

User Manual

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1. Introduction

This User manual is to inform students and staff how to use F.R.A.M.E from their perspective, The User Manual walks through how to use F.R.A.M.E as well as describing what all the options do and how to use them.

2. Sign in

When the lecture is about to begin, F.R.A.M.E will start and display on the screen feedback of the camera.

There will be the time and date on the screen as well as the time of the lecture.

Once in the camera view the student will be requested to press the sign in button.

When the sign in button is pressed F.R.A.M.E will take a photo and then match the photo to the database this then will display if the student has been signed in, signed in late or not meant to be in the lecture (error).

2.1 Successful sign in

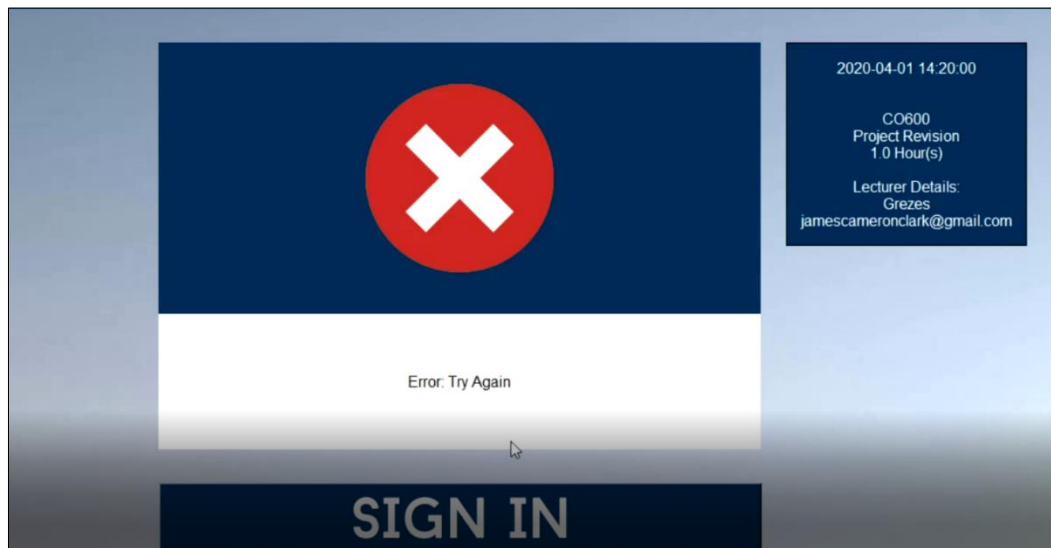
If F.R.A.M.E has successfully found the student in the database there will be a green tick displayed on the screen, this indicates that the student has been signed in.



[Figure 2.1 – Successful sign in, green tick.]

2.2 Error signing in

If the student's face is not recognised and is not on the database there will be a red cross that appears on the screen instead of the green tick.



[Figure 2.2 – Error Sign in, red cross]

2.3 Unidentified user

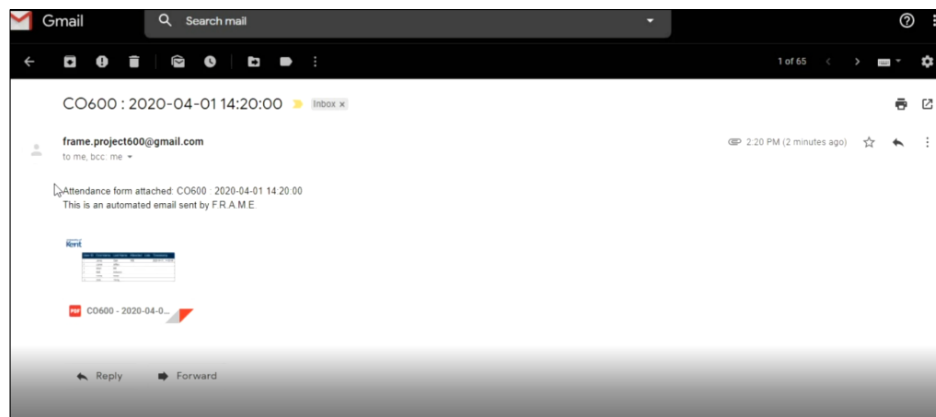
If the student cannot be recognised within the database a red cross will appear on the screen and the student will have to speak to the lecturer either to discuss why this has occurred or because the student may be in the wrong room, since they may not be on the register for the specific lecture. Or if the student's face is covered the face recognition may not recognise the face correctly.



