

Screen Recording and Optimising in CAB432

Please use the following guide to set up screen recording and compression for your video submission. Many of you will already have experience with this and can just skim this document. Whatever you do in regards to recording, please pay close attention to the resulting file size – please see the section on *Handbrake*. We do not want to bring Blackboard down on the day of submission. You may use *any screen recording software you wish* as long as the final submission is in mp4 format and under the file-size limit. OBS is cross platform and will be preferred by linux users. Others may use the Windows applications discussed below.

Option 1: OBS

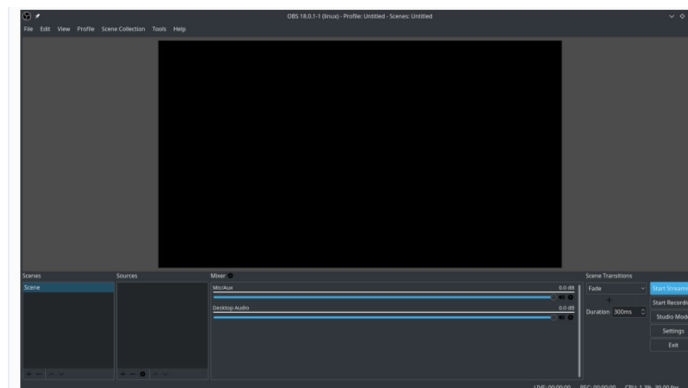
Open Broadcaster Software or *OBS*, is a video streaming/recording application. It's free, open source, and also cross platform (Mac, Windows and Linux). It can be a very powerful tool, especially when it is combined with other high end audio and video editing software. Here we will not be diving too deep into this application and we only need to utilise a small percentage of its functionality. The steps required are as follows;

Steps:

1) Download

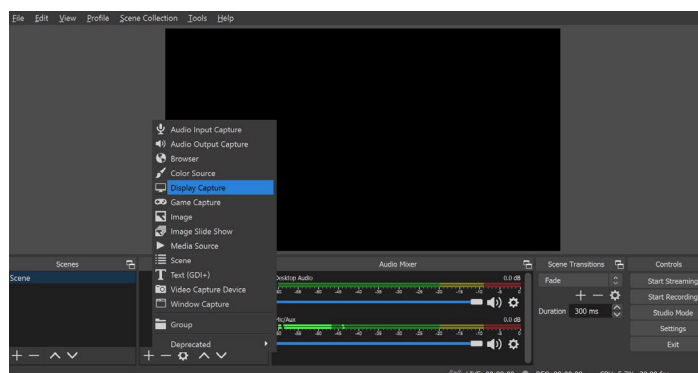
OBS can be found here: <https://obsproject.com/download>.

Once downloaded and installed you should see a screen like this:

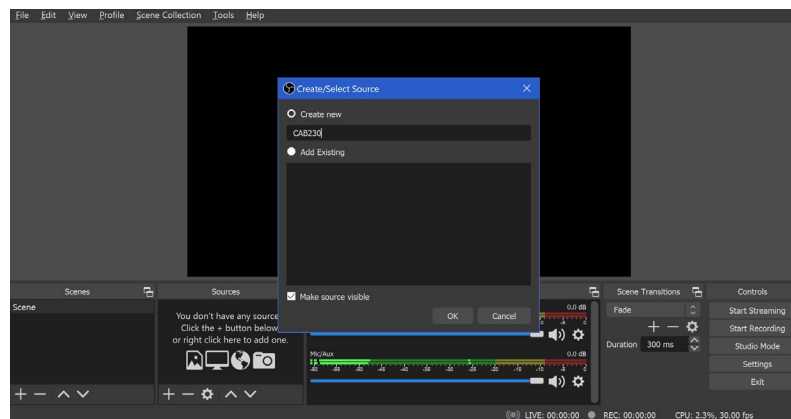


2) Screen Capture Selection

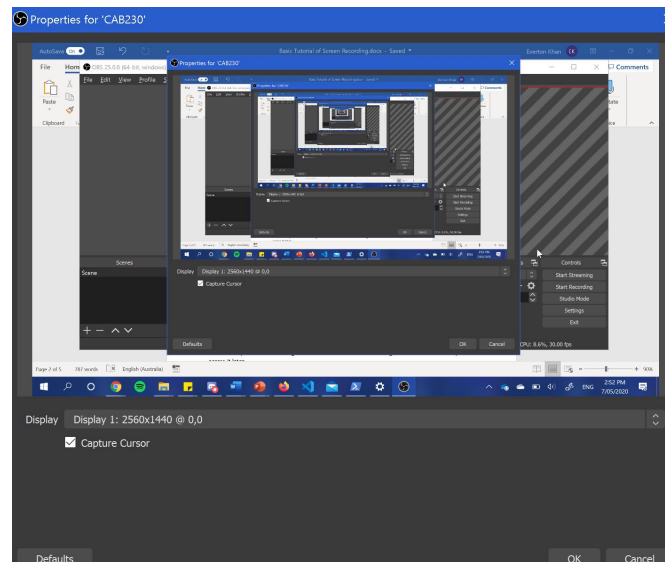
Underneath the sources subsection in the bottom left click the little + button and then select Screen Capture on Linux or *Display Capture* on Mac and Windows.



