FINAL CODE:

Index.html :

```
<!DOCTYPE html>

<html lang="en">

<head>

 <!-- basic -->

 <meta charset="utf-8">

 <meta http-equiv="X-UA-Compatible" content="IE=edge">

 <!-- mobile metas -->

 <meta name="viewport" content="width=device-width, initial-scale=1">

 <meta name="viewport" content="initial-scale=1, maximum-scale=1">

 <!-- site metas -->

 <title>IBM</title>

 <meta name="keywords" content="">

 <meta name="description" content="">

 <meta name="author" content="">

 <!-- fevicon -->

 <link rel="icon"
href="C:\Users\abi\project\flask\static\images\fevicon.png"
type="image/gif" />

 <!-- bootstrap css -->

 <link rel="stylesheet"
href="C:\Users\abi\project\flask\static\css\bootstrap.min.css">

 <!-- style css -->

 <link rel="stylesheet"
href="C:\Users\abi\project\flask\static\css\style.css">

 <!-- Responsive-->

 <link rel="stylesheet"
href="C:\Users\abi\project\flask\static\css\responsive.css">
```

```html
<!-- Scrollbar Custom CSS -->
<link rel="stylesheet"
href="C:\Users\abi\project\flask\static\css\jquery.mCustomScrollbar.min.css
">

<!-- Tweaks for older IEs-->
<link rel="stylesheet" href="https://netdna.bootstrapcdn.com/font-
awesome/4.0.3/css/font-awesome.css">

<link rel="stylesheet"
href="https://cdnjs.cloudflare.com/ajax/libs/fancybox/2.1.5/jquery.fancybox.mi
n.css" media="screen">

<!--[if lt IE 9]>
<script
src="https://oss.maxcdn.com/html5shiv/3.7.3/html5shiv.min.js"></script>

<script
src="https://oss.maxcdn.com/respond/1.4.2/respond.min.js"></script><![endif]-
->

</head>
<!-- body -->
<body class="main-layout">
  <!-- loader  -->
  <div class="loader_bg">
    <div class="loader"><img
src="C:\Users\abi\project\flask\static\images\loading.gif" alt="#" />
  </div>
  <!-- end loader -->
  <!-- header -->
  <header>
   <!-- header inner -->
   <div class="header-top">
     <div class="header">
```

```html
<div class="container-fluid">
  <div class="row">
    <div class="col-xl-2 col-lg-4 col-md-4 col-sm-3 col logo_section">
      <div class="full">
        <div class="center-desk">
          <div class="logo">
            <a href="index.html"><img
src="C:\Users\abi\project\flask\static\images\logo.png" alt="#" />
          </div>
        </div>
      </div>
    </div>
    <div class="col-xl-10 col-lg-8 col-md-8 col-sm-9">
    <div class="menu-area">
      <div class="limit-box">
        <nav class="main-menu ">
          <ul class="menu-area-main">
            <li class="active"> <a href="index.html">Home</a> </li>
            <li> <a href="#about">About</a> </li>
            <li> <a href="predict.html">Predict</a> </li>
          </ul>
        </nav>
      </div>
    </div>
    </div>
  </div>
</div>
```

```html
        </div>
        <!-- end header inner -->
        <!-- end header -->
        <section class="slider_section">
         <div id="myCarousel" class="carousel slide" data-ride="carousel">
           <ol class="carousel-indicators">
             <li data-target="#myCarousel" data-slide-to="0" class="active"></li>
             <li data-target="#myCarousel" data-slide-to="1"></li>
           </ol>
           <div class="carousel-inner">
             <div class="carousel-item active">
               <div class="container-fluid padding_dd">
                 <div class="carousel-caption">
                   <div class="row">
                     <div class="col-xl-6 col-lg-6 col-md-6 col-sm-12">
                       <div class="text-bg">
                         <h1 style="font-size: 50px;">Fertilizers Recommendation System
For Disease Prediction In Plants</h1>
                         <form class="Vegetable">
                        </div>
                     </div>
                     <div class="col-xl-6 col-lg-6 col-md-6 col-sm-12">
                       <div class="images_box">
                         <figure><img
src="C:\Users\abi\project\flask\static\images\img2.png">
                        </div>
                     </div>
                   </div>
```

```html
        </div>
       </div>
      </div>
      <div class="carousel-item">
       <div class="container-fluid padding_dd">
        <div class="carousel-caption">
         <div class="row">
          <div class="col-xl-6 col-lg-6 col-md-6 col-sm-12">
           <div class="text-bg">
            <h2 style="font-size: 35px;">It is used to predict diseases in
plants and to suggest fertilizers which would be required to eradicate the disease
and to fight off the disease in the future too.</h2>
           </div>
          </div>
          <div class="col-xl-6 col-lg-6 col-md-6 col-sm-12">
           <div class="images_box">
            <figure><img
src="C:\Users\abi\project\flask\static\images\img4.gif">
           </div>
          </div>
         </div>
        </div>
       </div>
      </div>
     </div>
     <a class="carousel-control-prev" href="#myCarousel" role="button" data-
slide="prev">
```

```html
        <span class="carousel-control-prev-icon" aria-hidden="true"></span>

        <span class="sr-only">Previous</span>

      </a>

      <a class="carousel-control-next" href="#myCarousel" role="button" data-slide="next">

        <span class="carousel-control-next-icon" aria-hidden="true"></span>

        <span class="sr-only">Next</span>

      </a>

    </div>

  </section>

</div>

</header>

<!-- about  -->

<div id="about" class="about">

  <div class="container-fluid">

    <div class="row">

      <div class="col-xl-6 col-lg-6 col-md-6 col-sm-12">

        <div class="about-box">

          <h2>About us</h2>

          <p>Agriculture is the most important sector in today's life. Most plants
are affected by a wide variety of bacterial and fungal diseases. Diseases on
plants placed a major constraint on the production and a major threat to food
security. Hence, early and accurate identification of plant diseases is essential to
ensure high quantity and best quality. In recent years, the number of diseases on
plants and the degree of harm caused has increased due to the variation in
pathogen varieties, changes in cultivation methods, and inadequate plant
protection techniques.

An automated system is introduced to identify different diseases on plants by
checking the symptoms shown on the leaves of the plant. Deep learning
techniques are used to identify the diseases and suggest the precautions that can
be taken for those diseases. </p>
```

```
        </div>

      </div>

      <div class="col-xl-6 col-lg-6 col-md-6 col-sm-12 padding_rl">

       <div class="about-box_img">
```