[Figure 2.3 – Unrecognised sign in, Yellow caution triangle.]

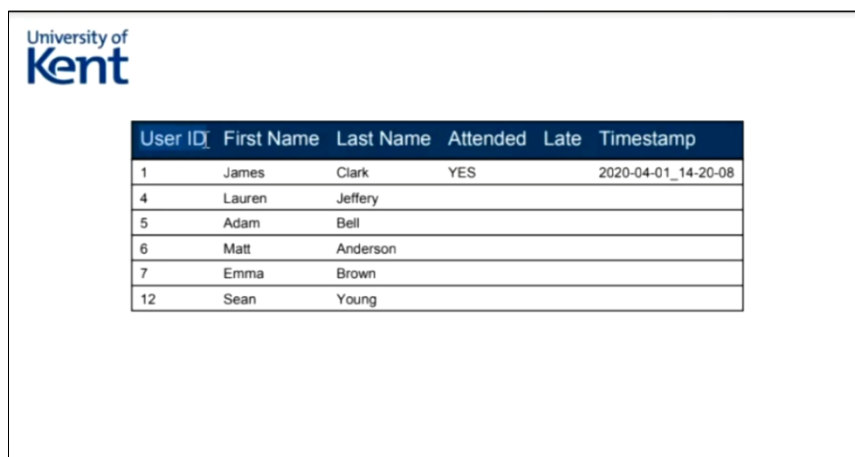
3. Completed register

When the lecture has finished F.R.A.M.E will send an email with a pdf of all the students who attended, attended but late and did not attend. The email that will be sent will have a subject name that contains, the module code, the date and the time of the lecture. The body of text in the email will inform the staff member that the attendance form is attached and proceed to give the module code, date and time of the lecture, Under this there will be a verification sentence saying “This is an automated email sent by F.R.A.M.E”. This allows the staff member to know that this is the email from F.R.A.M.E



[Figure 3.1 – The email that contains the pdf sent from F.R.A.M.E]

This will be sent to the lecturer via email. Once the email has sent F.R.A.M.E will standby or have the next lecture up if there is one after.



User ID	First Name	Last Name	Attended	Late	Timestamp
1	James	Clark	YES		2020-04-01_14-20-08
4	Lauren	Jeffery			
5	Adam	Bell			
6	Matt	Anderson			
7	Emma	Brown			
12	Sean	Young			

[Figure 3.2 – The pdf with the attendance marks, found in the email.]

4. Options & Settings

F.R.A.M.E has two different modes; the first mode is the student mode.

This mode will not show the options bar at the top of the screen, this is so the students cannot access the settings and change the options.

The other mode is for the teacher or individual in charge. This mode gives the options to the person in charge.

5. The GUI

On screen there will be a centre box with a black outline which will show the camera feed.



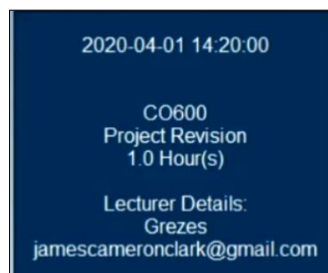
[Figure 5.1 – GUI of F.R.A.M.E]

This will show where the student must present their face relative to the camera positioning. The GUI includes a Sign in button under the camera, so it is easily visible.



[Figure 5.2 – Sign in button]

To the right of this there will be an information box that gives a description of what class is taking place, what time the class is and where it is.



[Figure 5.3 – Lecture Details.]

6. Using F.R.A.M.E

When starting up F.R.A.M.E you will see the start-up image pop up on the screen, this is how you will know if it has started up correctly.



[Figure 6.1 – Start up image.]

