

Homework 1: Familiarize with OpenCV

File Specification

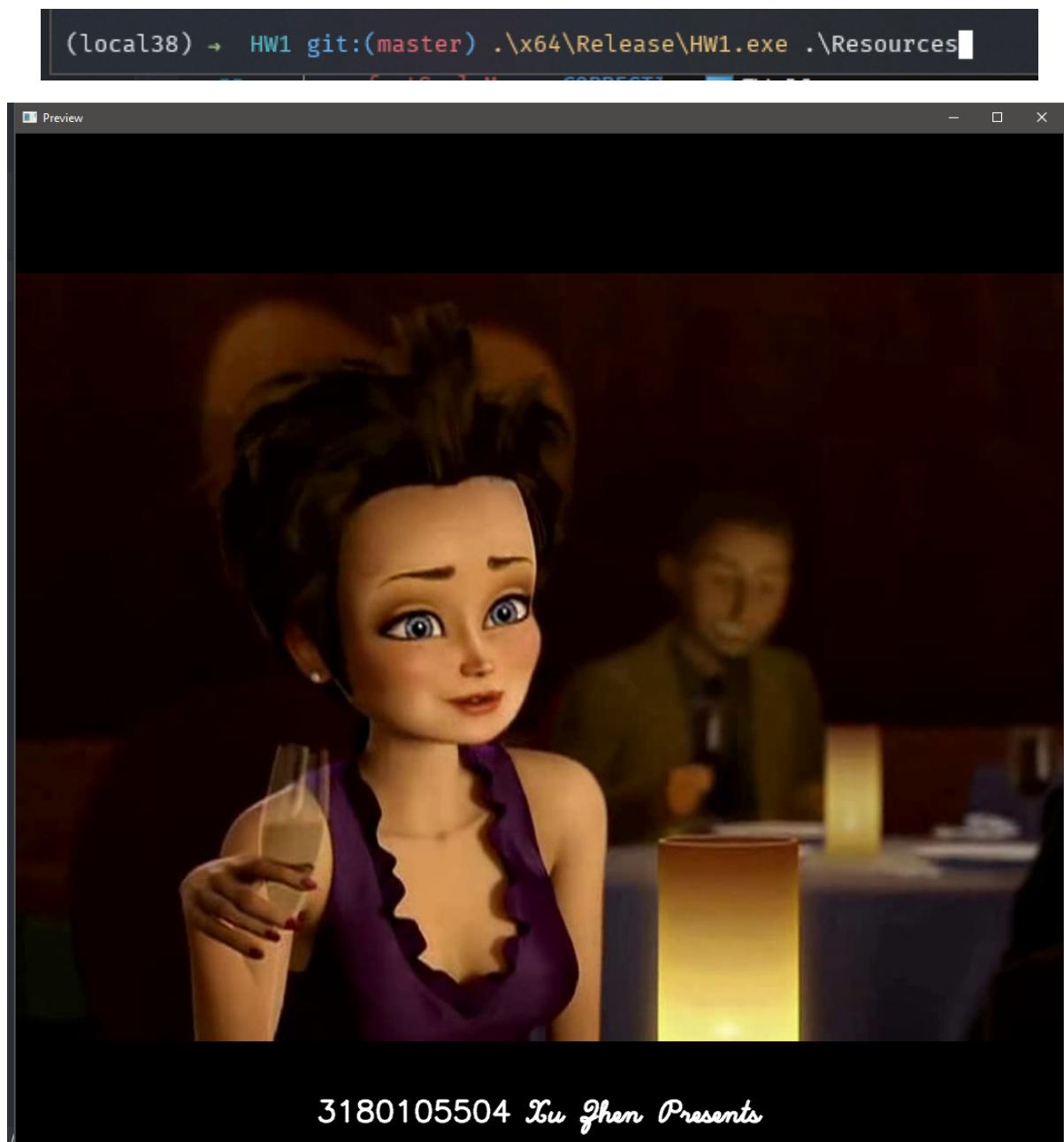
- **Source:** Contains the source code for this homework, along with a Visual Studio 2019 Solution file
 - **main.cpp:** The main function
 - **include.hpp:** Some header stuff
 - **introVideo.cpp:** Implementation of this homework
 - **random.cpp:** Random introduction generator's implementation
 - **OTHER FILES:** NOT IMPORTANT, THOSE FILES ARE OUR LEARNING MATERIAL FOR OPENCV. THEY PAVED THE WAY FOR THIS PROJECT.
- **Resource:** Where the input images and videos exist
- **Readme:** Contains this file, which contains IO specification and IO screenshots
- **Executable:** Visual Studio 2019 Release x64 executable for this homework

