PROFESSIONAL

VIDEO ALBUM

INSTRUCTIONS:

Goal of the Project:

In Class 105, you created a video using multiple images with the help of OpenCV in Python. In today's project, you will create a video album with 10-20 images.

Story:

Friendship day is coming up soon, and you want to make a special video with pictures you have with all your friends. Use your Python skills to write a program that will create a video with the images provided.

***This is just for your reference. We expect you to apply your own creativity to the project.**

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VIDEO ALBUM

WhiteHat Jr
Live Online Coding for Kids

Getting Started:

1. Create a folder as **Project105**
2. Open the folder **Project105** in **VSC**.
3. Choose 10-20 images of your friends and move them to the Images folder inside **Project105**
4. Or you can download sample images from here

Specific Tasks to complete the Project:

1. Import **os & cv2** in **CreateVideo.py** file.
2. Set a **path** for the Images folder.

```
path = "Images/"
```

3. Created a list variable named **Images = [ ]**
4. Using **for loop** to check each file in the folder using **os.listdir(path)**
5. For each file name, use **os.splitext(file)** to separate the name and extension from a file name.
6. Create an **if** condition to check if the extension of the file matches with the image extension.
    - Create a variable **file_name** by concatenating the **path "/"** and **file** name(Includes both name and extension).

```
if ext in ['.gif', '.png', '.jpg', '.jpeg','.jfif']:
    file_name = path+"/"+file
```

7. Use **print(file_name)** to make sure filenames are formed correctly.
8. Add each file in the **images** list using **.append()**
9. Create a variable **count** to store **len(images)**
10. Create a variable named frame to read the first image from the images list. **frame = cv2.imread(images[0])**
11. Use **frame.shape** to capture **width, height & Channels**
12. Create a tuple variable size using width, height.

```
size = (width,height)
```

13. Use **print(size)** to check the result.
14. Create a variable **out**.
    - Assign with **cv2,VideoWriter()**
    - **video name = Project.avi**
    - **fourcc = cv2.VideoWriter_fourcc(*'DIVX')**
    - **fps = 0.8**
    - **Size = size**

```
out = cv2.VideoWriter('project.avi',cv2.VideoWriter_fourcc(*'DIVX'), 0.8, size)
```

15. Create a **for loop** to add images to a videowriter.
    - **for i in range(0, count-1)**
    - Use **cv2.imread()** to reach each image
    - Add the image in Video using **out.write()**

16. Print a message to know the video is complete as **print("Done")**

Submitting the Project:

1. **SAVE** all the changes made to the project.
2. Click on "**Run**" once to check if it is working.
3. Open the GitHub create a repository named **Project105**
4. Upload files **Create_Video.py & Project.avi video** and click **Commit Changes**
5. Copy this link and submit it in the Student Dashboard Projects panel against the correct class number.

REMEMBER... Try your best, that's more important than being correct.

After submitting your project, your teacher will send you feedback on your work.

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