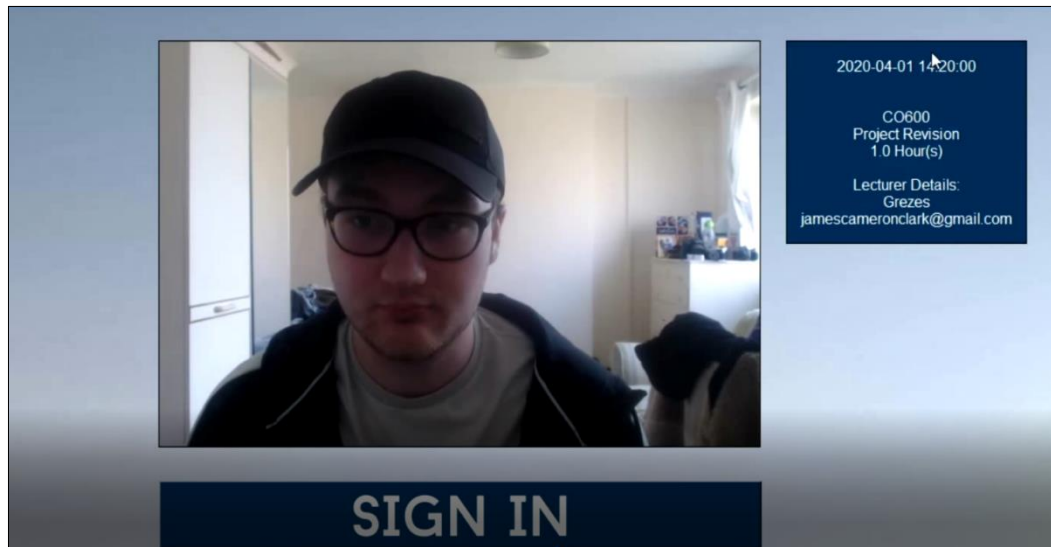
After this the main window will appear. Once this window has appeared there will be the video image via the webcam.



[Figure 6.2 – Sign in window.]

F.R.A.M.E – Facial Recognition Attendance Monitoring Engine

Under this there will be a sign in button, simply press this to allow the camera to take a photo of the student.



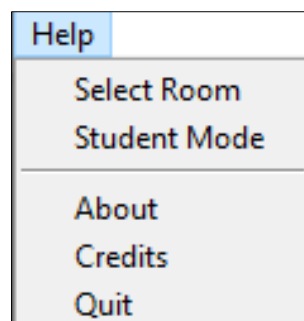
[Figure 6.3 – Signing into a class.]

As the staff in charge you will be able to see the help menu on the top left of the screen. For the staff to be able to see this press esc and the help option will show up at the top. This is so students cannot change the options.



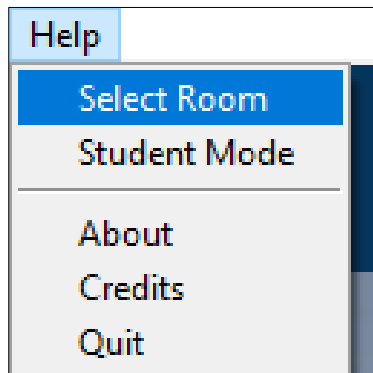
[Figure 6.4 – Help option.]

When pressed multiple options will show up, these are “Select room, Student mode, About, Credits and Quit”

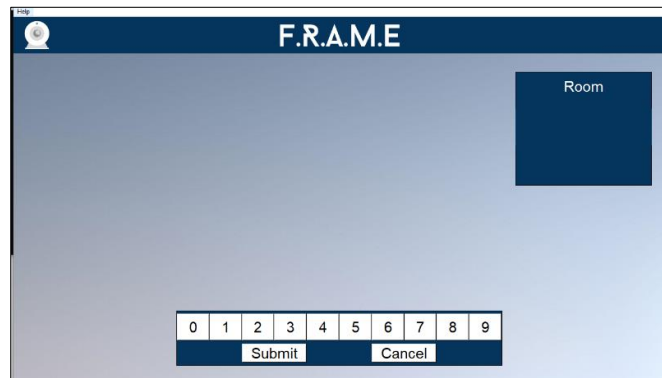


[Figure 6.5 – Help option menu.]

If the staff presses, select room on the right of the screen there will be a box that is labelled room.

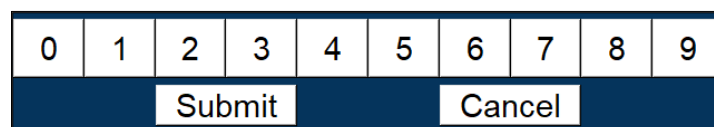


[Figure 6.6 – Select room option.]