alt="#" /></figure>

```
        </div>

      </div>

    </div>

  </div>
```

</div>

<!-- end abouts -->

<!-- end vegetable -->

```
      <!-- Javascript files-->

      <script
src="C:\Users\abi\project\flask\static\js\jquery.min.js">

      <script
src="C:\Users\abi\project\flask\static\js\popper.min.js">

      <script
src="C:\Users\abi\project\flask\static\js\bootstrap.bundle.min.js">
```

3.0.0.min.js"></script>

```
      <!-- sidebar -->

      <script
src="C:\Users\abi\project\flask\static\js\jquery.mCustomScrollbar.concat.mi
n.js"></script>
```

```
      <script
src="https:cdnjs.cloudflare.com/ajax/libs/fancybox/2.1.5/jquery.fancybox.min.js
"></script>
```

```
</body>
```

```
</html>
```

Predict.html:

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
  <!-- basic -->
```

```
  <meta charset="utf-8">
```

```
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
```

```
  <!-- mobile metas -->
```

```
  <meta name="viewport" content="width=device-width, initial-scale=1">
```

```
  <meta name="viewport" content="initial-scale=1, maximum-scale=1">
```

```
  <!-- site metas -->
```

```
  <title>IBM</title>
```

```
  <meta name="keywords" content="">
```

```
  <meta name="description" content="">
```

```
  <meta name="author" content="">
```

```
  <!-- fevicon -->
```

```
  <link rel="icon"
href="C:\Users\abi\project\flask\static\images\fevicon.png"
type="image/gif" />
```

```
  <!-- bootstrap css -->
```

```
  <link rel="stylesheet"
href="C:\Users\abi\project\flask\static\css\bootstrap.min.css">
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```html
    <!-- style css -->

    <link rel="stylesheet"
href="C:\Users\abi\project\flask\static\css\style.css">

    <!-- Responsive-->

    <link rel="stylesheet"
href="C:\Users\abi\project\flask\static\css\responsive.css">

    <!-- Scrollbar Custom CSS -->

    <link rel="stylesheet"
href="C:\Users\abi\project\flask\static\css\jquery.mCustomScrollbar.min.css
">

    <!-- Tweaks for older IEs-->

    <link rel="stylesheet" href="https://netdna.bootstrapcdn.com/font-
awesome/4.0.3/css/font-awesome.css">

