Deployment Manual

Deploying ANIMA requires a minimal level of technical knowledge. Currently, we are deploying the python back-end on Docker, and then compiling the MFC front end.

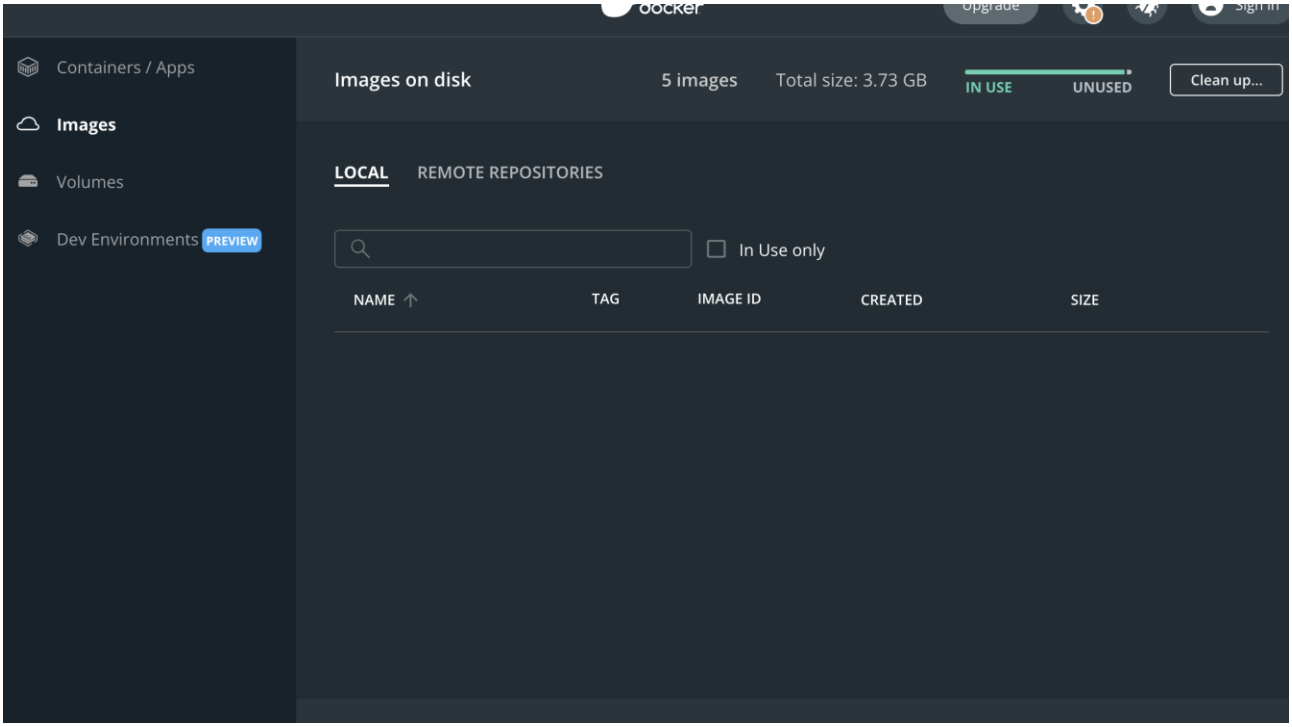
Step 1 - Install Docker

The first thing that we have to do is install Docker onto our computer.

Visit https://docs.docker.com/get-docker/ to install docker, and complete the instructions provided on the website.

Step 2 – Run Docker

Open the Docker application after it is installed and wait until it has finished launching. It will show something like this page once it's ready:



Step 3 – Make Docker image using python

Now, we want to package the python source code into a Docker image. To do this, open the python project and navigate to the project in the terminal.

Open the “Command Prompt” application.