Click *ok* on the popup.



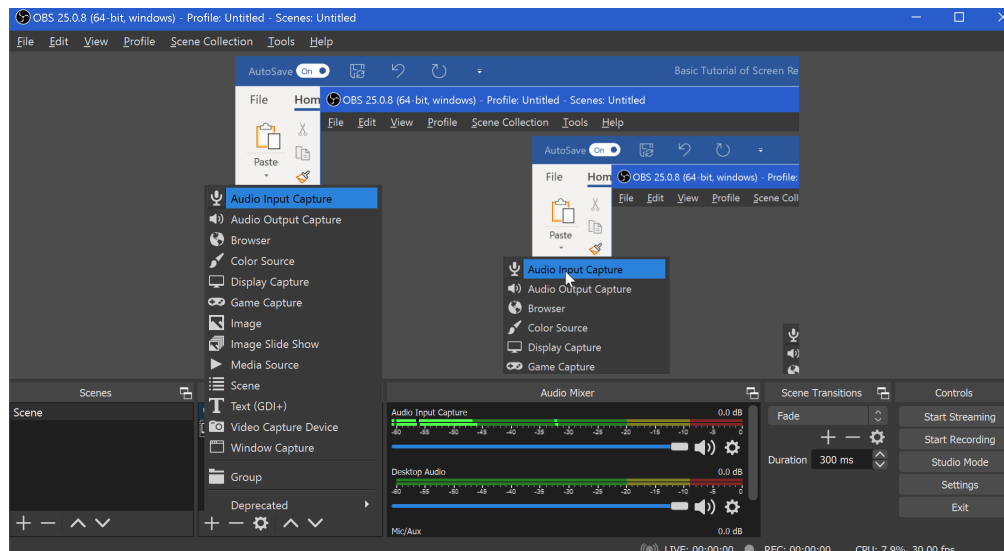
And on the next one too.



You have now selected your screen as the capture point.

2) Audio

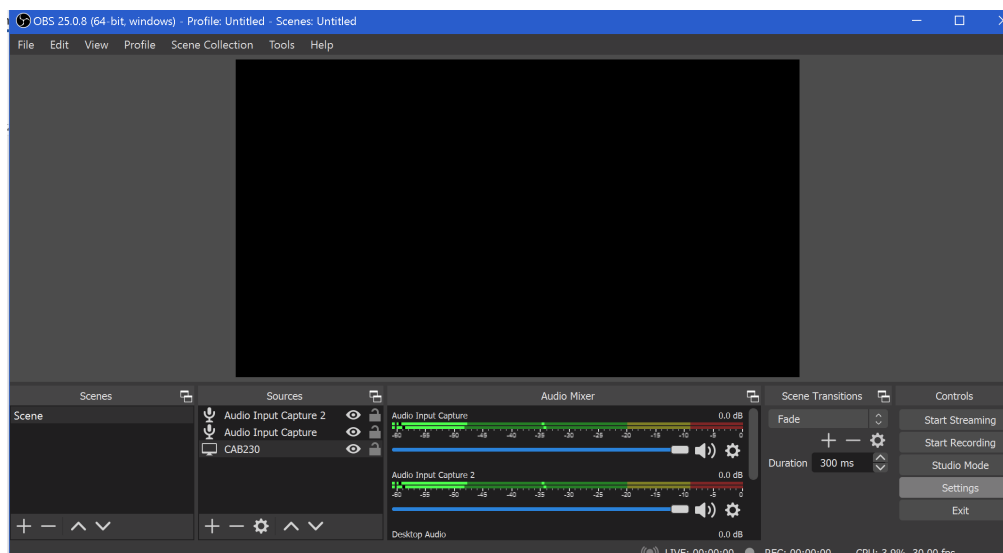
It is also recommended that you use narration to explain your work. Go back to the same little + button and then select Audio Input Capture and then select *ok* for the next two screens (The system should automatically detect your microphone/headphones but if not you might have to change the settings in the drop down).