IO Specification

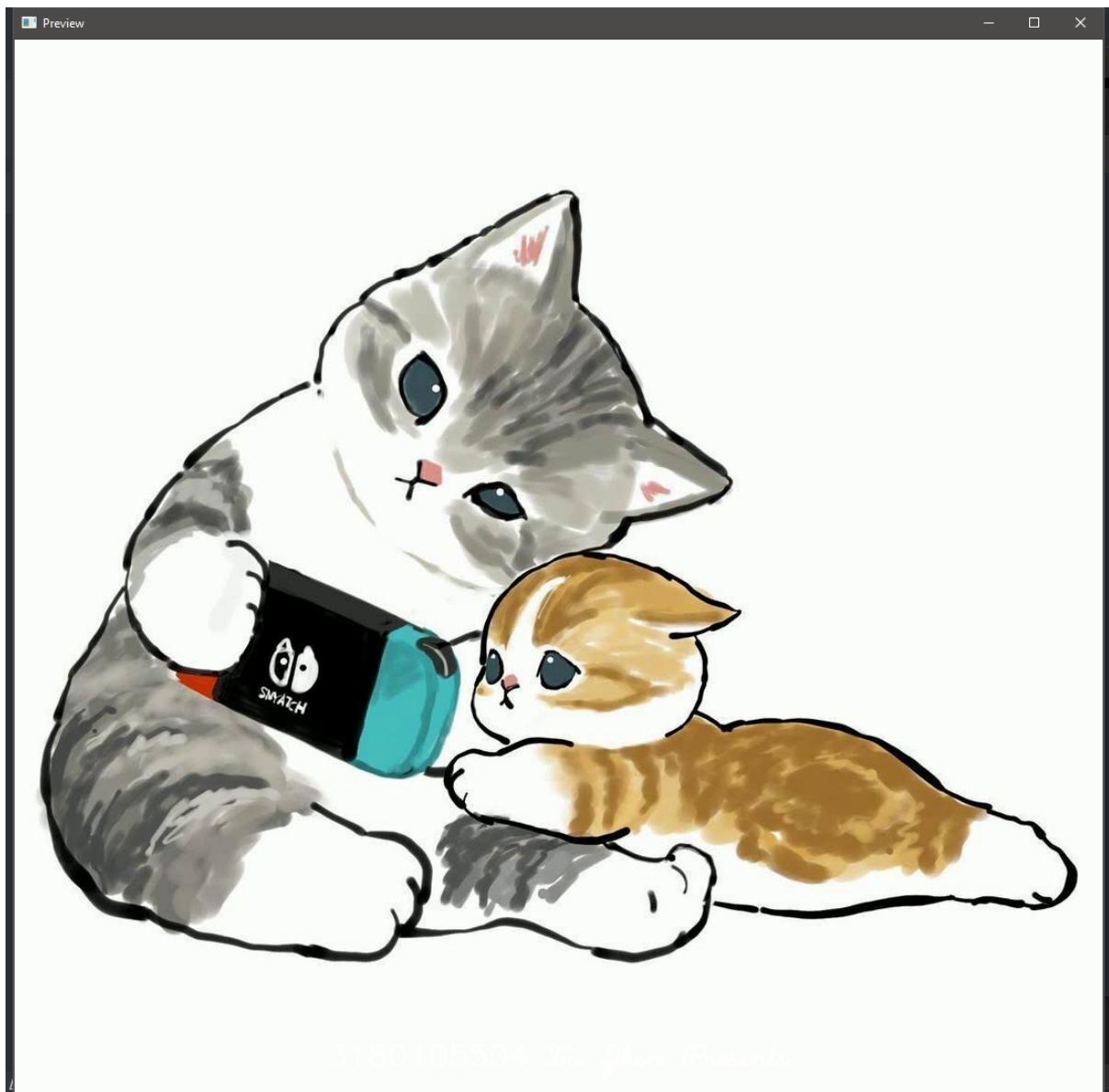
1. You should provide the input directory through **Command-line Arguments**
2. All **.avi**(upper/lower case) in the directory specified above will be treated as video
All other files will be treated as image
3. We will generate two videos named **OUTPUT.AVI** and **OUTPUT_CAPTION.AVI** to the directory specified above
So make sure no file with such names exists there
OUTPUT.AVI: The output video without caption, which is my name and student ID
OUTPUT_CAPTION.AVI: The output video with caption, which is my name and student ID
4. We will arrange the output video in such order:
 1. Random Intro
 2. Images
 3. Videos
All blended with **cross-dissolve**.
All resized (preserving aspect ratio) to the max size of all the input (max width and max height)
A caption including my name and student ID will be added to the bottom of the generated video
5. We've provided some sample videos and images, located at **Resource** folder
6. Example:

```
``` shell
.\Executable\HW1.exe .\Resource
```
```

