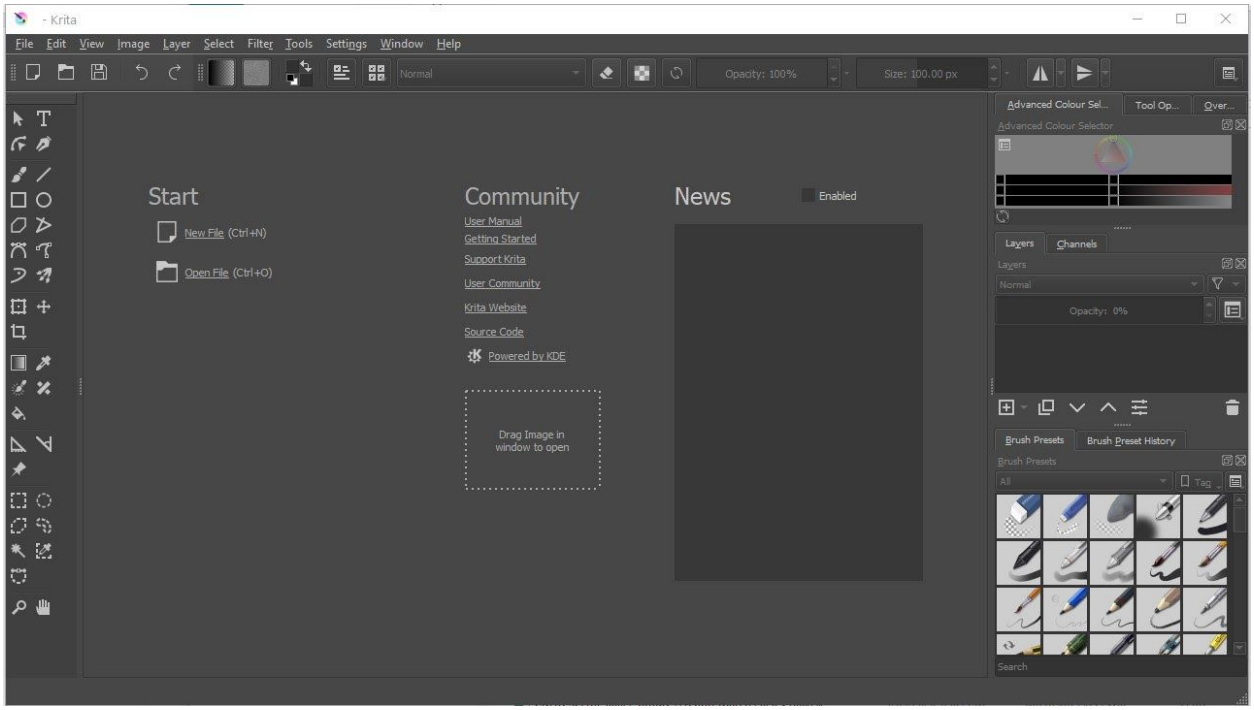
Basic Animation for AR

We're going to be using a Free and Open Source program, Krita, for creating our animation today. It's like a cross between Adobe Illustrator and After Effects, it may seem a bit daunting at first but hopefully just following along with our simple guide you will be animating something in no time!

