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# Code and Files

[3D Motion Capture \(https://www.computervision.zone/courses/3d-motion-capture/\)](#) > [Code and Files \(https://w...](#)**IN PROGRESS****Click here to download Video File****(<https://usercontent.one/wp/www.computervision.zone/wp-content/uploads/2022/02/Video.mp4?media=1632743877>)****Click here to download Animation Text File****(<https://usercontent.one/wp/www.computervision.zone/wp-content/uploads/2022/02/AnimationFile.txt?media=1632743877>)**

## Python Code

```
1 import cv2
2 from cvzone.PoseModule import PoseDetector
3
4 cap = cv2.VideoCapture('Video.mp4')
5
6 detector = PoseDetector()
7 posList = []
8 while True:
9     success, img = cap.read()
10    img = detector.findPose(img)
11    lmList, bboxInfo = detector.findPosition(img)
12
13    if bboxInfo:
14        lmString = ''
15        for lm in lmList:
16            lmString += f'{lm[1]},{img.shape[0] - lm[2]},{lm[3]},'
17        posList.append(lmString)
18
19    print(len(posList))
20
21    cv2.imshow("Image", img)
22    key = cv2.waitKey(1)
23    if key == ord('s'):
24        with open("AnimationFile.txt", 'w') as f:
25            f.writelines(["%s\n" % item for item in posList])
```

## Animation Code

```
1 using System.Collections;
2 using System.Collections.Generic;
3 using System.Linq;
4 using UnityEngine;
5 using System.Threading;
6
7 public class AnimationCode : MonoBehaviour
8 {
9
10     public GameObject[] Body;
11     List<string> lines;
12     int counter = 0;
13     // Start is called before the first frame update
14     void Start()
15     {
16         lines = System.IO.File.ReadLines("Assets/AnimationFile.txt").ToList();
17     }
18
19     // Update is called once per frame
20     void Update()
21     {
22         string[] points = lines[counter].Split(',');
23
24         for (int i = 0; i <= 32; i++)
25         {
26             float x = float.Parse(points[0 + (i * 3)]) / 100;
27             float y = float.Parse(points[1 + (i * 3)]) / 100;
28             float z = float.Parse(points[2 + (i * 3)]) / 300;
29             Body[i].transform.localPosition = new Vector3(x, y, z);
30         }
31
32         counter += 1;
33         if (counter == lines.Count) { counter = 0; }
34         Thread.Sleep(30);
35     }
36 }
37 }
```

## Line Code

```
1 using System.Collections;
2 using System.Collections.Generic;
3 using UnityEngine;
4
5 public class LineCode : MonoBehaviour
6 {
7
8     LineRenderer lineRenderer;
9
10    public Transform origin;
11    public Transform destination;
12
13    // Start is called before the first frame update
14    void Start()
15    {
16        lineRenderer = GetComponent<LineRenderer>();
17        lineRenderer.startWidth = 0.1f;
18        lineRenderer.endWidth = 0.1f;
19    }
20
21    // Update is called once per frame
22    void Update()
23    {
24        lineRenderer.SetPosition(0, origin.position);
25        lineRenderer.SetPosition(1, destination.position);
26    }
27 }
```

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