I0 Screenshots







From 3180105504

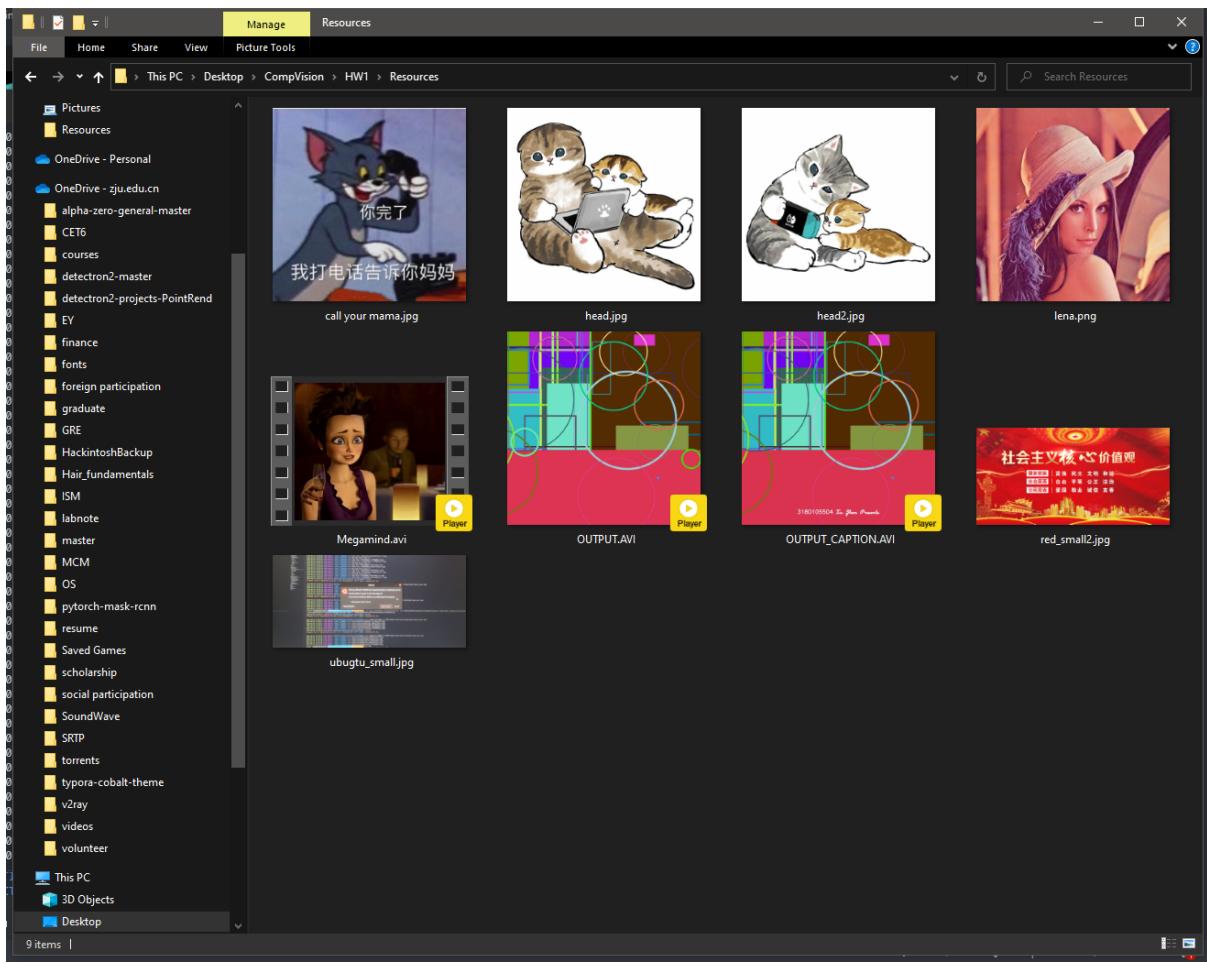
你完了

我打电话告诉你妈妈

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```
F C:\...\CompVision\HW1 x + v
[INFO] resizeImage: Getting ratio: 438/438=1 and 2d0/210=1.36364
[INFO] crossDissolve: Blending with a step of 0.0285714 for 438, 438 and for 438, 438
[INFO] crossDissolve: Blending at index: 0 current weight is 1 and 0
[INFO] crossDissolve: Blending at index: 1 current weight is 0.971429 and 0.0285714
[INFO] crossDissolve: Blending at index: 2 current weight is 0.942857 and 0.0571429
[INFO] crossDissolve: Blending at index: 3 current weight is 0.914286 and 0.0857143
[INFO] crossDissolve: Blending at index: 4 current weight is 0.885714 and 0.114286
[INFO] crossDissolve: Blending at index: 5 current weight is 0.857143 and 0.142857
[INFO] crossDissolve: Blending at index: 6 current weight is 0.828571 and 0.171429
[INFO] crossDissolve: Blending at index: 7 current weight is 0.8 and 0.2
[INFO] crossDissolve: Blending at index: 8 current weight is 0.771429 and 0.228571
[INFO] crossDissolve: Blending at index: 9 current weight is 0.742857 and 0.257143
[INFO] crossDissolve: Blending at index: a current weight is 0.714286 and 0.285714
[INFO] crossDissolve: Blending at index: b current weight is 0.685714 and 0.314286
[INFO] crossDissolve: Blending at index: c current weight is 0.657143 and 0.342857
[INFO] crossDissolve: Blending at index: d current weight is 0.628571 and 0.371429
[INFO] crossDissolve: Blending at index: e current weight is 0.6 and 0.4
[INFO] crossDissolve: Blending at index: f current weight is 0.571429 and 0.428571