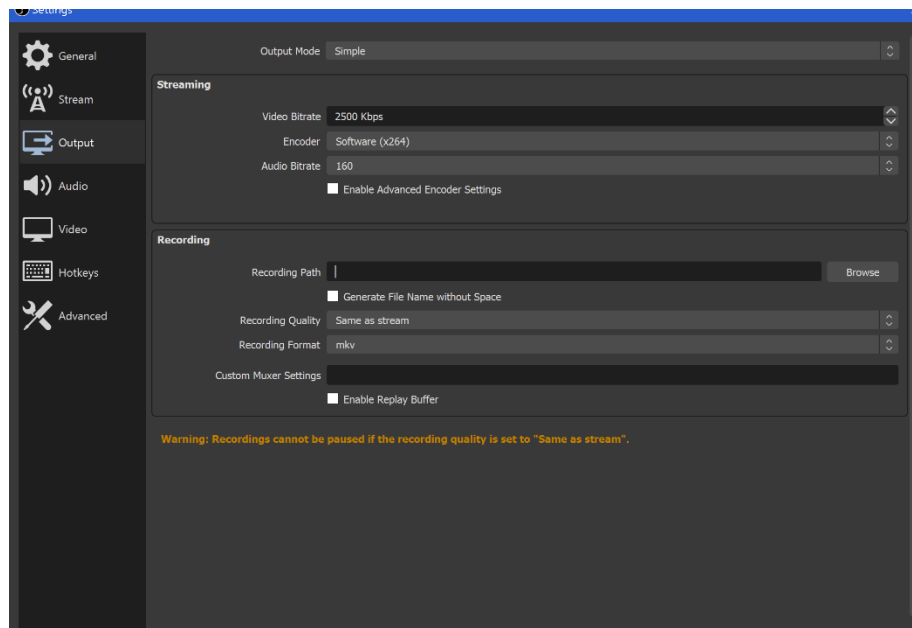
3) File Location Changing

The next step would be to change the location of where the recording is saved so we can easily access it later.

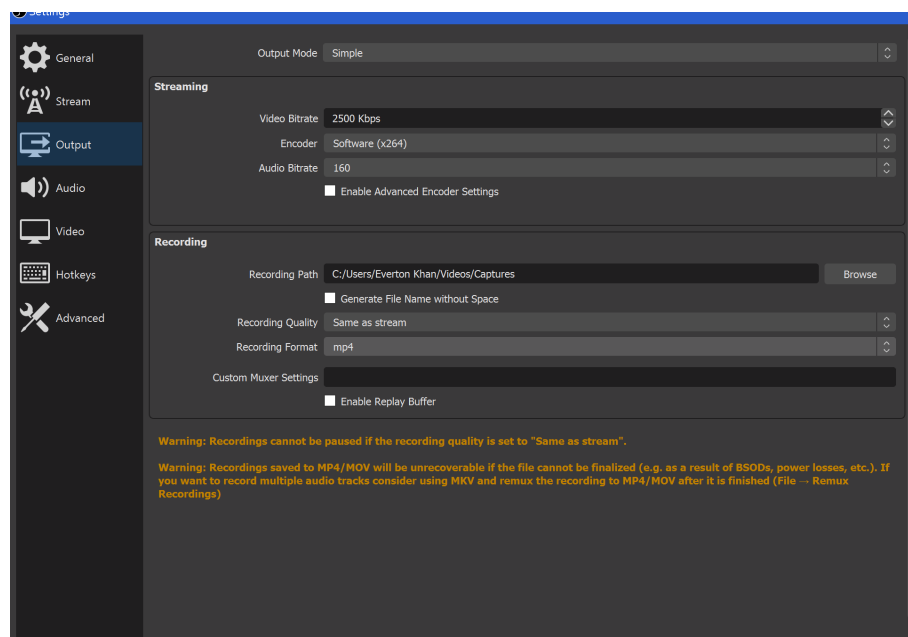
Do this by clicking *settings* in the bottom right corner.



And then by changing recording path under the output section.