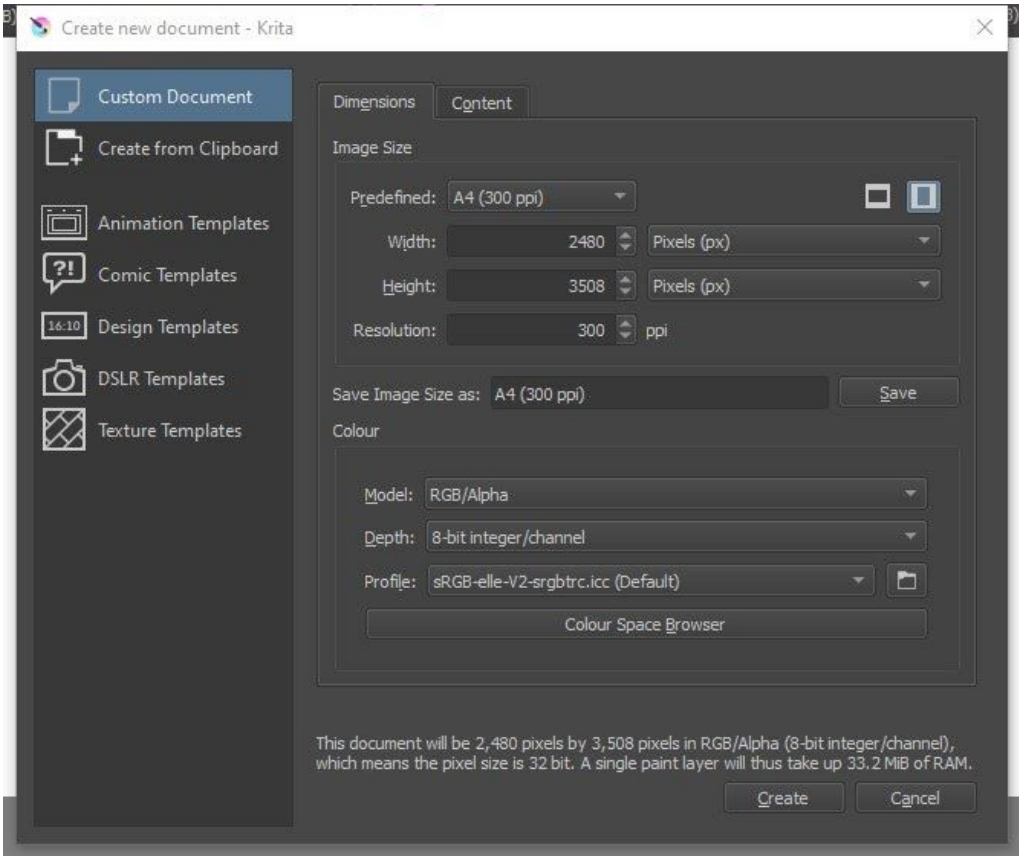
https://docs.krita.org/en/user_manual/getting_started.html

Step 1. Create your canvas
Open the Krita program, you will see the app interface and option to start a new file or open a file. Choose New File.



We will make our canvas size to just be a standard A4 print size, it doesn't matter too much for our tutorial but what does matter is that your Target Image and Animation are the same size. So we will be using the same sizing for both Image and Animation.

Canvas size;
Choose the pre-defined a4 300 dpi option
Landscape setting



Step 2. Create your design

We want to draw a simple shape or item that won't take too much time and that we can animate changing colour. With varying degrees of skill, we know some of you could probably draw and animate some great things, but for today's session it is about learning the process, not so much our end result.

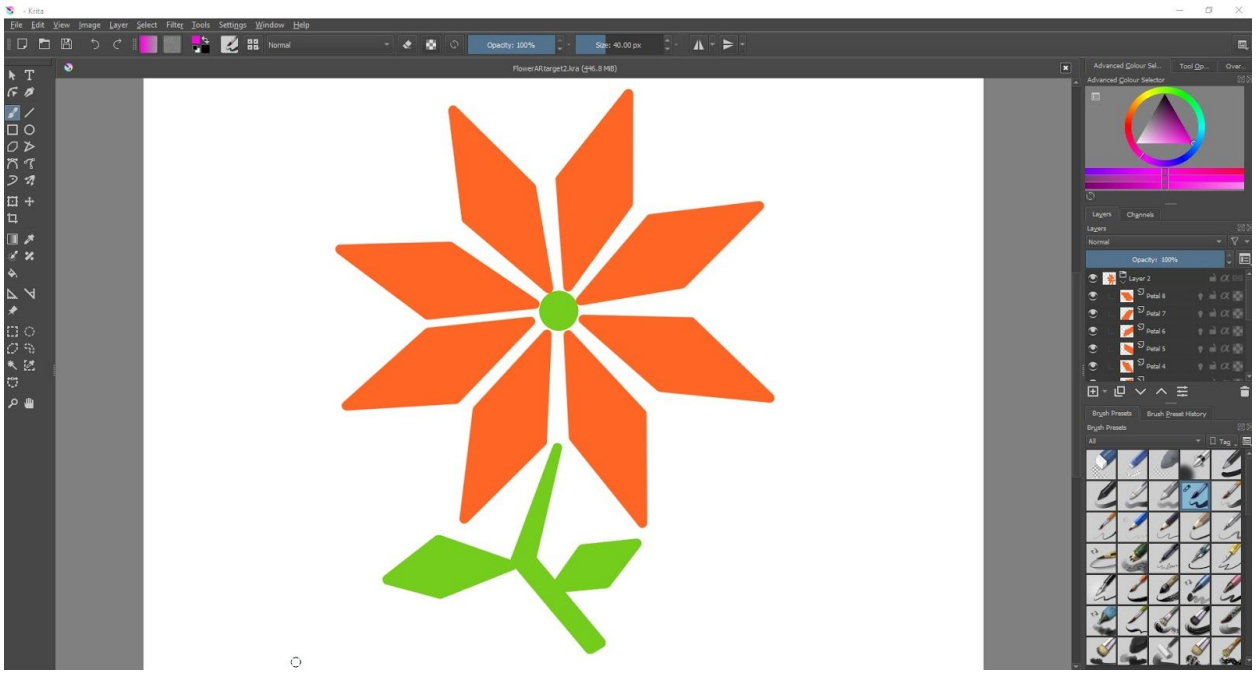
As we don't have much time, we're going to create a simple flower using Krita's shape tools and brushes. One thing we need to keep in mind for augmented reality is that the design needs to be high contrast, and sometimes anything too minimalistic, too symmetrical or with not enough detail won't work in the processing. Think about a QR code, it has lots of detail so the camera scanners can pick it up easily.