    <link href="{{ url_for('static', filename='css/final.css') }}" rel="stylesheet">

    <link rel="stylesheet"
href="https://cdnjs.cloudflare.com/ajax/libs/fancybox/2.1.5/jquery.fancybox.mi
n.css" media="screen">

<!--[if lt IE 9]>

<script
src="https://oss.maxcdn.com/html5shiv/3.7.3/html5shiv.min.js"></script>

<script
src="https://oss.maxcdn.com/respond/1.4.2/respond.min.js"></script><![endif]-
->

</head>

<body>

    <!-- predict -->

<div id="predict" class="vegetable">

    <div class="container">

      <div class="row">

        <div class="col-md-12">

          <div  class="titlepage">
```

```html
<h2> Plant Disease <strong class="llow">Prediction</strong> </h2>
    </div>
  </div>
</div>
<div class="row">
  <div class="col-xl-5 col-lg-5 col-md-5 col-sm-12 ">
    <h4 style="color: green;"><b>Drop the image to get the
prediction!!!...</b></h4>
    <div class="vegetable_shop">
      <form action="" id="upload-file" method="post"
enctype="multipart/form-data">
        <h5 style="color: red;"><b>Choose Category</b></h5>
        <select name="plant">
          <option value="fruit" name="fruit">Fruits</option>
          <option value="vegetable" name="vegetable">Vegetables</option>
        </select>
        <br><br>
        <input id="imageUpload" type="file" name="image" value="CHOOSE"
accept="image/jpeg, image/jpg, image/png"
onchange="document.getElementById('output').src=window.URL.createObject
URL(this.files[0])">
        <br><br>
        <img src="" id="output">
        <br><br>
        <button type="button" class="btn btn-info btn-lg " id="btn-predict"
style="background: #28272c;">Predict</button>
      </form>
      <!--drop down,file upload,button-->
    </div>
```

```html
        </div>
        <div class="loader" style="display:none;"></div>
                    <h3>
                            <span id="result" style="font-size:17px; "> </span>
                    </h3>
        <div class="col-xl-7 col-lg-7 col-md-7 col-sm-12 ">
         <div class="vegetable_img">
           <right>

alt="#"/></figure>
          </right>
          </div>
      </div>
    </div>
 <!-- Javascript files-->


 <script
src="C:\Users\abi\project\flask\static\js\bootstrap.bundle.min.js">

3.0.0.min.js"></script>


 <!-- sidebar -->
 <script
src="C:\Users\abi\project\flask\static\js\jquery.mCustomScrollbar.concat.mi
n.js"></script>
```

```
 <script
src="https:cdnjs.cloudflare.com/ajax/libs/fancybox/2.1.5/jquery.fancybox.min.js
"></script>
</body>
</html>
```

App.py :

```
import requests

from tensorflow.keras.preprocessing import image

from tensorflow.keras.models import load_model

import numpy as np

import pandas as pd

import tensorflow as tf

from flask import Flask, request, render_template, redirect, url_for

import os

from werkzeug.utils import secure_filename

from tensorflow.python.keras.backend import set_session


app=Flask(__name__)


model=load_model('vegetable.h5')

model1=load_model('fruit.h5')


#homepage

@app.route('/')

def home():

    return render_template('index.html')
```

```python
#prediction page
@app.route('/prediction')
def prediction():
    return render_template('predict.html')


@app.route('/predict',methods=['POST'])
def predict():
    if request.method=='POST':
        f=request.files['image']
        basepath=os.path.dirname(__file__)
        file_path=os.path.join(basepath,'uploads',secure_filename(f.filename))
        f.save(file_path)
        img=image.load_img(file_path,target_size=(128,128))
        x=image.img_to_array(img)
        x=np.expand_dims(x,axis=0)
        plant=request.form['plant']
        print(plant)
        if(plant=="vegetable"):
            preds = model.predict(x)
            preds=np.argmax(preds)
            print(preds)
            df=pd.read_excel('precautions_veg.xlsx')
            print(df.iloc[preds]['caution'])
        else:
            preds = model1.predict(x)
            preds=np.argmax(preds)
```

```python
        df=pd.read_excel('precautions_fruits.xlsx')
        print(df.iloc[preds]['caution'])
    return df.iloc[preds]['caution']
if __name__ == "__main__":
    app.run(debug=False)
```