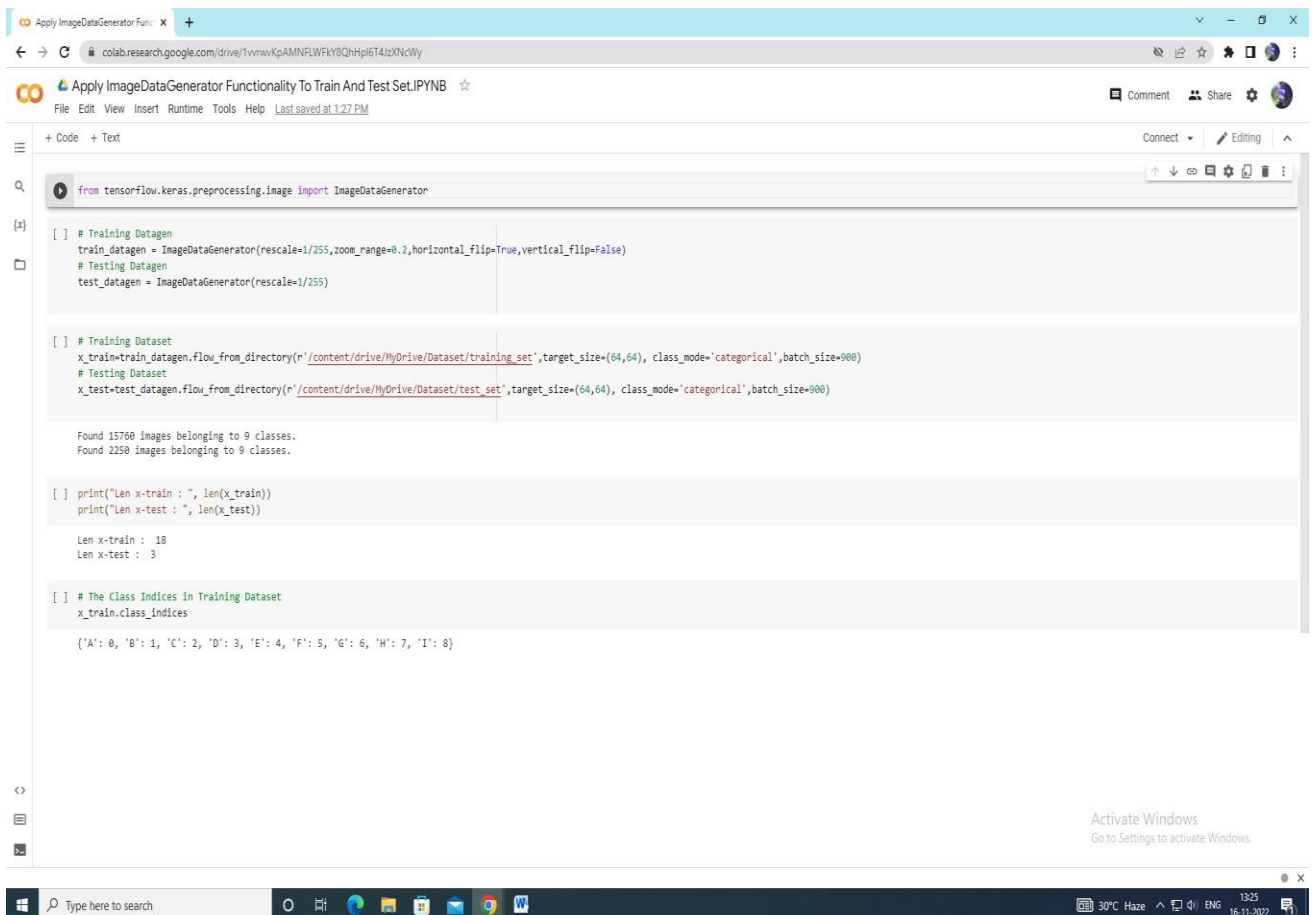


Sprint-1

Project Development Phase

Date	18 November 2022
Team ID	PNT2022TMID29406
Project Name	Real – Time Communication system powered by AI for Specially Abled

