Project Report

On

Play a video in reverse mode

Report Submitted To

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Pune For

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In

Department of Information Technology

By

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INDEX

1. Introduction:

In this mini project, we are going to play a mp4 video in reverse order with the help of python library open-cv. OpenCV is a great tool for image processing and performing computer vision tasks. It is an open-source library that can be used to perform tasks like face detection, objection tracking, landmark detection, and much more. My project logic is very simple i.e., first of all I need to break the entire video in Frames and add those in a list. After that we need to pop the Frames from end of the list and display them one by one.

2. Data Used:

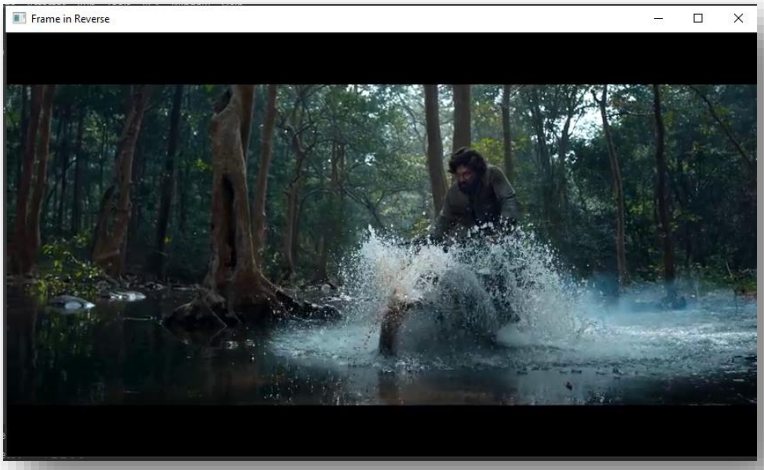
OpenCv library can be used to perform multiple operations on videos. Take a video as input and play it in a reverse mode by breaking the video into frame by frame and simultaneously store that frame in the list. After getting list of frames we perform iteration over the frames. For playing video in reverse mode, we need only to iterate reverse in the list of frames. Use reverse method of the list for reversing the order of frames in the list.

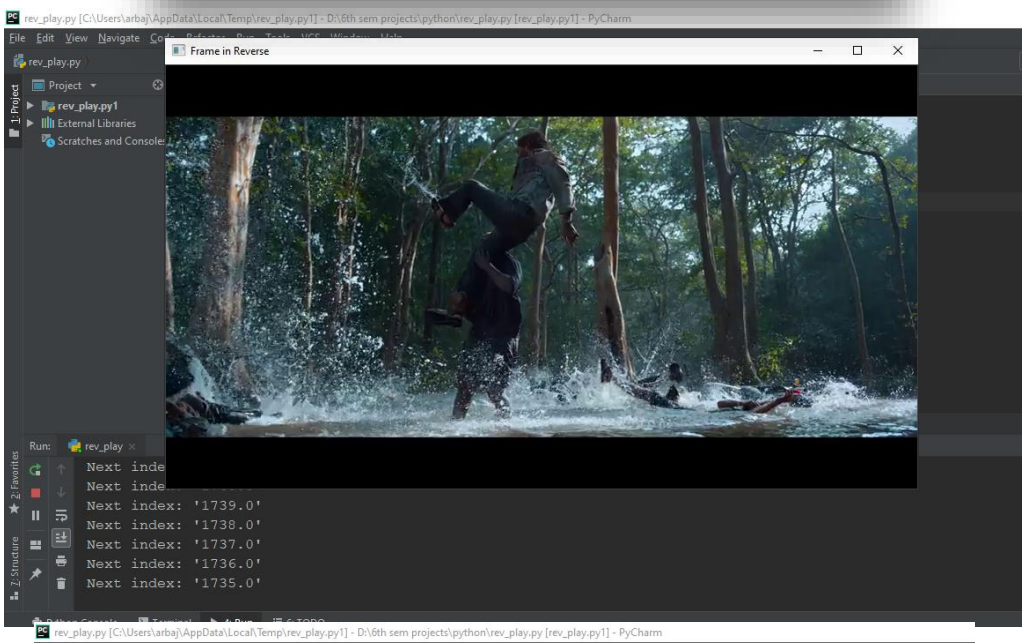
3. Implementation:

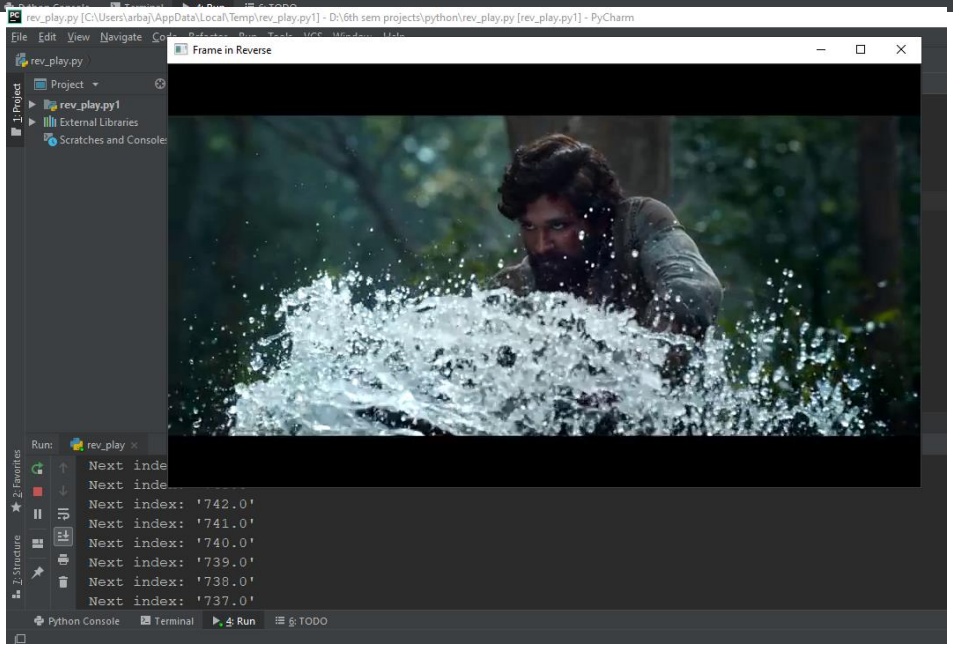
```
import cv2

# Create a VideoCapture object to read the video file
capture = cv2.VideoCapture('E:/Afreen.mp4')

# check for camera openning
if capture.isOpened() is False:
    print("Error opening video")

# Get the total number of frames
frame_idx = capture.get(cv2.CAP_PROP_FRAME_COUNT) - 1
print("Starting Frame: '{}'".format(frame_idx))

# Read until video is finished:
while capture.isOpened() and frame_idx >= 0:
```

```
        # Set the current frame position to start:
        capture.set(cv2.CAP_PROP_POS_FRAMES, frame_idx)

        # Capture frame-by-frame from the video:
        ret, frame = capture.read()

        if ret is True:
            # Display the frame:
            cv2.imshow('Frame in Reverse', frame)

            # Reduce the index to read next frame:
            frame_idx = frame_idx - 1
            print("Next index: '{}'".format(frame_idx))

            # Press q on keyboard to exit the program:
            if cv2.waitKey(1) & 0xFF == ord('q'):
                break
        # Break the while loop
        else:
            break

# Release the VideoCapture object:
capture.release()
cv2.destroyAllWindows
```

4. Output:


Frame in Reverse


rev_play.py [C:\Users\arbaj\AppData\Local\Temp\rev_play.py1] - D:\6th sem projects\python\rev_play.py [rev_play.py1] - PyCharm
Frame in Reverse
Next index: '1739.0'
Next index: '1738.0'
Next index: '1737.0'
Next index: '1736.0'
Next index: '1735.0'


rev_play.py [C:\Users\arbaj\AppData\Local\Temp\rev_play.py1] - D:\6th sem projects\python\rev_play.py [rev_play.py1] - PyCharm
Frame in Reverse
Next index: '742.0'
Next index: '741.0'
Next index: '740.0'
Next index: '739.0'
Next index: '738.0'
Next index: '737.0'

5. Conclusion:

In this project, concepts of playing reverse video using OpenCV library. OpenCV is a cross-platform library using which we can develop real-time computer vision applications. It mainly focuses on image processing, video capture and analysis including features like face detection and object detection. In this tutorial, we explain how you can use OpenCV in your applications.

In this project, we are going to play a mp4 video in reverse order with the help of python library open-cv.

6. Future Scope:

- It will use for highlighting a part of movie.
- In wedding shoots.
- In CCTV Camera
- In New Promo Shots

7. References:

- https://www.geeksforgeeks.org/
- *https://www.W3schools.org/*