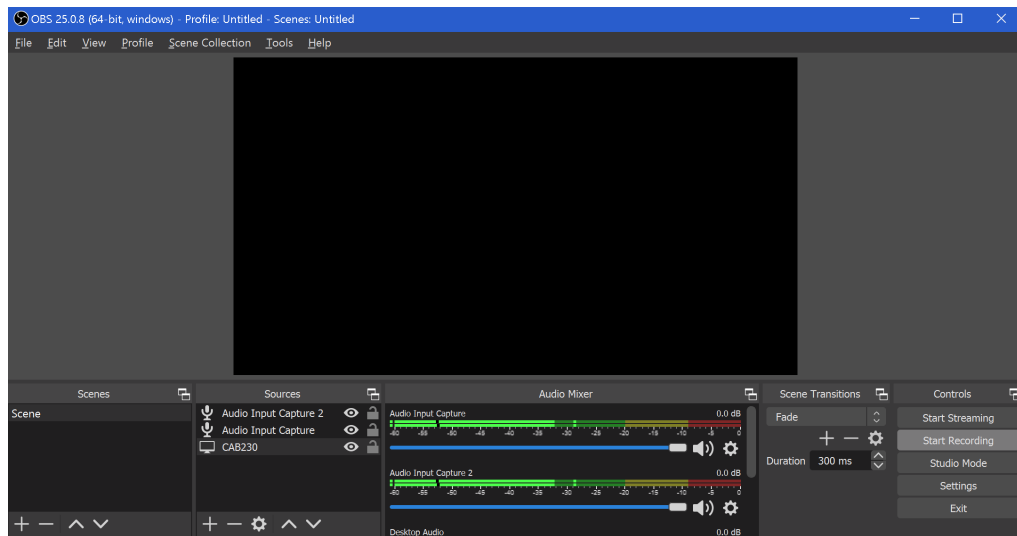


It is probably best that you change the format of the output as well to MP4. OBS will throw a warning at you but for our case we do not care.



4) Recording

You can now record using the *start recording* button on the bottom right.



When you are done, click the same button which will now be called *stop recording* and the recording will be written to the specified folder as an mp4.

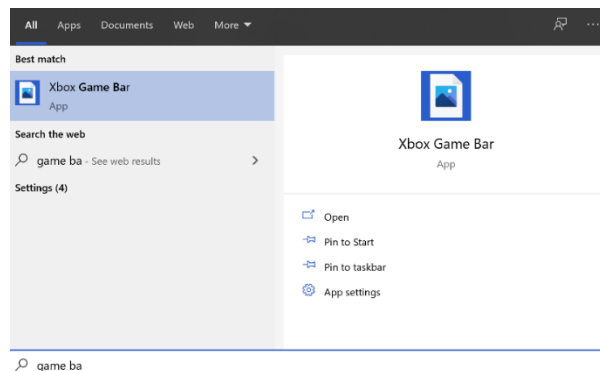
Option 2: Windows 10 Screen Recording

[As the title suggests, this option is limited to Windows 10 users. Please see option 1 or the list at the end of the document if you are using a Mac or a Linux machine.]

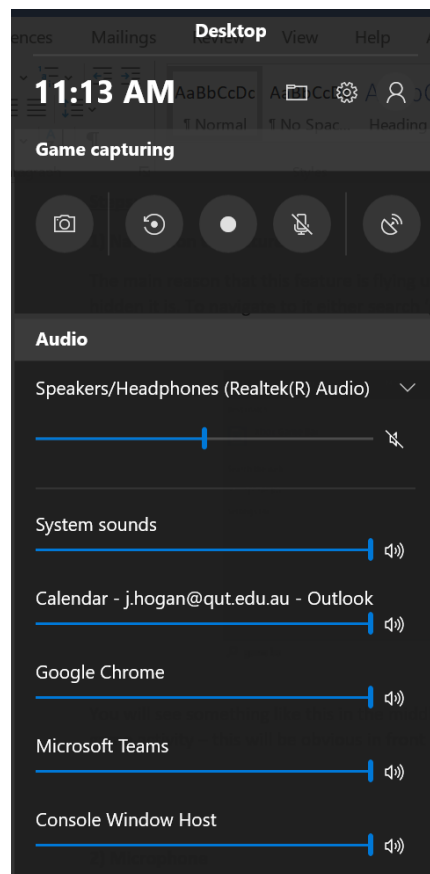
Unbeknownst to many (including us), Windows 10 also has screen recording functionality that you can use. It is mainly intended for recording of in-game footage, and for some reason has not been publicised for broader use. Once the settings are right, the simplest way to work with this recorder is to just press <win-key> + <alt> + R to start recording, and the on-screen stop button to stop. The next sections will walk through the setup.

