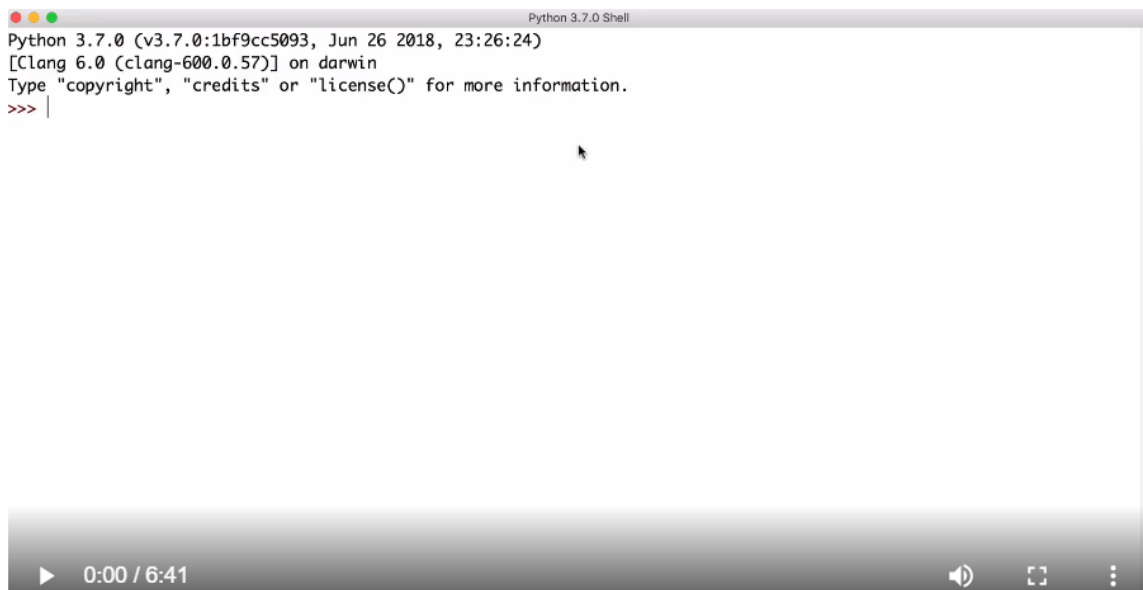
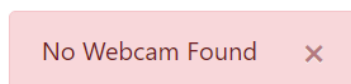
Please click "Allow" to enable access to your webcam*



4. Click the Play button to watch the video

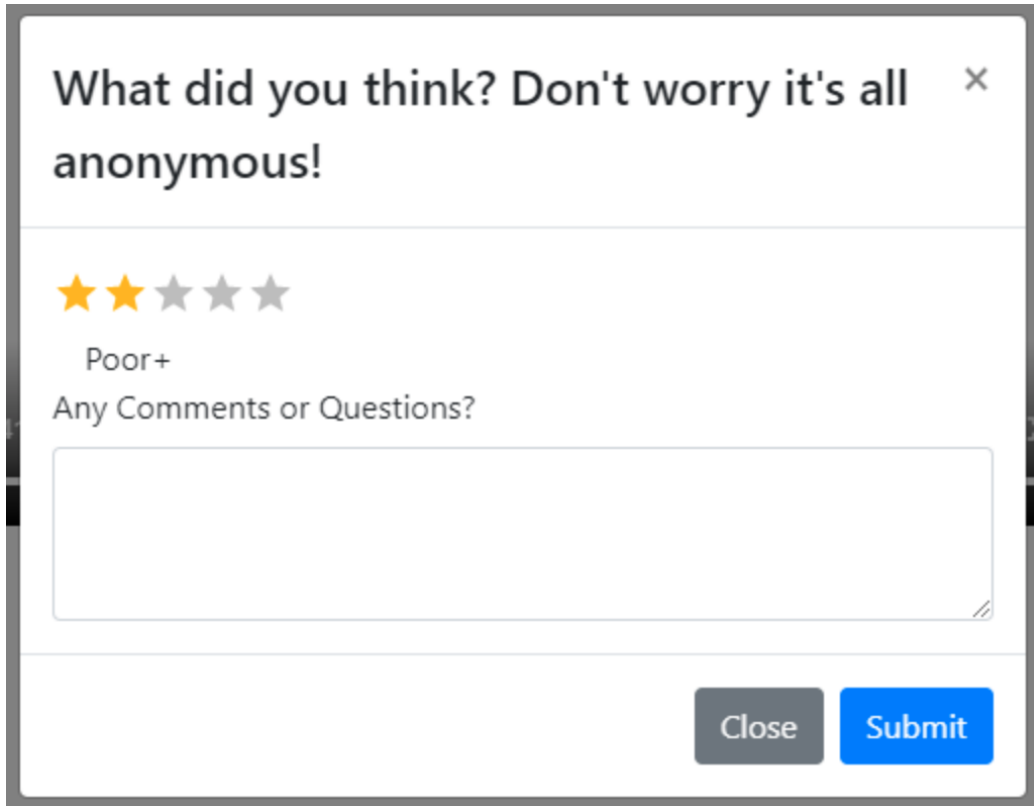
*Please note you can still watch lecture videos without a webcam or giving the necessary permissions if you prefer. You will see a red error message appear instead of where the webcam media stream would be as shown below:

Introduction



How to Give Feedback

While watching the video, feedback is given automatically to your lecturer. If you would like to provide additional feedback on the lecture, you can do so after the video ends. At the end of the video you will see the following feedback form pop up:

A feedback form pop-up with a white background and a grey border. At the top, it says "What did you think? Don't worry it's all anonymous!" with a close button (X) on the right. Below this is a 5-star rating system with two yellow stars and three grey stars. Under the stars, it says "Poor+" and "Any Comments or Questions?". There is a large text input box for comments. At the bottom right, there are two buttons: "Close" (grey) and "Submit" (blue).