Notes;

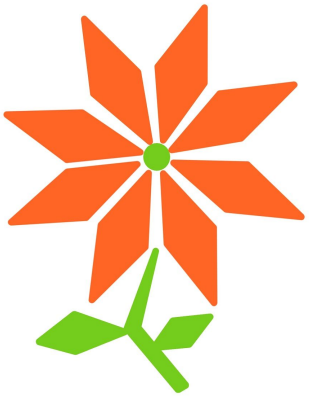
The main frustration with Krita tools if you are coming from Adobe products is the arrow tool is not a move tool, it only works with vector layers, so you need to remember to choose the crosshair tool for moving shapes.

Using shapes you can make some simple items like a flower, you can create the first petal then right click on the layer to duplicate it. We want to create a new layer for any new shapes as this will come in handy if you want to show some gradual animation like colour changing the petals.

We also want to name our layers so we don’t get lost.



Step 3. Save your target image



We should all now have an image or ‘target marker’ that we can work with to animate. Before we start our animation process though, we need to make sure we save the original version as a jpeg or png, as we will be uploading this as the target our mobiles will scan to show the animation.

Go to the File menu and choose Save As, then find JPEG from the list and name your file and save in a place you will remember.

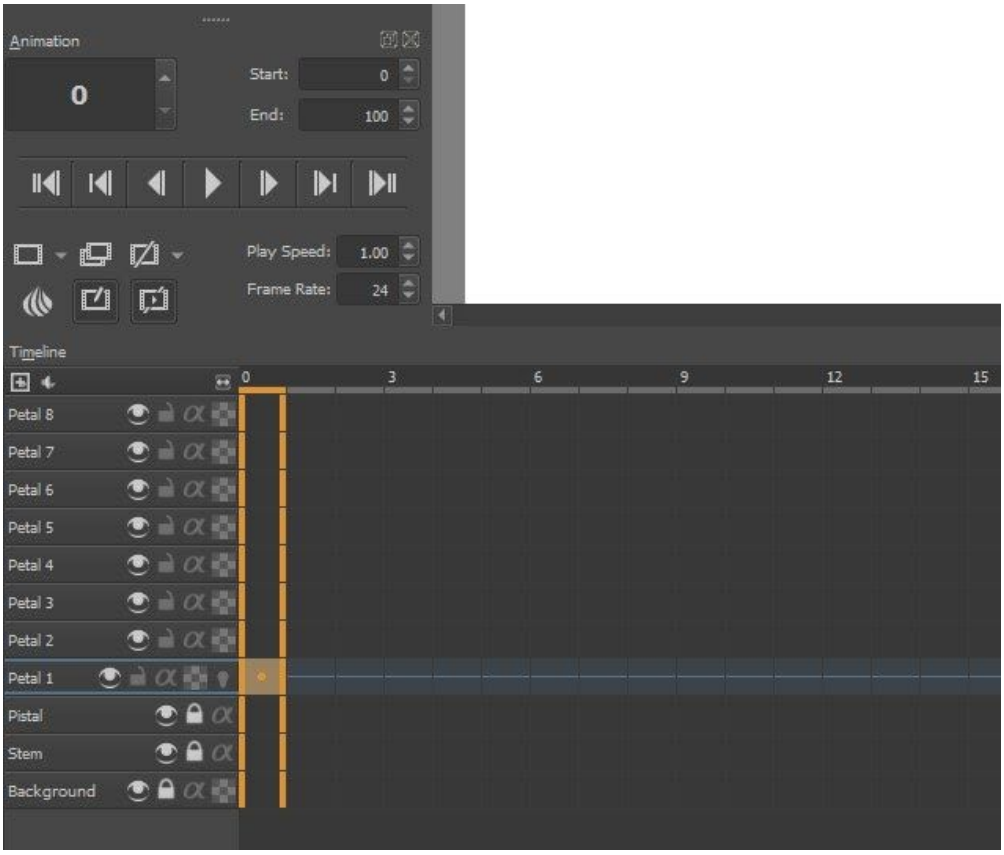
Step 4. Animation set up

We are going to animate our flower or personal design with colour change. It's simple but can be effective and we don't have too much time to get into more detailed animation processes.

There is a great guide to creating a walk cycle in the Krita documentation, so we suggest doing that when you get a chance as it will help you understand the Krita animation process more.

To get to our Animation workflow, we need to head to the Window menu, then Workspace, and choose Animation. This will bring up a Timeline window (bottom of your screen) along with the play menu. It's a good idea to move your layer menu over to the right hand side for better viewing. You can drag menus around to create the best workspace that suits you and your screen size.

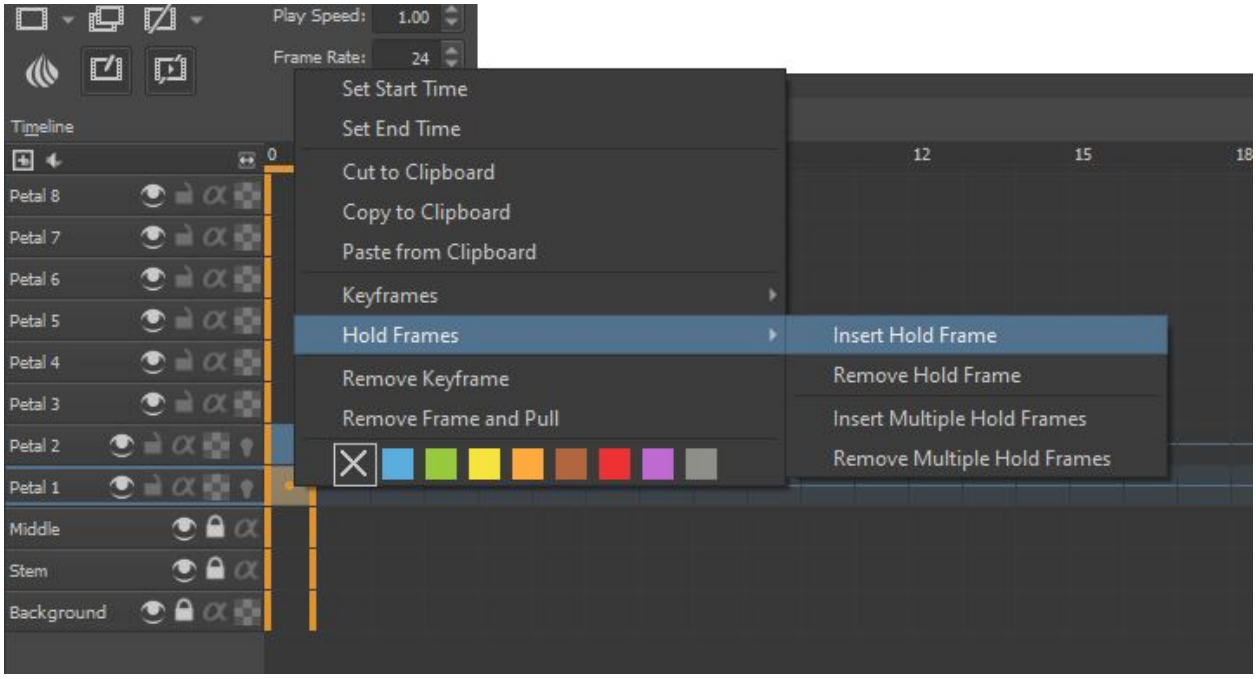
All your layers should show up in the timeline.