Steps:

1) Navigation to Feature



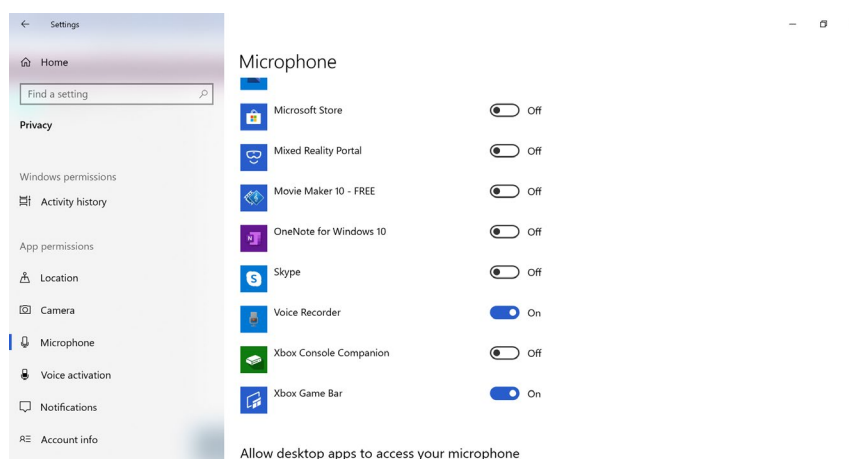
To find the app, search 'game bar' in the start menu (see image above) or click <windows-key> + G, and the bar shown below will appear as an overlay. You may have to check a box to enable game play.



2) Microphone

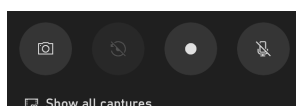
Once in you may have to allow microphone access to the device – your privacy settings may be blocking access to the mic. You can fix this by clicking on the microphone icon in the image above and following the ‘find out why’ prompt that appears, or by navigating directly through Windows settings to the microphone privacy settings at (*Home>Privacy>Microphone*).

Once here turn on the Xbox Game Bar Slider



3) Recording

Once the app has access you can start recording through clicking the little record button underneath the capture widget (if the capture widget is not turned on you can do so through the menu in the top middle of the screen).



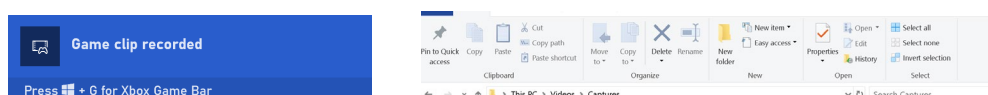
Annoyingly, you will have to ‘opt in’ to audio capture after the recording is started so make sure you do that before you start speaking to no one.



You can click the stop button after you’re finished to stop the recording

3) Accessing the Recording

Once done you can either access your work through clicking the popup that will be displayed on the left or through navigating to this through *This PC > Videos > Captures*.



Major time saver: A reminder that once you are sure of the setep, just hit the Windows key + Alt + R at the same time to start the recording, and then click on the stop button on the timer to finish.

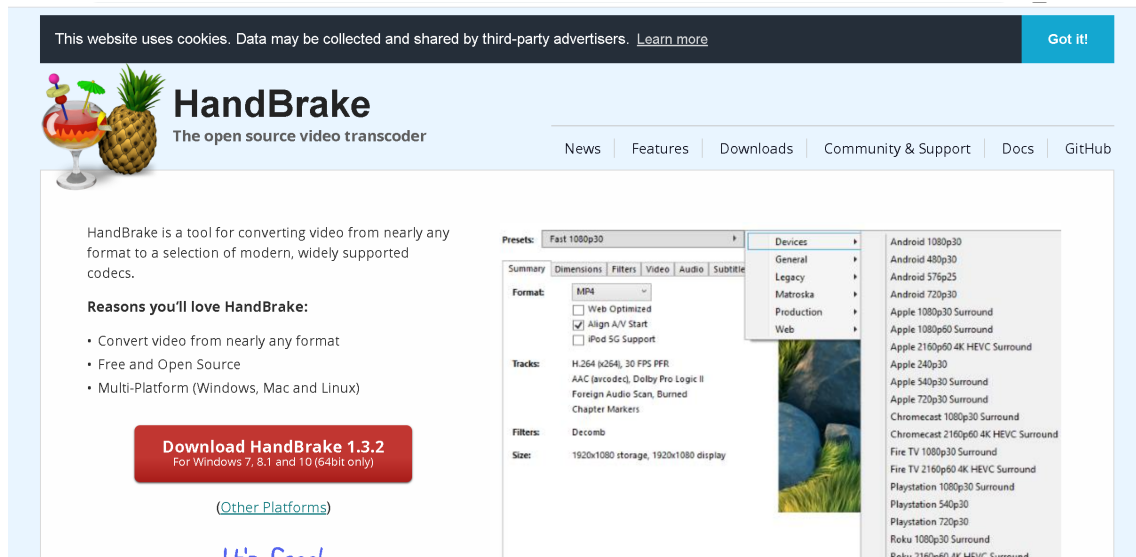
HandBrake

Regardless of how you capture your recording, we will require that you take careful note of the file size before submission. If the mp4 file – and remember, it **must** be an mp4 file – **is larger than say 10MB** then you must compress it. If you don't know how to do this, we recommend that you use the HandBrake application with the settings described below.