What did you think? Don't worry it's all anonymous! X

★ ★ ★ ★ ★

Poor+

Any Comments or Questions?

Close Submit

You now have the ability to rate the lecturer's video out of 5 stars and also leave any comments or questions you may have for the lecturer. It will all be submitted anonymously.

How to Sign Out

If you would like to sign out of your account please click the 'Sign Out' button at the end of the navigation bar seen below. This is displayed on every screen, to allow you to sign out at any point.

Forgot/Change Password

If you have forgotten or would like to change your password. Go to the Intendi homepage as seen on the right:

Please follow the steps below to change your password:

1. Click the blue 'Forgot Password' at the bottom

You will be redirected to the page on the right:

2. Enter your DCU email address you used when signing up
3. Click the blue 'Change Password' button



Email Address

We will never share your email with anyone else.

Password

[Sign In](#)

[Create an Account](#)

[Forgot Password](#)



Registered Email Address

[Change Password](#)

If the entered email is registered on the Intendi system you will then be redirected to the page on the right:

4. Enter your registered email address again
5. Enter a new password (Minimum 8 characters)
6. Enter the verification code which was sent to your registered email address
7. Click the blue 'Change Password' button
8. Return back to the homepage and log in with your new password

Note: If you did not receive your verification code, please press the back button and resubmit your email address



Registered Email Address

know.youremail@gmail.com

New Password

Password- MIN 8 Characters

Verification Code

Code

[Change Password](#)

Lecturers

Introduction

Welcome to Intendi, this software will help lecturers better understand how students are feeling or how they are interacting with their online module content! Intendi allows students to watch lecture videos whilst providing anonymous feedback through facial analysis, focusing on improving engagement and the quality of lectures. This application aims to reform the way academic institutions gather feedback from students, with constant unbiased feedback being collected throughout the academic year compared to a single end of year questionnaire currently in place.

Using the student's webcam, multiple screenshots of the student are captured whilst watching the lecture video, and facial analysis is then run on each of these images to analyse their emotions and concentration level. Multiple other features are recorded, such as if they are on the video tab, if the video is muted, and what time of day it is being watched, among other things. This is all done without interrupting the student. All the recorded data is entirely anonymous, and all recordings of the students are instantly deleted after the facial analysis is complete. It also allows for students to leave anonymous questions and feedback comments for each lecture video.

All the feedback and data analysis is then presented to the lecturer in an easy to understand graphics report page. We hope that by lecturers utilising the constant stream of feedback it will aid them to create more engaging lectures improving course material while also identifying key areas of difficulty for students within the module. This in return can lead to higher engagement and quality of course material.

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[Sign In](#)

[Create an Account](#)

[Forgot Password](#)

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DCU Email Address

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Password

Confirm Password

[Sign Up](#)

After this you will be brought to the page as shown on the right:

5. Please check your emails for a verification code. If you did not receive a code click the blue 'Resend Code'
6. Input the verification code in the box provided
7. You will then be redirected back to the homepage where you can now log in using your account details



Verification Code

Verify

Resend Code

How to Log In

Once you are signed up and have an account, you can now sign in! To sign in go to the Intendi homepage seen on the right:

Please follow the steps below to sign in:

1. Input your DCU email address
2. Input your password (Minimum 8 characters)
3. Click the blue 'Sign In' button
4. You will then be redirected to your account homepage



Email Address

We will never share your email with anyone else.

Password

Sign In

[Create an Account](#)

[Forgot Password](#)

How to Create a Module

Once logged in you will see the navigation bar below at the top of your screen

[Home](#) [About](#) [Create Module](#) [My Modules ▾](#) [Upload](#) [Sign Out](#)

Please follow the steps below to create a module

1. Please click 'Create Module' on the navigation bar

You will then be brought to the page as shown on the right:

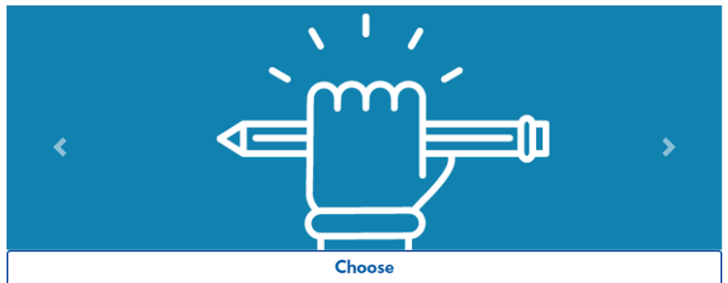
2. Enter the module code
3. Create a password for student registration
4. Pick a module background image from the 24 provided, once selected press the blue 'Choose' button
5. After inputting all the details, click the blue 'Create Module' button
6. If the module is successfully created you will get the following pop up below

Create a Module

Module Code

Password

Choose a Background



Choose

Create Module

Create Module

Module Successfully Created!

How to Upload a Lecture

After creating a module you can now upload to it! Please follow the steps below to upload a lecture to your module.

1. Click 'Upload' on the navigation bar

[Home](#) [About](#) [Create Module](#) [My Modules](#) [Upload](#) [Sign Out](#)

After this the following page below will appear:

Upload Lecture

File

Choose File No file chosen

Module Code

Select... | v

Week

Select... | v

Video Title

Video Description

Upload File

2. Click the grey 'Choose File' button and browse your pc files for the lecture video and upload it (Only .mp4 files are currently accepted)
3. Select the module you wish to upload to from the Module Code dropdown
4. Select the relevant week for the lecture video
5. Input a video title
6. Input a video description
7. Once all of these are completed click the blue 'Upload File' button
8. If the lecture video is successfully uploaded you will get the following pop up below

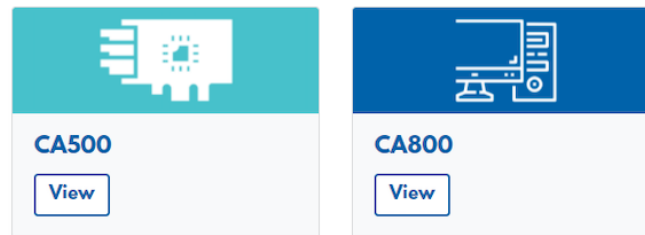
Success uploading Lecture!