Note;
If you created your design as a vector layer, you will need to convert the layer before being able to animate. Converting to a Paint layer works. Right click on a layer to choose a convert option.

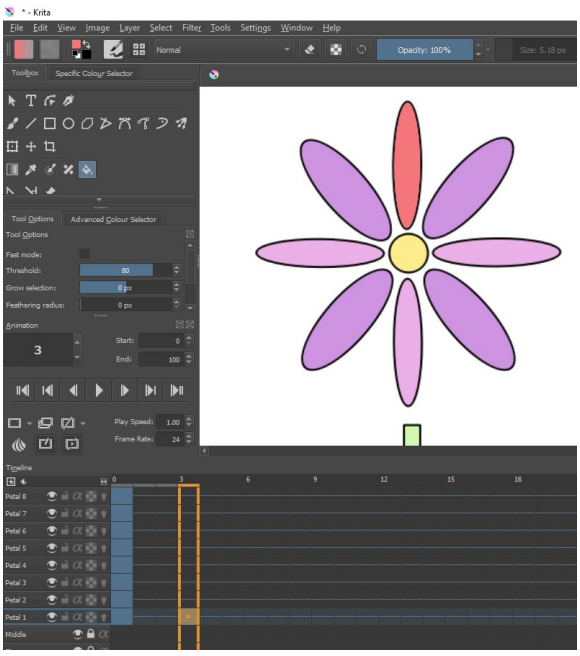
Step 5. Animation sequence

We want to create keyframes for all the petals in their current position and colour. We can do this 2 ways, the first option is by starting on petal 1, right click in the first frame and choose ‘Insert hold frame’. Do this for each petal layer.

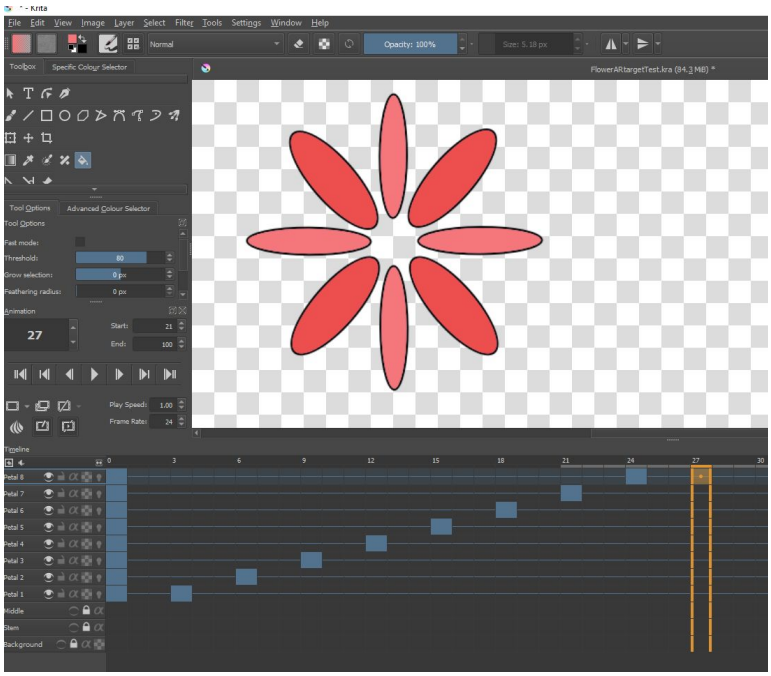


Or, the other way is to create a duplicate frame, really we just want to make our first frame the same as the image we’ve created so whichever way you prefer at this stage is fine. You can create duplicate frames by right clicking when you’re in the frame or using the icon in the above animation menu.

Once we have all our 0 frames populated, now we will go through each layer, starting with Petal 1, and duplicate a layer at around frame 3 to 5, doesn't matter too much at this stage as we can move them later or adjust our timing once we can see the entire animation in action. Once we duplicate this petal, we can change its colour using the colour fill tool.