[Figure 6.7 – Room number selection.]

At the bottom of the screen there is a number index 0-9 with buttons submit and cancel underneath, this allows the staff to choose the room that is about to be used.



[Figure 6.8 – Room number index.]

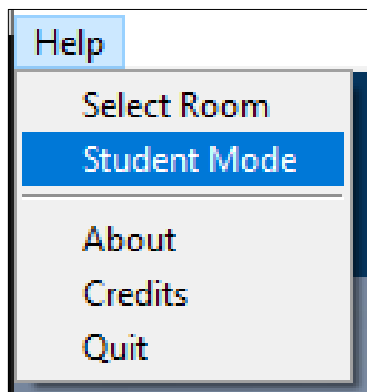
Press the numbers needed to create the room number and press submit this will then set the room. If accidentally pressed simply press the cancel button. This will bring you out of the select room option.



[Figure 6.9 – Inputted room number.]

F.R.A.M.E – Facial Recognition Attendance Monitoring Engine

When pressing the “student mode” the help bar at the top will disappear and only show the sign in button and camera feedback box. If you want to get out of student mode press the escape key to bring back the help button.

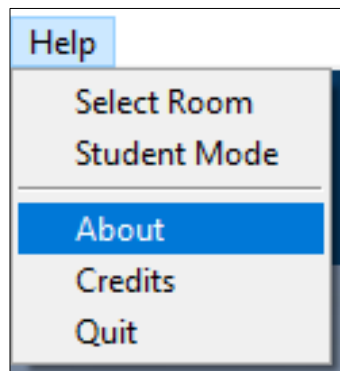


[Figure 6.10 – Student Mode in help menu.]



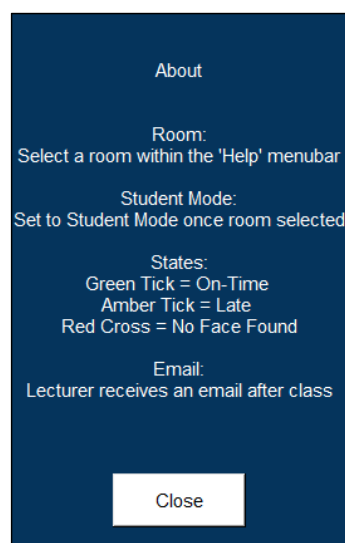
[Figure 6.11 – Student mode GUI]

If the about button is pressed there will be a simple guide on what each of the options will do within the help tab.



[Figure 6.12 – About in the help menu.]

On the right-hand side of the screen in a blue box, to close this you can press the close button at the bottom of the box. When close is pressed the about box is removed and it returns to the default GUI.



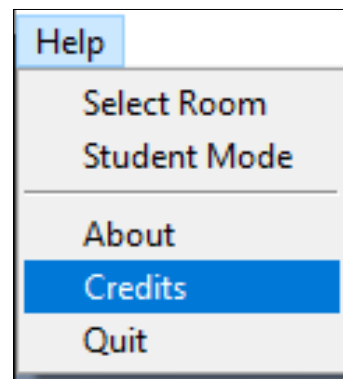
F.R.A.M.E – Facial Recognition Attendance Monitoring Engine

[Figure 6.13 – About section.]

The next option is the credits, when this is pressed the credits of the group that made F.R.A.M.E will pop up in a small box on the right hand side of the screen, this will show for a couple of seconds and then disappear.

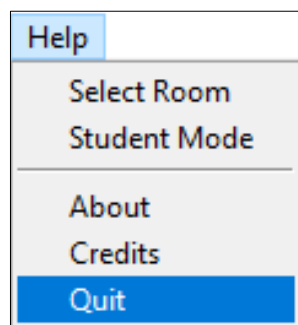


[Figure 6.14 – Credits box.]



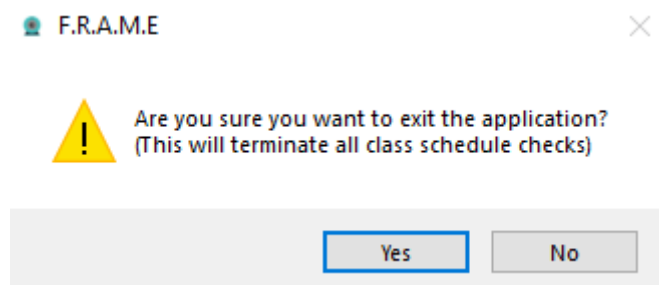
[Figure 6.15 – Credits in help menu.]