How to Check Module Information

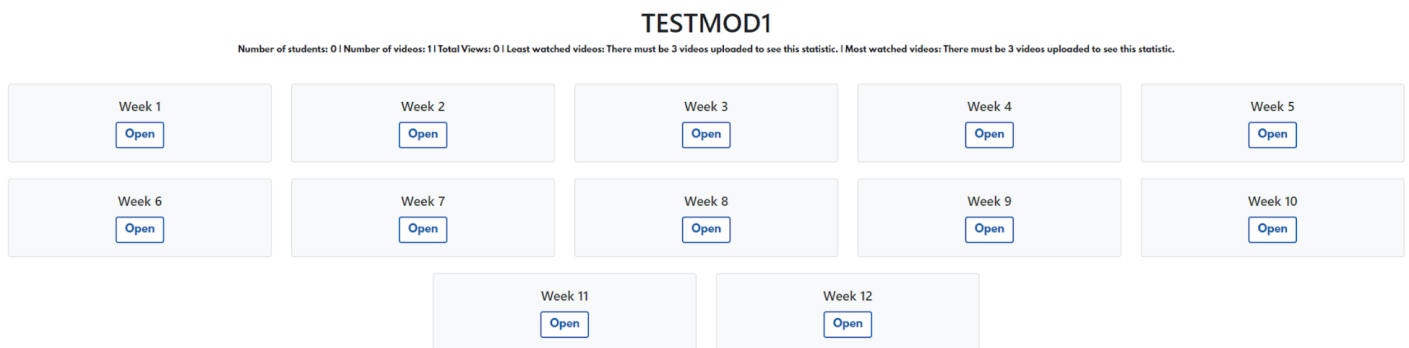
If you want to check information on your created modules. Please follow the steps below

1. Click the 'View' button within the relevant module on the homepage

Your Modules



Once you click on this you will see the page below:



2. You can see all the module information under the module code. You will be able to see how many students are signed up to the module, the number of videos uploaded, the total views and the most/least watched videos.

TESTMOD1

Number of students: 0 | Number of videos: 1 | Total Views: 0 | Least watched videos: There must be 3 videos uploaded to see this statistic. | Most watched videos: There must be 3 videos uploaded to see this statistic.

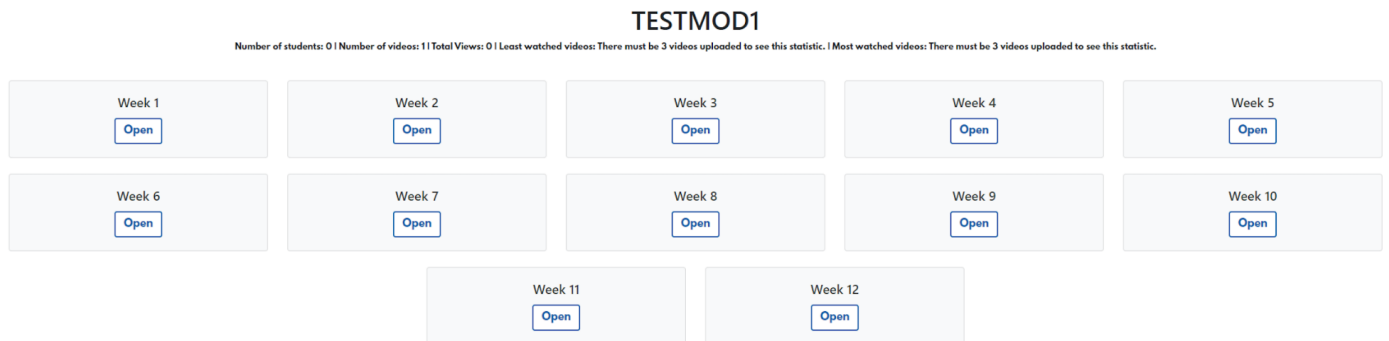
How to Check Feedback From Module Videos

In order to check the feedback on your uploaded lecture videos please follow the steps below

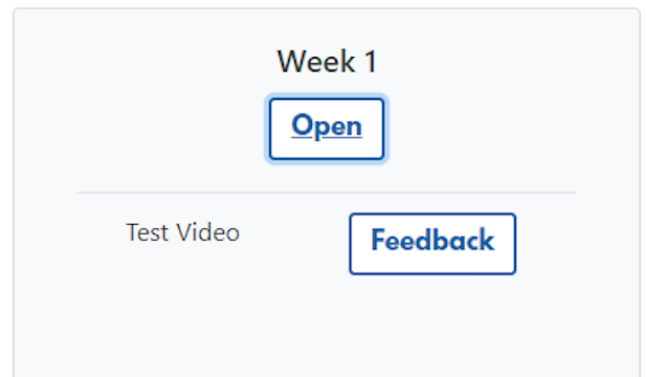
1. Click the 'View' button within the relevant module on the homepage



Once you click on this you will see the page below:



2. Click the 'Open' button on the relevant week
3. Click the 'Feedback' button as seen below beside whatever video you wish to get a report on
4. This will open the feedback report page as seen on the next page



Once you click on the 'Feedback' button you will be redirected to the page below:

Test Video

NaVi

Students who watched: 0 / 0

Test Video

Comments & Questions

```
Python 3.7.0 (tags/v3.7.0:19fbc5203, Jun 26 2018, 23:12:12)
[Clang 6.0 (clang-600.0.37)] on darwin
Type "copyright", "credits" or "license()" for more information.
>>> |
```

0:00 / 6:41

Video Rating

★★★★★

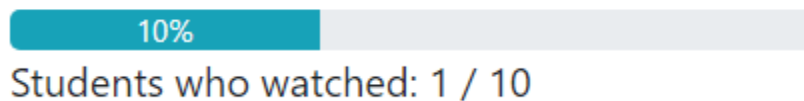
0 / 5

Total Views: 0 | Average Watch Time: 00:00:00

What Feedback is Recorded

This part will run through all sections of feedback recorded per each module video.

