

HW2 : Charan Karthikeyan Parthasarathy Vasanthi

The raspberry pi was made headless using putty and VNC Connect. The video shows the computer screen with the VNC server and putty and the live relay of the recorded frames. The video is a bit shaky because of the lag in the frames and bit due to my hands. The code written for capturing the video frame is given below.

Code:

```
from picamera.array import PiRGBArray
from picamera import PiCamera
import time
import cv2

camera = PiCamera()
camera.resolution = (640,480)
camera.framerate = 60
rawCapture = PiRGBArray(camera,size=(640,480))
fourcc = cv2.VideoWriter_fourcc(*'XVID')
out = cv2.VideoWriter("video_out.avi",fourcc,10,(640,480))
start_time = time.time()
time_thresh = 175
for frame in camera.capture_continuous(rawCapture,format="bgr",use_video_port=False):
    image = frame.array
    cv2.imshow("frame",image)
    key = cv2.waitKey(1) & 0xFF
    rawCapture.truncate(0)
    if key== ord("q"):
        break
    time_out = time.time()-start_time
    if time_out >= time_thresh:
        break
    print("The time out is",time_out)
    out.write(image)
```

The file transfer from the raspberry to the computer was done using FTP protocol. The FTP client software used is the FileZilla Client.

The you tube link for the video for homework 2 is in the link below:

<https://youtu.be/nUo32UgaEdk>