[INFO] crossDissolve: Blending at index: 10 current weight is 0.542857 and 0.457143
[INFO] crossDissolve: Blending at index: 11 current weight is 0.514286 and 0.485714
[INFO] crossDissolve: Blending at index: 12 current weight is 0.485714 and 0.514286
[INFO] crossDissolve: Blending at index: 13 current weight is 0.457143 and 0.542857
[INFO] crossDissolve: Blending at index: 14 current weight is 0.428571 and 0.571429
[INFO] crossDissolve: Blending at index: 15 current weight is 0.4 and 0.6
[INFO] crossDissolve: Blending at index: 16 current weight is 0.371429 and 0.628571
[INFO] crossDissolve: Blending at index: 17 current weight is 0.342857 and 0.657143
[INFO] crossDissolve: Blending at index: 18 current weight is 0.314286 and 0.685714
[INFO] crossDissolve: Blending at index: 19 current weight is 0.285714 and 0.714286
[INFO] crossDissolve: Blending at index: 1a current weight is 0.257143 and 0.742857
[INFO] crossDissolve: Blending at index: 1b current weight is 0.228571 and 0.771429
[INFO] crossDissolve: Blending at index: 1c current weight is 0.2 and 0.8
[INFO] crossDissolve: Blending at index: 1d current weight is 0.171429 and 0.828571
[INFO] crossDissolve: Blending at index: 1e current weight is 0.142857 and 0.857143
[INFO] crossDissolve: Blending at index: 1f current weight is 0.114286 and 0.885714
[INFO] crossDissolve: Blending at index: 20 current weight is 0.0857143 and 0.914286
[INFO] crossDissolve: Blending at index: 21 current weight is 0.0571429 and 0.942857
[INFO] crossDissolve: Blending at index: 22 current weight is 0.0285714 and 0.971429
```



PotPlayer ▾ AVI | [2/2] OUTPUT_CAPTION.AVI