1. The Percentage of Students in the Module who have Viewed the Video



This allows lecturers to assess if the students in their module are engaging with the content in the first place.

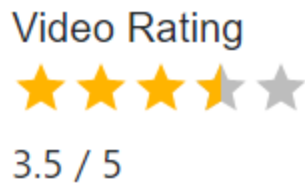
2. The Total Views & Average Watch Time

Total Views: 5 | Average Watch Time: 00:03:31

This allows lecturers to see if students are watching the video multiple times and the average time a student watches the video for. This will help assess the level

engagement with the course material based on if the students are revising the work and if they are watching the whole video or watching it in segments.

3. The Average Video Rating by Students



This allows lecturers to see what students rated the lecture video out of 5 stars. This reflects the conscious rating by the students in contrast to the automatic feedback collected throughout the lecture.

4. Comments & Questions

Comments & Questions

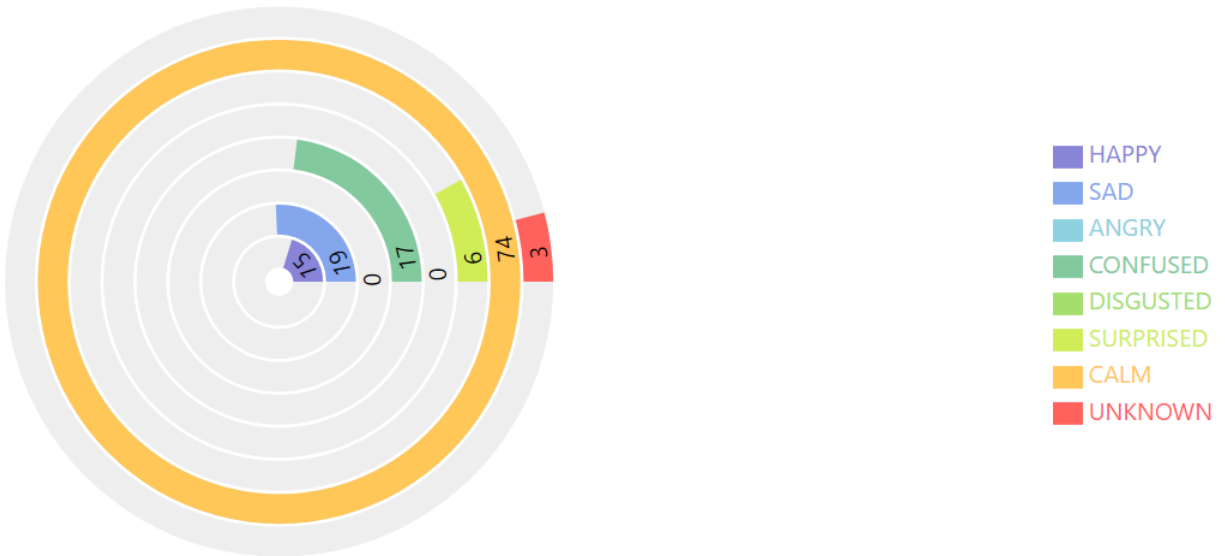
How do you define a function in python?

I feel it went through the material too fast

Is this examinable?

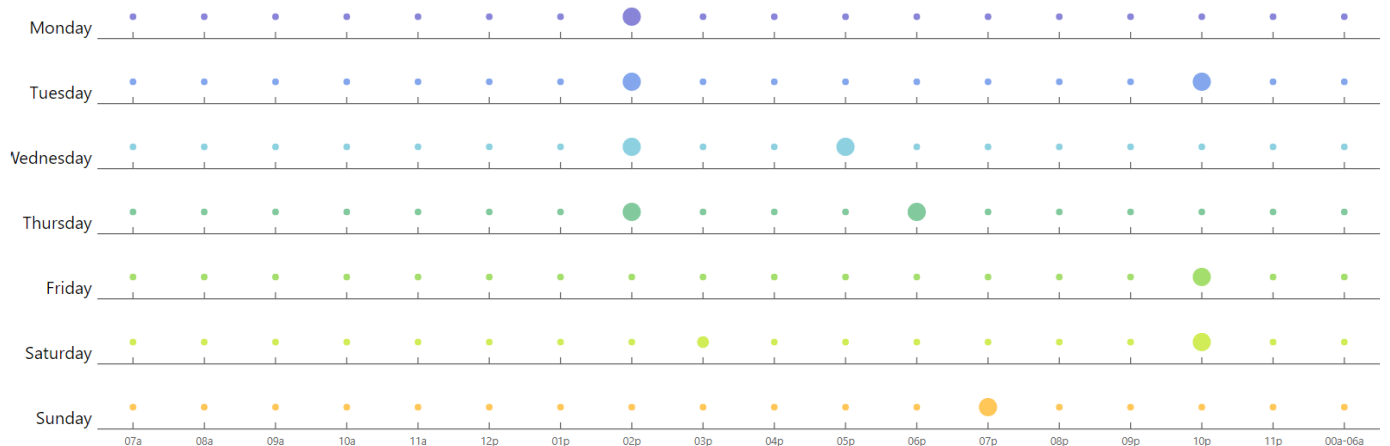
This allows lecturers to see any comments or questions left by students after viewing the video. As these are anonymous the lecturer will need to address them or answer the questions for the whole class, the format they choose to do this in is up to their discretion.