Steps:

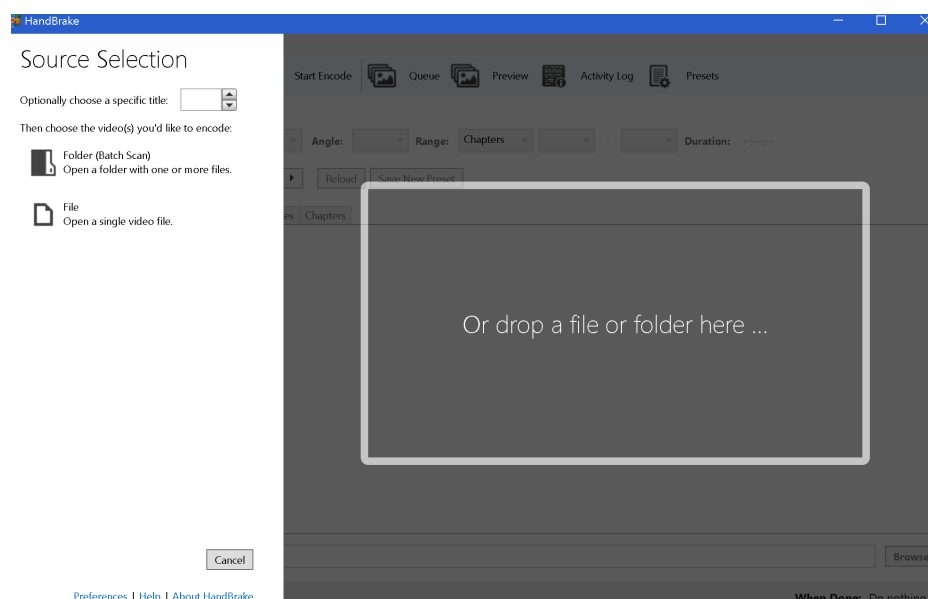
1) Download

HandBrake can be downloaded from here: <https://handbrake.fr/>



2) Loading up a Video

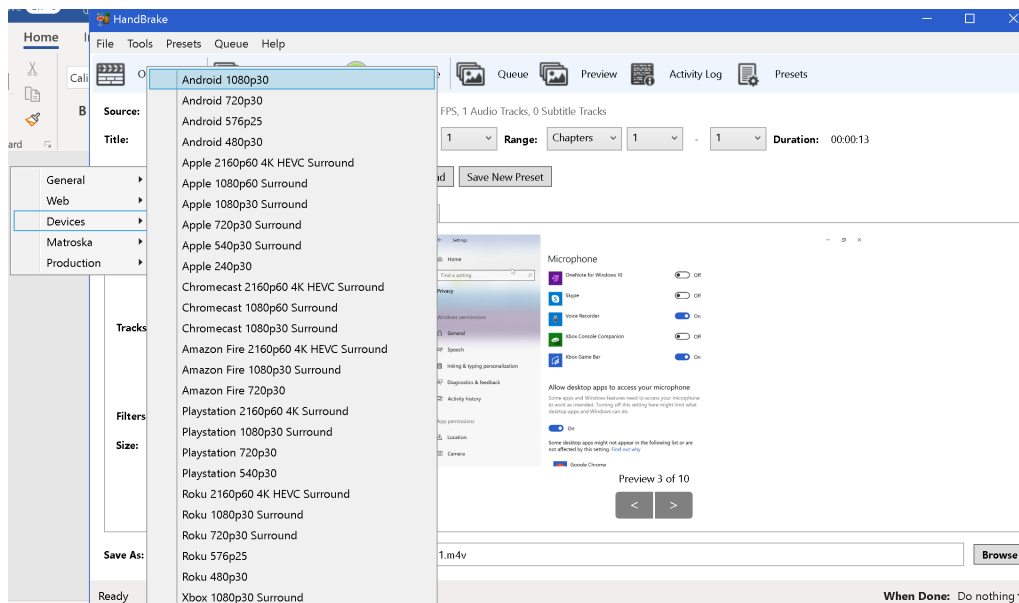
The application will automatically ask you to load up a video when you open it. Choose one you have previously made.



