

CV ASSIGNMENT

1)

```
#!/usr/bin/env python3
```

```
import cv2
```

```
import depthai as dai
```

```
import time
```

```
from depthai_sdk.fps import FPSHandler
```

```
# Creating pipeline
```

```
pipeline = dai.Pipeline()
```

```
# Define source and output
```

```
camRgb = pipeline.create(dai.node.ColorCamera)
```

```
xoutVideo = pipeline.create(dai.node.XLinkOut)
```

```
xoutVideo.setStreamName("video")
```

```
camRgb.setBoardSocket(dai.CameraBoardSocket.RGB)
```

```
camRgb.setResolution(dai.ColorCameraProperties.SensorResolution.THE_1080_P  
)
```

```
camRgb.setVideoSize(1280,720)
```

```
xoutVideo.input.setBlocking(False)
```

```
xoutVideo.input.setQueueSize(1)
```

```
# Linking
```

```
camRgb.video.link(xoutVideo.input)
```

```
# Connecting to device and start pipeline
```

```
start_time = time.time()
```

```
x = 1
```

```
counter = 0
```

```
count=0
```

```
with dai.Device(pipeline) as device:
```

```
    video = device.getOutputQueue(name="video", maxSize=1, blocking=False)
```

```
    while True:
```

```
        videoIn = video.get()
```

```
        Frame=videoIn.getCvFrame()
```

```
        counter+=1
```

```
        font = cv2.FONT_HERSHEY_SIMPLEX
```

```
        if (time.time() - start_time) >= 1 :
```

```
            fps=counter
```

```
            counter = 0
```

```
            start_time = time.time()
```

```
            cv2.putText(Frame, str(fps)+' '+str(camRgb.getVideoSize()), (7, 70), font, 1,  
(100, 255, 0), 1, cv2.LINE_AA)
```

```
            cv2.imshow("video", Frame)
```

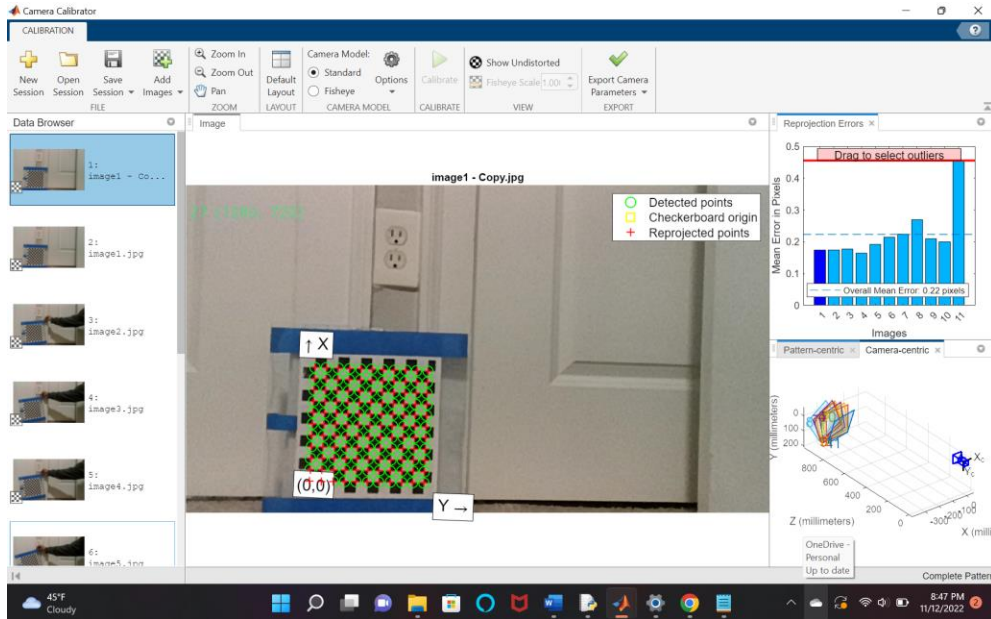
```
            if cv2.waitKey(1)==ord('p'):
```

```
count+=1
```

```
cv2.imwrite('image'+str(count)+'.jpg',Frame)
```

