Project Objectives

By the end of this project you will:

- Know fundamental concepts and techniques of VGG16.
- Gain a broad understanding of image data.
- Know how to pre-process/clean the data using different data preprocessing techniques.
- know how to build a web application using the Flask framework.

Project Flow:

- The user interacts with the UI (User Interface) to choose the image.
- The chosen image is analyzed by the model which is integrated with the flask application.
- VGG16 Model analyzes the image, then the prediction is showcased on the Flask UI.

To accomplish this, we have to complete all the activities and tasks listed below

- Data Collection.
    - Create Train and Test Folders.
- Image Preprocessing.
    - Import the ImageDataGenerator library
    - Configure ImageDataGenerator class
    - ApplyImageDataGenerator functionality to Trainset and Testset
- Model Building
    - Import the model building Libraries
    - Loading the model
    - Adding Flatten layers
    - Adding Output Layer
    - Creating Model Object
    - Configure the Learning Process
    - Train the Model
    - Save the Model
    - Test The Model
- Cloudant DB
    - Register & Login to IBM Cloud
    - Create Service Instance
    - Creating Service Credentials
    - Launch Cloudant DB
    - Create Database
- Application Building
    - Building HTML Pages
    - Build Python Code
    - Run The Application