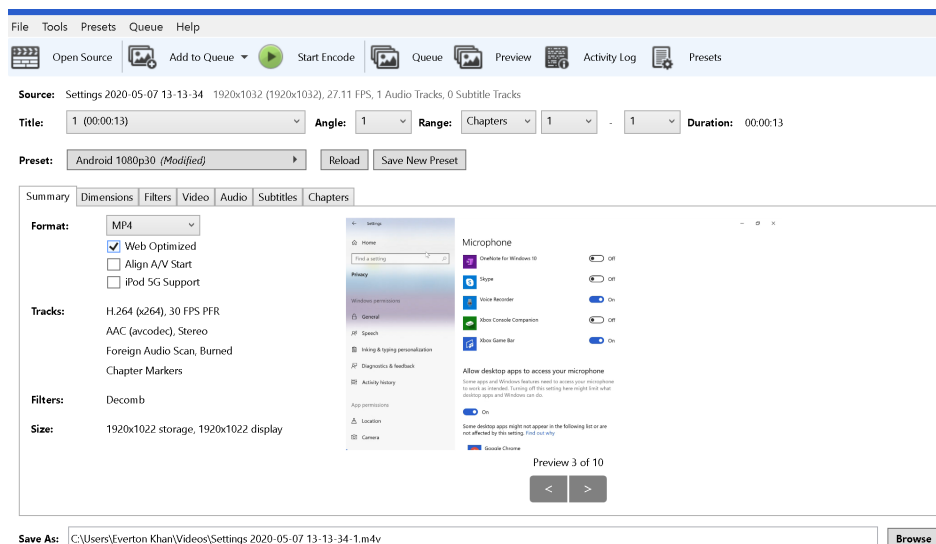
3) Compression

There are a number of steps involved to compress the video;

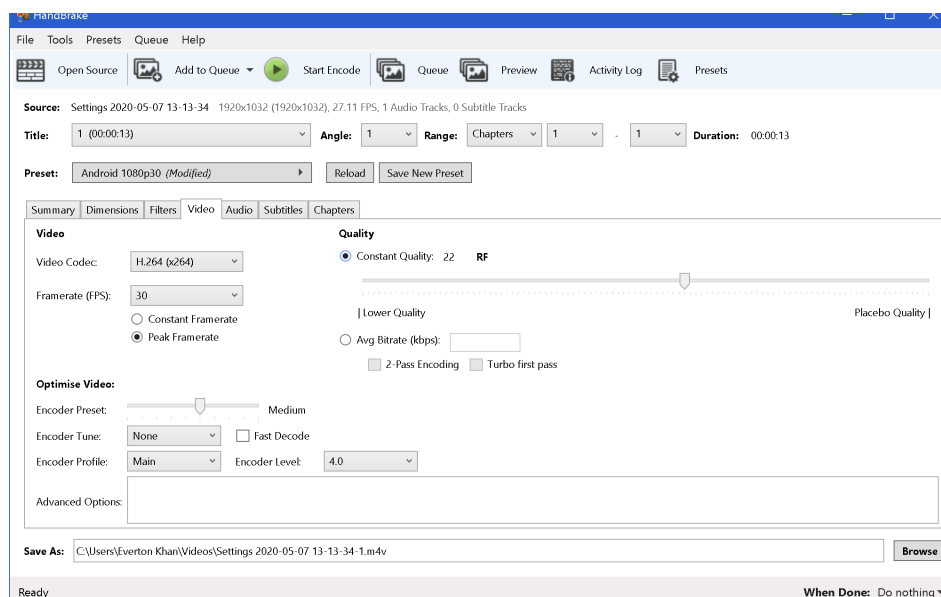
Firstly, Open the *Preset* dropdown and select *Devices> Android 1080p30*. This will load in as default a lot of the settings we want and save us some time.