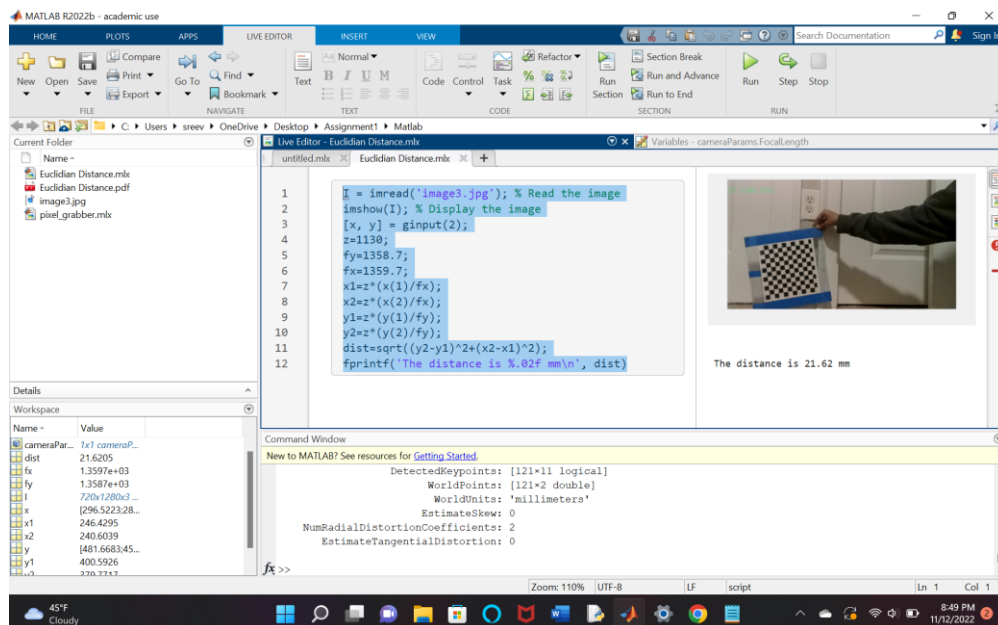
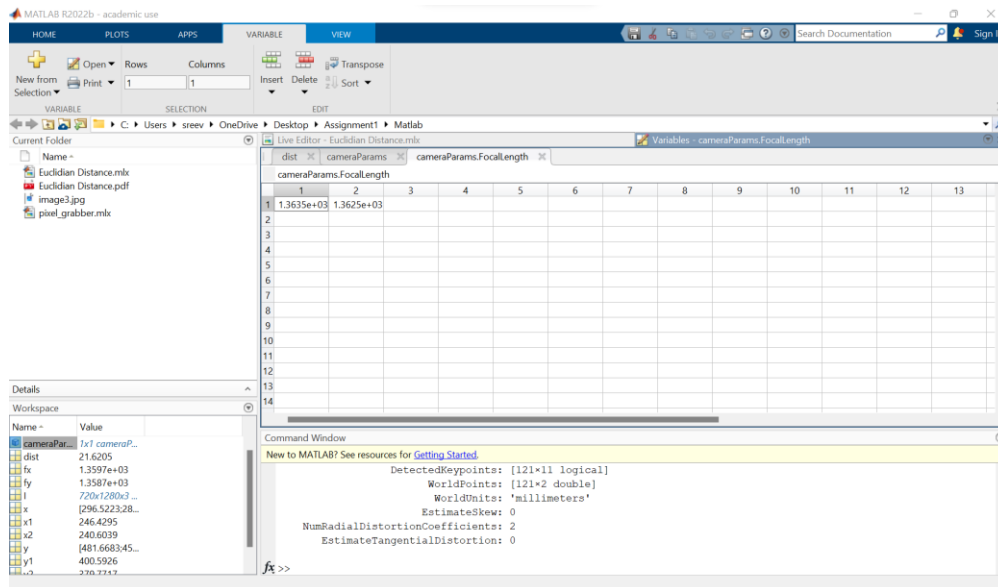
```
if cv2.waitKey(1) == ord('q'):
```

```
break
```



2)

f_x , f_y and z values are



3)