5. General Emotions



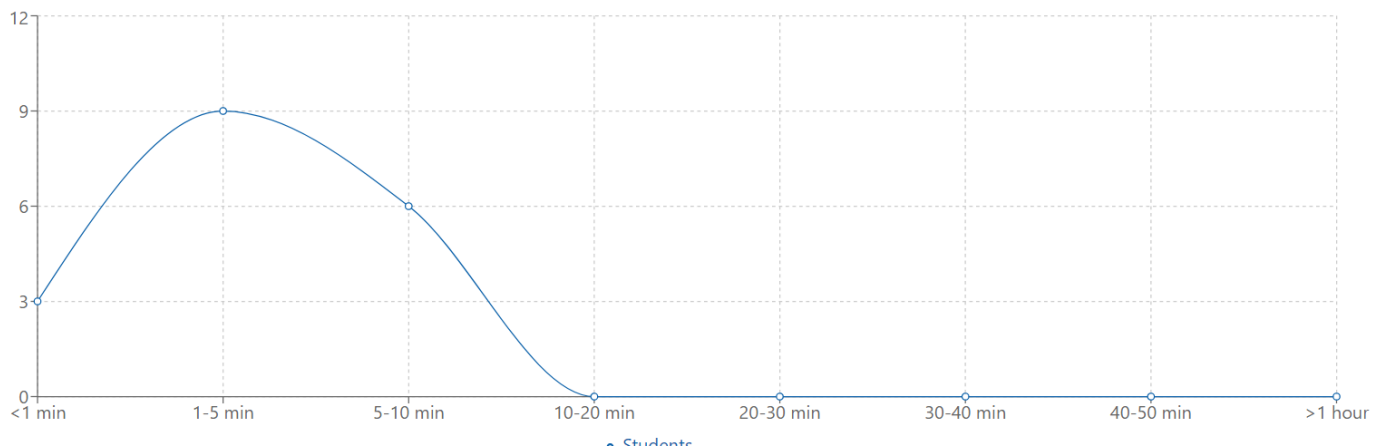
This statistic allows lecturers to access the general emotion of students while watching the video. The software records the following 8 emotions: Happy, Sad, Angry, Confused, Disgusted, Surprised, Calm and Unknown. They can use this feedback to help revert back to the class if there was a high level of confusion for example and clear this up. They can also utilise this to improve their lectures in the future. The total count of each emotion is visible within the radial bar chart

6. Views by Day / Time



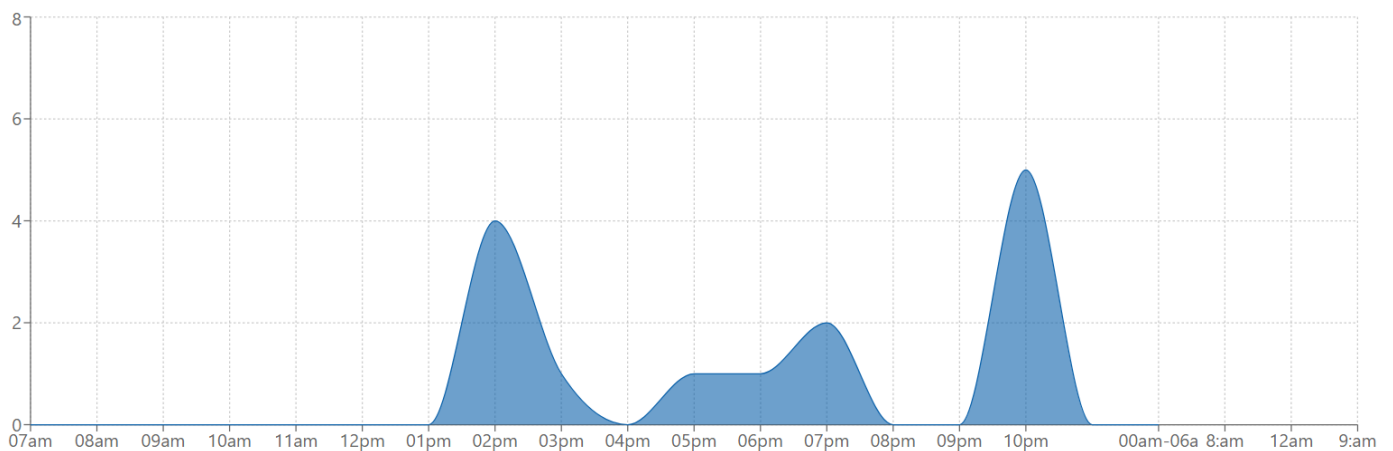
This graph allows lecturers to assess the lecture video by what day the students are watching the video as well as what time of the day they are watching the video. This will allow them to assess if students are watching the video as soon as it is released or do they wait a few days and which days are the most popular! They can also see if students are watching the video more so in the morning, afternoon or evening.

