BUILD PYTHON CODE (PART 1)

Team ID	**PNT2022TMID50703**
Project Name	**A Novel Method for Handwritten Digit Recognition System**

Build python code:

- App starts running when the "_name_" constructor is called in main.
- render_template is used to return HTML file.
- "GET" method is used to take input from the user.
- "POST" method is used to display the output to the user.

Import Libraries:

```
from flask import Flask, render_template, request
from PIL import Image
import numpy as np
from tensorflow.keras.models import load_model
import tensorflow as tf
```

Libraries required for the app to run are to be imported.

Routing to the html page:

```
@app.route('/')
def upload_file():
   return render_template('index.html')
@app.route('/about')
def upload_file1():
   return render_template('index.html')
@app.route('/upload')
def upload_file2():
   return render_template('index.html')
```

There are routing the app to the HTML templates which the want to render.

Firstly rendering the main.html template and from there are navigating to the prediction page that is index6.html

Returning the prediction on UI:

```
@app.route('/predict', methods=['POST'])
def upload_image_file():
   if request.method=='POST':
     img=Image.open(request.files['file'].stream).convert("L")
     img=img.resize((28,28))
     im2arr=np.array(img)
     y_pred=model.predict_classes(im2arr)
     print(y_pred)
```