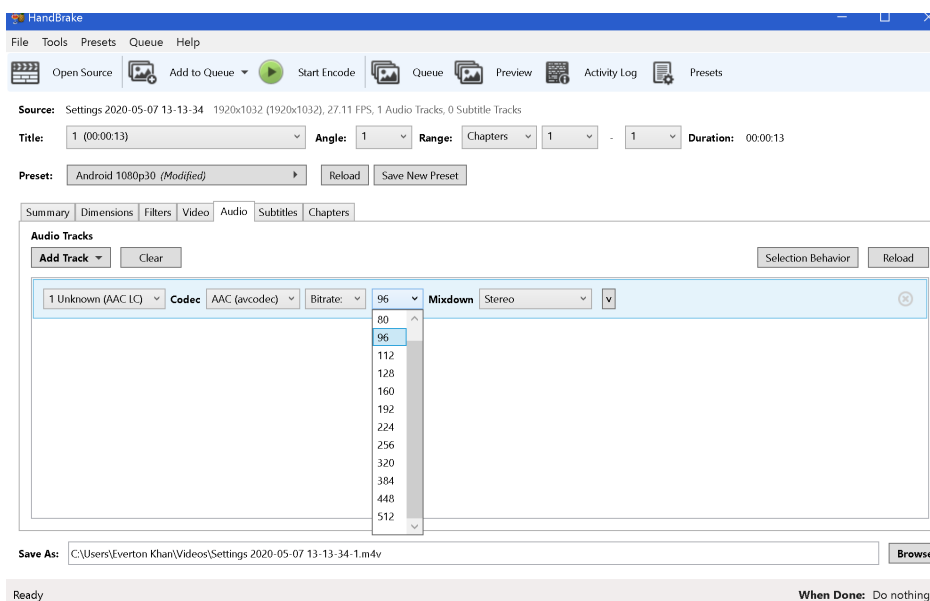
Next, Under *Summary* tab, select the checkbox *Web Optimized*.



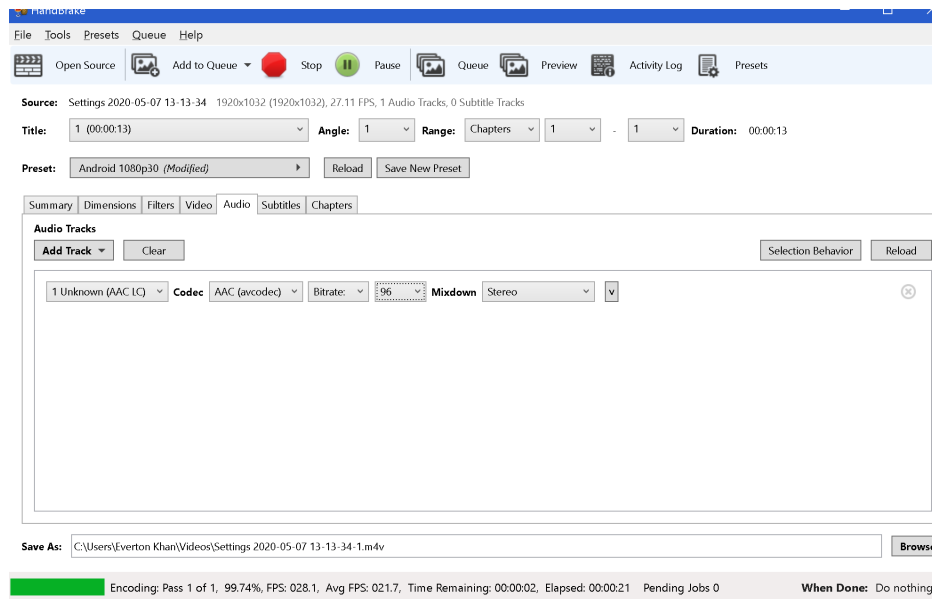
Then under the *Video* tab, lower the *Constant Quality* to 22 (it may already be set like this).



Under the *Audio* tab change the *Bitrate* to 96



Finally, select *start* (at the top) to begin encoding. It should produce a loading bar at the bottom.



All Done! You may include the resulting mp4 file as part of your submission. If you wish, you may host a higher resolution version of your video on Dropbox or some other cloud service and include the link in your report. We can then look at a better version of the video, but this is entirely optional.

That concludes our tutorial of screen recording and compression. You should now have a well optimised screen recording with narration over it ready to submit to blackboard. Congrats on finishing assignment 1.

Other Alternatives

QUT's Learning and Teaching Unit has made a number of recommendations for staff and students relating to screen recording and video compression. Our discussion of HandBrake is based on their document with settings chosen for our purposes.

For screen recording they usually recommend Screencast-o-matic, which can be found here: <https://screencast-o-matic.com/home>. There is a free version that works on Windows, Mac, Android, Chromebooks and IOS. There are also a number of short tutorials that can assist students in the use of the application, but it is basically a click on the button to record and click it again to stop.

The only limitation of the free version is that it places a **watermark** on the video and the maximum recording time for a single video is **15 mins**, which is more than adequate for this assessment task. Unfortunately, there is no mention of Linux on their web site, but if students are using Windows to access Linux then it should be fine as it would be recorded from Windows rather than Linux.

Screencast-o-matic also provides additional videos on their web site around scripting and editing of their video, which may be of interest to you and your students: <https://screencast-o-matic.com/tutorials>.