7. Watch Sessions by Length



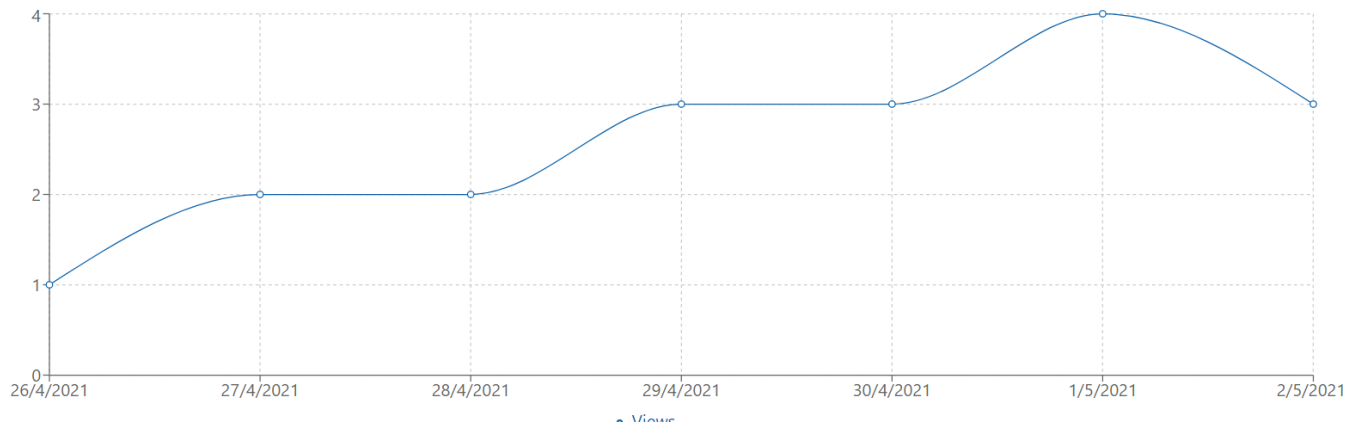
This will allow lecturers to assess the length of time each student is watching the uploaded lecture video for. If they are watching the whole video in one go, if they are pausing the video and watching beyond the video run time or if they are clicking on to the video only for a moment and exiting it.

8. Watch Sessions by Time of Day



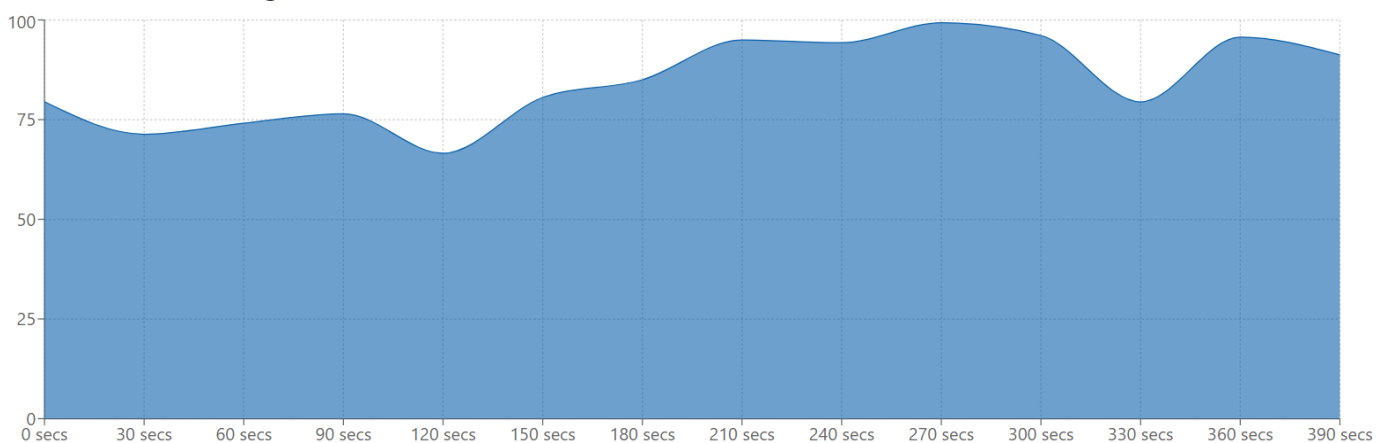
This statistic has crossover with the above statistic 'Views by Day/Time' but it provides a more in depth analysis of the time of day students are watching the video without splitting it up by the days of the week. This allows for a total average and the ability to access if the video is being viewed in a majority during the morning, evening or night.

9. Views Last 7 Days



This will allow lecturers to see if their videos are being watched recently after uploading them but additionally they can check back on this statistic before continuous assessments or exams to see what videos students are reviewing the most and perhaps identify what they are deeming particularly relevant to the upcoming exams / assessments.

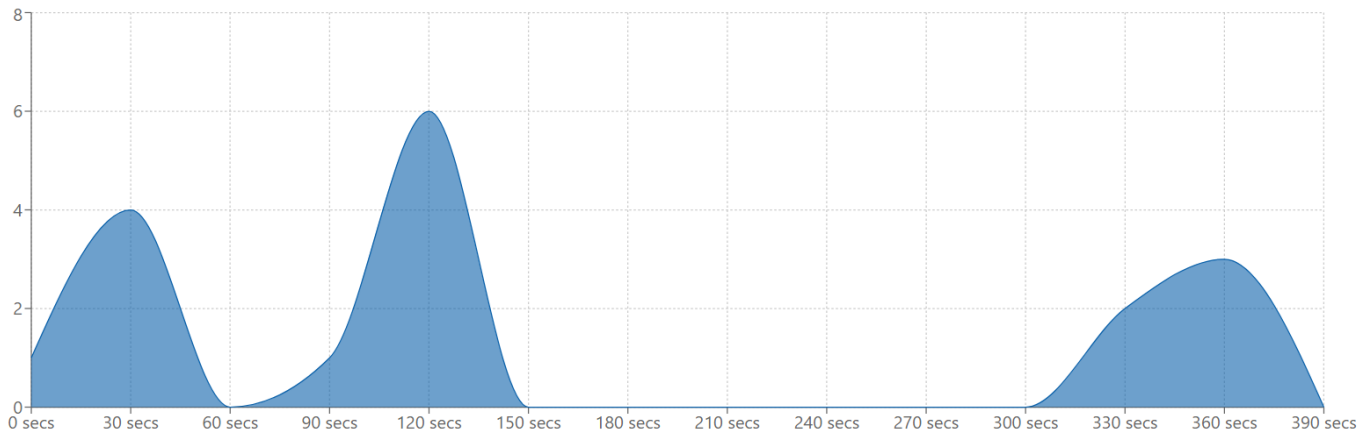
10. Concentration Throughout Video



This will allow lecturers to assess their lecture and see which sections in it had high engagement and concentration from the students and any potential drop off points for