STEP 1: In this, we will be collecting data for building our project. We will be creating two folders one for training and the other for testing. Images present in the training folder will be used for building the model and the testing images will be used for validating our model.



```
from tensorflow.keras.preprocessing.image import ImageDataGenerator

[ ] # Training Datasets
train_datagen = ImageDataGenerator(rescale=1/255, zoom_range=0.2, horizontal_flip=True, vertical_flip=False)
# Testing Datasets
test_datagen = ImageDataGenerator(rescale=1/255)

[ ] # Training Dataset
x_train=train_datagen.flow_from_directory(r'/content/drive/MyDrive/Dataset/training_set',target_size=(64,64), class_mode='categorical',batch_size=900)
# Testing Dataset
x_test=test_datagen.flow_from_directory(r'/content/drive/MyDrive/Dataset/test_set',target_size=(64,64), class_mode='categorical',batch_size=900)

Found 15760 images belonging to 9 classes.
Found 2250 images belonging to 9 classes.

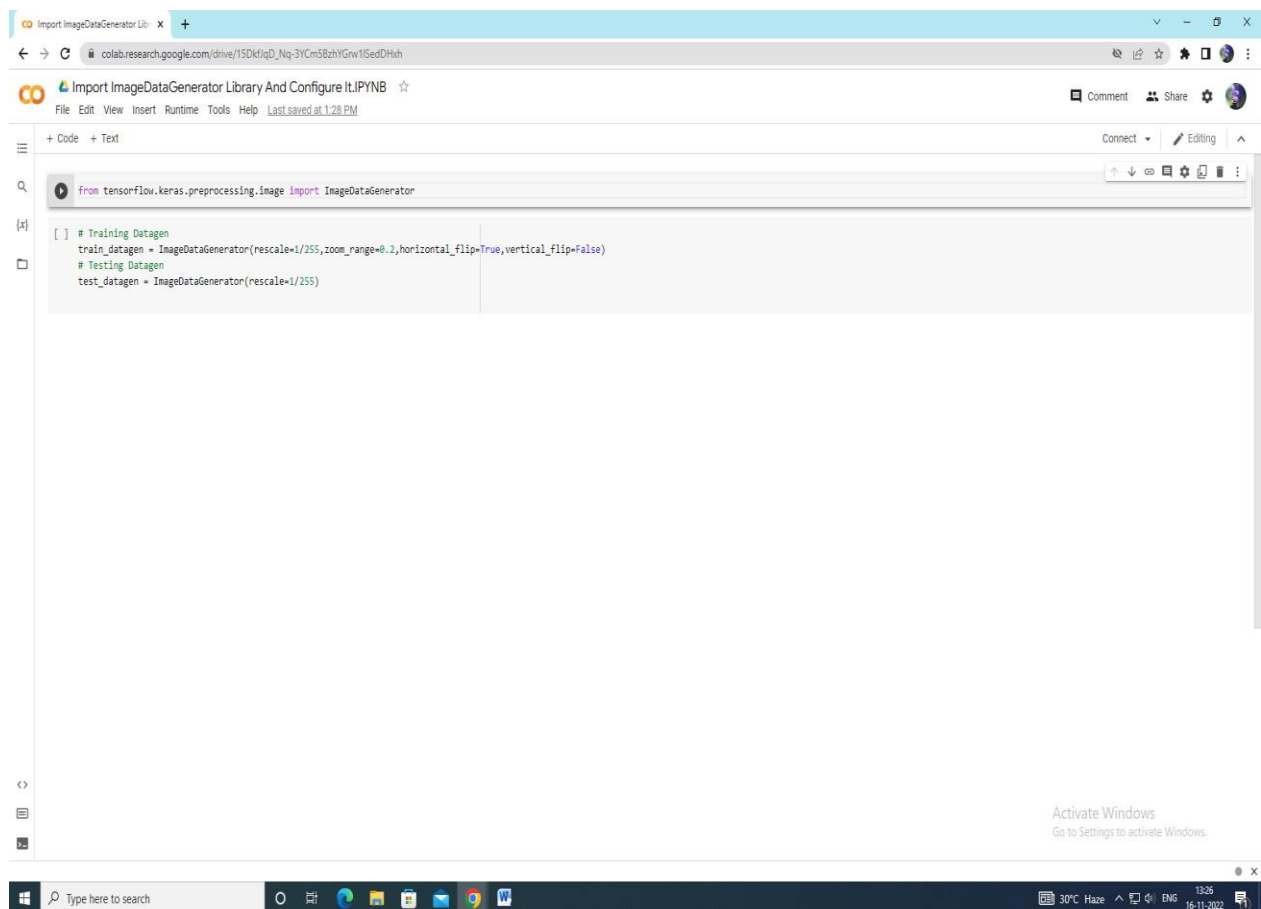
[ ] print("Len x-train : ", len(x_train))
print("Len x-test : ", len(x_test))

Len x-train : 18
Len x-test : 3

[ ] # The Class Indices in Training Dataset
x_train.class_indices

{'A': 0, 'B': 1, 'C': 2, 'D': 3, 'E': 4, 'F': 5, 'G': 6, 'H': 7, 'I': 8}
```

STEP 2: We will pre-process the images which will be used for building the model. Image preprocessing includes zooming, shearing, flipping to increase the robustness of the model after it is built. We will be using the Keras package for pre-processing images.



The screenshot shows a Google Colab notebook titled "Import ImageDataGenerator Library And Configure It.IPYNB". The notebook is open to a code cell containing the following Python code:

```
from tensorflow.keras.preprocessing.image import ImageDataGenerator

[ ] # Training Datagen
train_datagen = ImageDataGenerator(rescale=1/255, zoom_range=0.2, horizontal_flip=True, vertical_flip=False)
# Testing Datagen
test_datagen = ImageDataGenerator(rescale=1/255)
```

The notebook interface includes a menu bar with options like File, Edit, View, Insert, Runtime, Tools, and Help. The status bar at the bottom indicates the system temperature is 30°C, the weather is Hazy, and the date is 16-11-2022.