Project Development Phase
Sprint 4

Date	19 November 2022
Team ID	PNT2022TMID14822
Project Name	Real-Time Communication System Powered by AI for Specially Abled
Maximum Marks	2 Marks

```
import cv2                  #importing open.cv Library to open camera and take the video
import numpy as np          # to convert image to array and expand dimensions
from tensorflow.keras.models import load_model          # to Load the saved model from
tensorflow.keras.preprocessing import image             # to preproccess the imagemodel
load_model("dataset.h5")                                # we are loading the saved model
video = cv2.VideoCapture(0)                 # two parameters 1, bool 0 or 1
index=['A','B','C','D','E','F','G','H','I']        #frameindex= ["A","B","C","D","E","F","G","H","I"]
from playsound import playsound
while(1):
    success,frame = video.read()
    cv2.imwrite("image.jpg",frame)
    img = image.load_img("image.jpg"  ,target_size = (64,64))
    x= image.img_to_array(img)
    x = np.expand_dims (x,axis = 0)
    pred = np.argmax(model.predict(x),axis=1)
    p = index [pred[0]]
    print("predicted letter is: "+ str(p))
    #playSound("letter"+str(str(index [p])+"is detected"))
```

```
        cv2.putText (frame,"predicted letter is "+str(p), (100, 100), cv2. FONT_HERSHEY_SIMPLEX,
            1,(0,0,0), 4)
        cv2.imshow("showcasewindow", frame)
        if cv2.waitkey(1) & 0xFF == ord('a'):
                break
video.release()
cv2.destroyAllwindows()
```