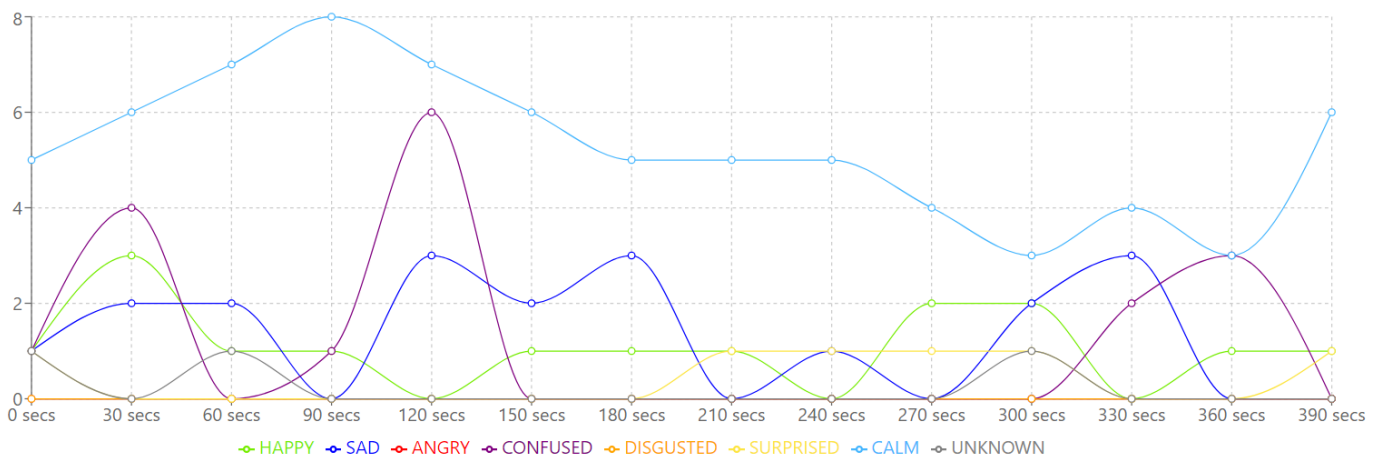
concentration. This will allow them to review their lecture/slides and adjust the content to increase engagement in the future and avoid students dropping concentration levels.

11. Confusion Throughout Video



This will allow lecturers to assess their lecture and see which sections in it had high confusion from the students. They can then potentially do a recap of this section with students to help them understand it better.

12. Emotions Over Time

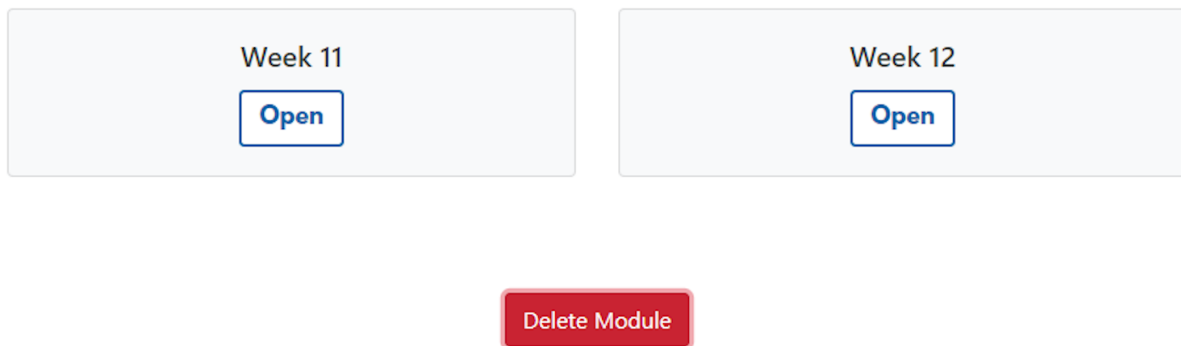


This will allow lecturers to assess their student emotions over the duration of the video lecture. They will be able to assess all hot spots for any certain emotion in a particular part of the video.

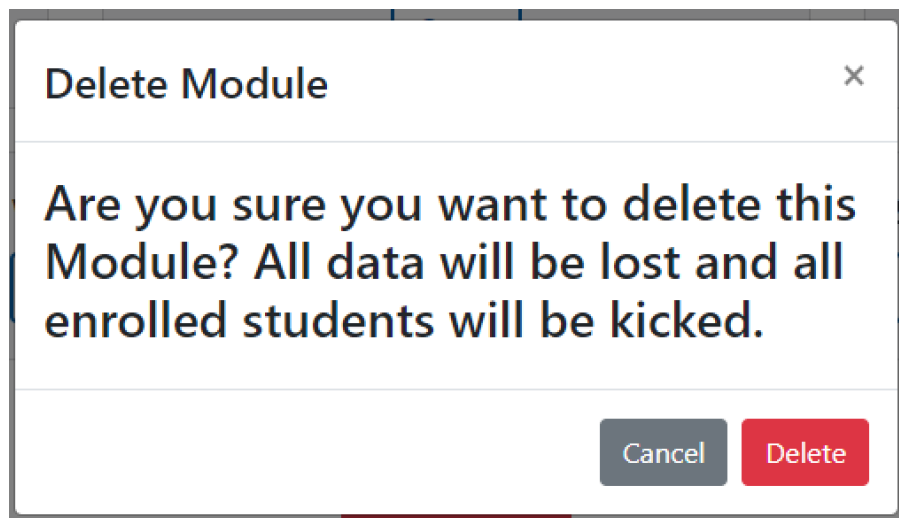
How to Delete Module

If you would like to delete a module and all the data with it please follow the steps below

1. Go to the module homepage of the module you wish to delete
2. Scroll to the bottom of the module page
3. Click the red 'Delete Video' button at the bottom as seen below



4. The following warning will appear



5. If you still wish to delete the video click 'Delete', if not click 'Cancel'

Note: Once a module is deleted all enrolled students will be removed from the module as well as related data.