The last option that can be pressed is quit.



[Figure 6.16 – Quit in help menu.]

Once this is pressed F.R.A.M.E will ask if you are sure that you want to exit out of F.R.A.M.E, there will be a yes and no button, press the option that fits what you want to do. Pressing yes will close F.R.A.M.E and pressing no will keep F.R.A.M.E open.



[Figure 6.17 – ‘Are you sure you want to quit’ pop up.]

7. Attendance Analytics

F.R.A.M.E also comes with an analytics tool, once running you can input the module code you wish to see, you can also input your email address so the pdf can be sent to you. When running the analytic tool, you will need to enter the module code from here you can input your email address once this is done the tool will find the data in the database for that module and then turn this data into a bar chart and send it to the inputted email address.

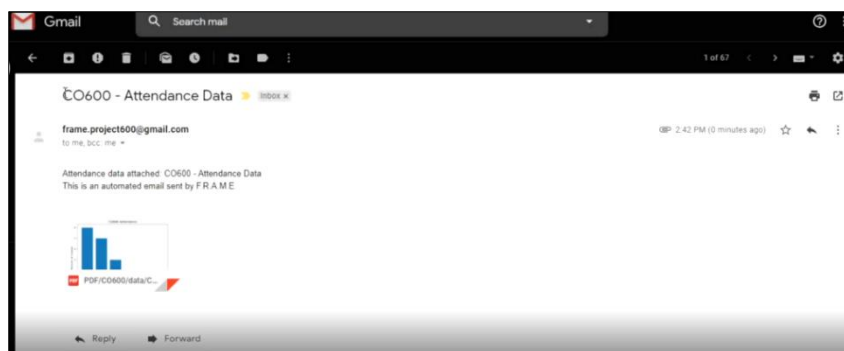
```
F.R.A.M.E Attendance Analytics
Enter the module code:
C0600
Enter email address:
jamescameronclark@gmail.com
Generating visual data...

TABLE C0600 : 2020-03-31 12:28:20:
USER ID: 1 UPDATED
USER ID: 4 UPDATED
USER ID: 12 UPDATED
[[1, 1], [4, 1], [5, 0], [6, 0], [7, 0], [12, 1]]

TABLE C0600 : 2020-03-31 12:29:20:
```

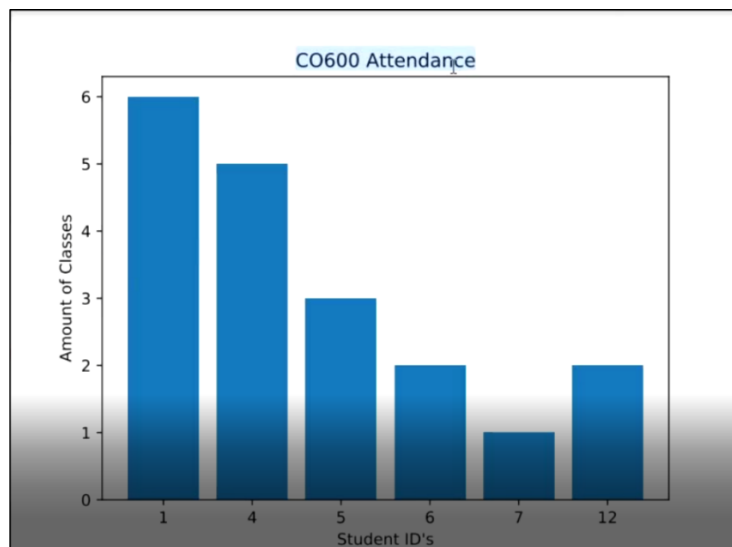
[Figure 7.1 – Analytics tool Input & output.]

The program once finished will close and send the email.



[Figure 7.2 – Email automatically sent with a pdf within with the attendance data.]

The pdf in the email represents the data in a bar chart form.



[Figure 7.3 – Pdf containing a bar chart made using the attendance data.]