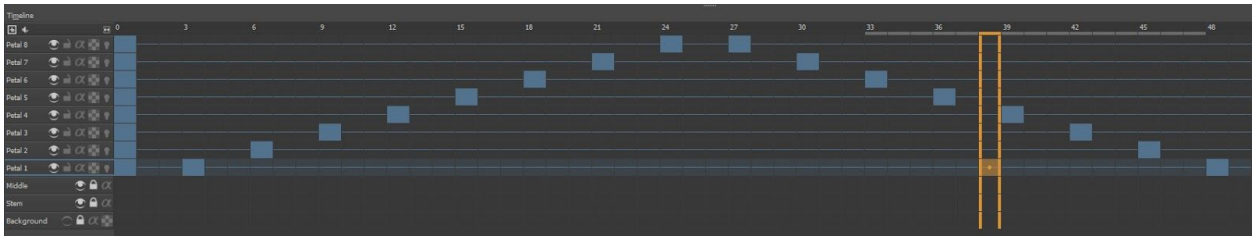


Continue with this until you have recoloured all the petals in a suitable animation sequence. We’ve chosen to leave 2 keyframes between each petal colour change, see image below.

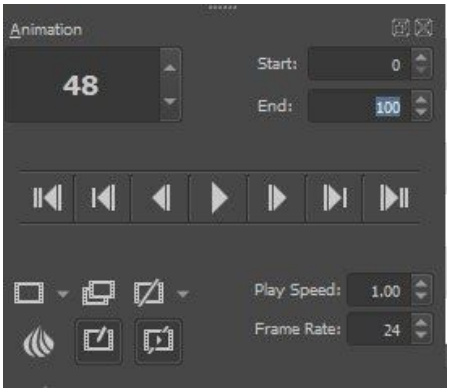


Once we have all our petals in a different colour we want to reverse the colour change. So an easy way to do this is to copy each layer frame 1 and paste it a reverse process.

Your timeline should look similar to the below.



Notes;
You can hit the play button to see how things are looking as you go.



You may notice that your animation plays longer than you have keyframes, you can change the length in the Animation menu, default is 100 frames so make the start frame as 0 and the end frame the last frame you added, in this case 48.

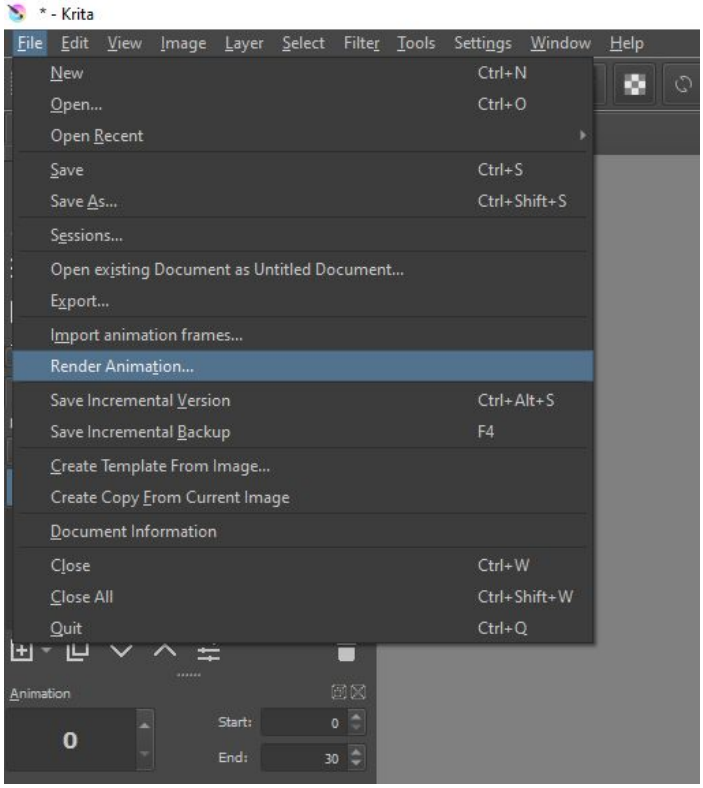
We are really only touching on a very simple animation technique, we haven't moved anything or created new additions to our piece, but showing something simple like how easy it is to make a colour change process will hopefully get you on your way to thinking bigger and bolder!