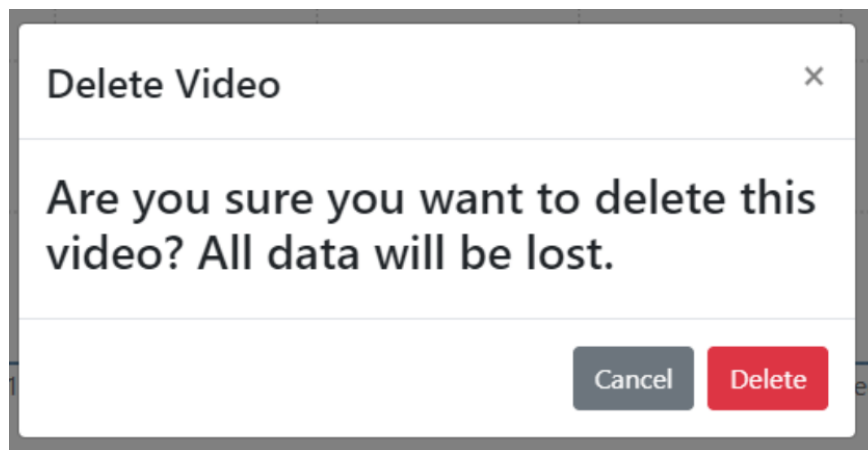
How to Delete Uploaded Video Lecture

If you would like to delete a video and all the data with it please follow the steps below

1. Go to the feedback page for the module video you wish to delete
2. Scroll to the bottom of the page
3. Click the red 'Delete Video' button below the Emotions Over Time statistic as seen below



4. The following warning will appear



5. If you still wish to delete the video click 'Delete', if not click 'Cancel'

Note: All video data will be deleted

How to Sign Out

If you would like to sign out of your account at any point, please click the 'Sign Out' button at the end of the navigation bar as seen below. This is displayed on every screen, to allow you to sign out at any point.

[Home](#) [About](#) [Create Module](#) [My Modules](#) [Upload](#) [Sign Out](#)

Forgot / Change Password

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Email Address

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[Create an Account](#)

[Forgot Password](#)

You will be redirected to the page on the right:

2. Enter your DCU email address you used when signing up
3. Click the blue 'Change Password' button



Registered Email Address

[Change Password](#)

If the entered email is registered on the Intendi system you will then be redirected to the page shown on the right:



4. Enter your registered email address
5. Enter a new password (Minimum 8 characters)
6. Enter the verification code which was sent to your email address
7. Click the blue 'Change Password'
8. Return back to the homepage and log in with your new password



Registered Email Address

know.youremail@gmail.com

New Password

Password- MIN 8 Characters

Verification Code

Code

[Change Password](#)

Note: If you did not receive your verification code, please press the back button and resubmit your email address

Installation Guide

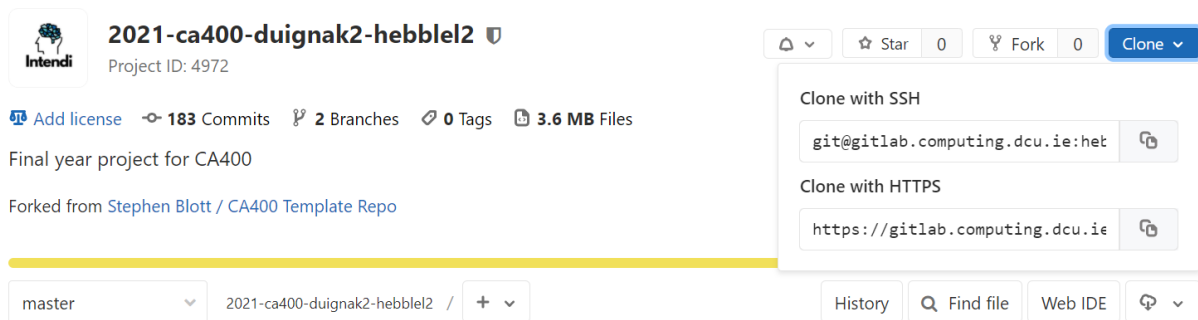
In order to run our application, you must have NodeJS and React downloaded and installed on your machine.

Guide on how to do so:

<https://www.freecodecamp.org/news/install-react-with-create-react-app/>

After successfully installing NodeJS and React, go to our GitLab repository here and clone it:

<https://gitlab.com/computing.dcu.ie/hebblel2/2021-ca400-duignak2-hebblel2>



After cloning our repository, go to the repository directory via the command line. Type in “cd src/intendi” to enter the intendi folder.

```
2021-ca400-duignak2-hebblel2>cd src/intendi
2021-ca400-duignak2-hebblel2\src\intendi>
```

From here, type in “npm install” to install all required packages. After that has completed, you will see a success message.

```
added 2422 packages from 1289 contributors and audited 2425 packages in 49.731s
```

After this, type in “npm start”. The development server will then start and the application will then open up in your web browser.

```
Starting the development server...
```