```

2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO mask_file: 40004379427_deduced1024_0117.png
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO getting img of idc: 25
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO img_file: 11752075204_477700039_b.jpg
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO mask_file: 11752075204_477700039_b11.png
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO getting img of idc: 26
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO img_file: 11752075204_477700039_b2.jpg
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO mask_file: 11752075204_477700039_b111.png
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO getting img of idc: 27
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO img_file: 11752075204_477700039_b3.jpg
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO mask_file: 11752075204_477700039_b1111.png
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO getting img of idc: 28
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO img_file: 11752075204_477700039_b4.jpg
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO mask_file: 11752075204_477700039_b11111.png
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO detecting data.datasets.coco[1360117] in 'l1/train/train_hair_train.json'
Category ids in annotations are not in [1, #categories]! We'll apply a mapping for you.

2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO Sorry, Ubuntu 20.04 has experienced an internal error.
Send problem report to the developer?
If you notice further problems, try restarting the computer.
Remember this in future
Show Details Don't send Send
l1/train/train_hair_train.json
l1/val/train_hair_val.json
cd /home/xddd/OneDrive/Ubuntu/datasets ; env /home/xddd/miniconda/envs/py38/bin/python /home/xddd/.vscode/extensions/ms-101144/pythonFiles/lib/python/debugger/UbuntuUser 39949 -- /home/xddd/OneDrive/Ubuntu/datasets/hair2coco.py
2020-08-10 19:51:19 xddd-ubuntu detecting data.datasets.coco[1360117] in 'l1/train/train_hair_train.json'
Category ids in annotations are not in [1, #categories]! We'll apply a mapping for you.

2020-08-10 19:51:19 xddd-ubuntu detect2000 data.datasets.coco[1360117] INFO Loaded 16 Images In COCO Format From train/train_hair_train.json
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO trial/train/11752075204_477700039_b.jpg
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO trial/train/11752075204_477700039_b11.jpg
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO trial/train/11752075204_477700039_b2.jpg
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO trial/train/11752075204_477700039_b3.jpg
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO trial/train/11752075204_477700039_b111.jpg
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO trial/train/11752075204_477700039_b1111.jpg
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO trial/train/11752075204_477700039_b4.jpg
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO trial/train/11752075204_477700039_b11111.jpg
2020-08-10 19:51:19 xddd-ubuntu __main__[1360561] INFO detecting2000 data.datasets.coco[1360117] in 'l1/val/train_hair_val.json'
Category ids in annotations are not in [1, #categories]! We'll apply a mapping for you.

2020-08-10 19:51:20 xddd-ubuntu detect2000 data.datasets.coco[1360117] INFO Loaded 14 Images In COCO Format From val/train_hair_val.json
2020-08-10 19:51:20 xddd-ubuntu __main__[1360561] INFO trial/val/11752075204_477700039_b.jpg
2020-08-10 19:51:20 xddd-ubuntu __main__[1360561] INFO trial/val/11752075204_477700039_b11.jpg
2020-08-10 19:51:20 xddd-ubuntu __main__[1360561] INFO trial/val/11752075204_477700039_b2.jpg
2020-08-10 19:51:20 xddd-ubuntu __main__[1360561] INFO trial/val/11752075204_477700039_b3.jpg
2020-08-10 19:51:20 xddd-ubuntu __main__[1360561] INFO trial/val/11752075204_477700039_b111.jpg
2020-08-10 19:51:20 xddd-ubuntu __main__[1360561] INFO trial/val/11752075204_477700039_b1111.jpg
2020-08-10 19:51:20 xddd-ubuntu __main__[1360561] INFO trial/val/11752075204_477700039_b4.jpg
2020-08-10 19:51:20 xddd-ubuntu __main__[1360561] INFO trial/val/11752075204_477700039_b11111.jpg
2020-08-10 19:51:20 xddd-ubuntu __main__[1360561] INFO detecting2000 data.datasets.coco[1360117] in 'l1/val/train_hair_val.json'
Category ids in annotations are not in [1, #categories]! We'll apply a mapping for you.

2020-08-10 19:51:20 xddd-ubuntu __main__[1360561] INFO 00:00:44 / 00:00:58 XVID

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