Run the following command, replacing [path/to/project] with your path to the folder that the python code is location in.

```
cd path/to/project
```

Then, run the following to make a docker image.

```
docker image build –t anima .
```

```
docker save anima > Anima.tar
```

Step 4 – Confirm docker image has been made

Now, go to the python project folder and locate the file named “Anima.tar”. You will need this file after the next few steps so ensure you take a note of its location.

Step 5 – Install Visual Studio 2022

Visit https://visualstudio.microsoft.com/vs/ to download visual studio 2022 to open and compile the MFC application.

Step 6 – Click the file "MFCApplication.sln" inside the project folder

This opens the project in visual studio 2022

Step 7 – Download vcpkg

Open “Command Prompt” and run the following commands:

```
git clone https://github.com/Microsoft/vcpkg.git
```

```
cd vcpkg
```

```
.\bootstrap-vcpkg.bat
```

```
.\vcpkg integrate install
```

Step 8 – Use vcpkg to download tesseract

Run the following command in the same Command Prompt.

```
.\vcpkg install tesseract:x64-windows
```

Step 9 - Change the bitmap path to the path on your computer

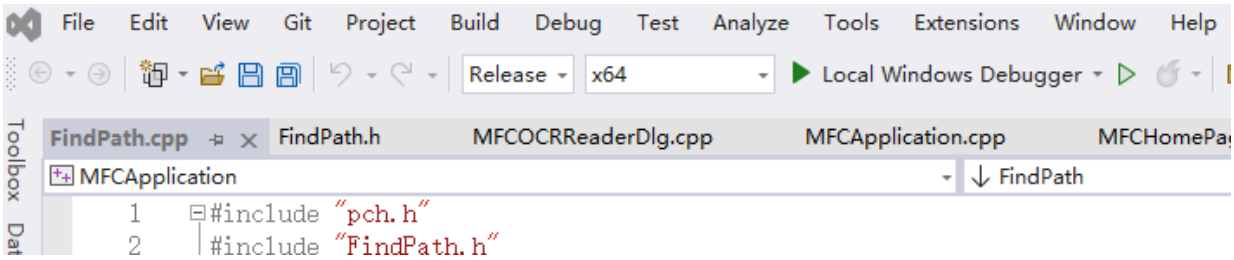
This step is only to adjust the path on the code so that it reflects the path of the bitmap file on your computer.

Go to line 121 of file MFCApplication.rc using visual studio 2022. Replace the "..\MFCApplication\Home.bmp" with whatever the absolute path of the file “Home.bmp” is (provided in the MFC folder) on your computer.

Step 10 – Create the release folder

Navigate to the Visual Studio 2022 with the MFC project open from the last step.

Ensure that the top bar looks like this (has the “Release” and “x64” selected on the dropdown)



Then, click the green play button to compile the program.

Once this is done, go to the following directory to find all the files you have just generated. These are the compiled MFC files.

If any new windows have opened, close them for now.

Step 11 – Copy compiled files to final folder

Navigate to the directory `[MFC folder]/x64/Release`

Copy all the files inside this into a new ANIMA folder on your desktop. This new folder will be the distributable.

Step 12 – Copy other required files to the final folder

Navigate to the directory `[MFC folder]/RequiredFiles`

Copy all the contents of this folder to the ANIMA folder on your desktop that you just created.

Step 13 – Copy the Docker image to the final folder

Navigate to the `[Python folder]` directory.

Copy the `Anima.tar` image that we created in step 4 to the final ANIMA folder on your desktop.

Step 14 – Cleaning up

To ensure no bugs or errors have occurred, go to the docker and delete all images and containers.

You can find the list of images and the list of containers by navigating on the left-hand side of the docker application window.

Ensure you delete ALL images and containers.

Step 15 – FINISHED

You can now run the app using the [ANIMA folder on DESKTOP]/Anima.exe.

In the case that you cannot find that file, just rename any of the .exe file that you can see in that folder to “Anima.exe” and double click to run 😊.

(Remember to always have docker open in the background when you run this app in the future)

Enjoy!