Step 6. Export your video

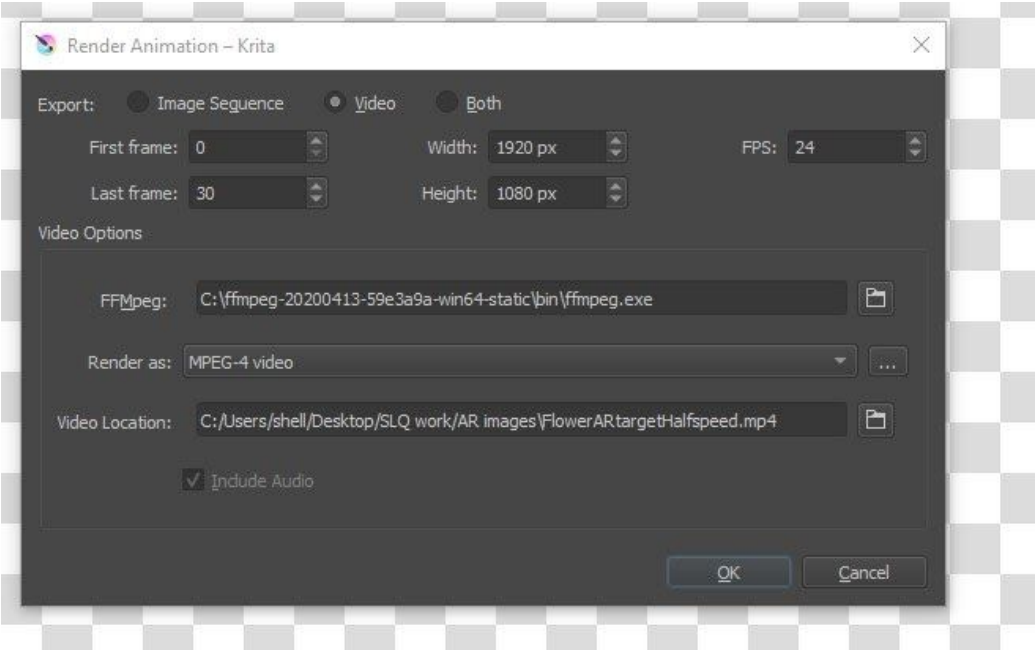
Once we are happy with the animation that will overlay our original image, we want to render it as an mp4 file.

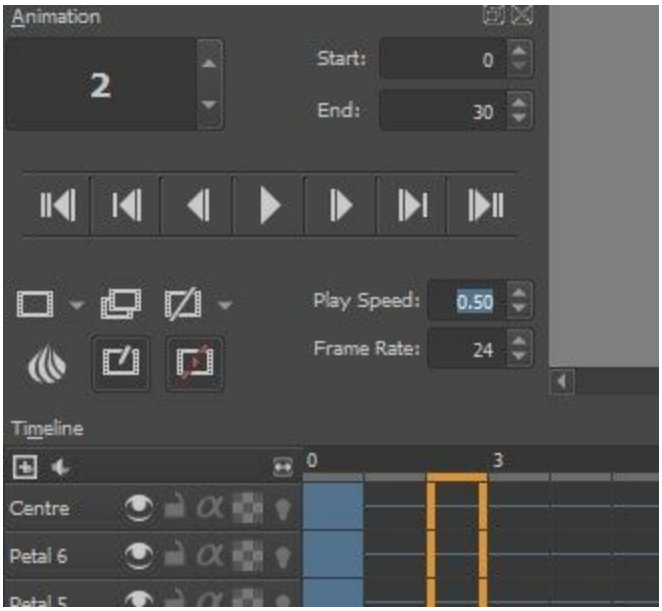
First we need to install an extra plugin for Krita, as we want to export mp4 files, visit https://ffmpeg.zeranoe.com/builds/ download the correct version for your operating system and when you unzip/extract the folder, choose a good place like applications or programs to save it in.

Once we have FFMPEG installed we can return to Krita, head to the file menu and choose 'Render Animation' from the drop down list.



Make sure you choose ‘video’ as your export, in the FFMpeg section select the folder icon and navigate to where you saved the ffmpeg.exe file, once selected make sure you have the Render as selection as MPEG-4 video and then choose where you want to save the file in the Video location section.



You should end up with a video file that has a black background if you followed along with the steps, if it’s a white background that’s ok, we are going to key out the background in the online AR program we will use, just ensure that the background colour is not also a colour in your animation!

If the animation plays too fast or too slow, there is an easy way to change this in Krita without moving keyframes around. Back in the timeline and play window, you will see the Play Speed is set to 1 by default, you can reduce to half speed by entering 0.5 or speed things up by changing to 1.5 or whatever looks best for your work.