Project Report

Name: 500_Person_Gender_Height_Weight_Index
Report date: September 3, 2021
Internship Batch: LISUM02
Version: 1.0
Project by: Melisa Gözet
Data intake reviewer:
Data storage location: https://www.kaggle.com/yersever/500-person-gender-height-weight-bodymassindex
Project Location: https://github.com/melisagozet/BMI_Predict_on_Flask.git

Context

Body mass index is a value derived from the mass and height of a person. The BMI is defined as the body mass divided by the square of the body height, and is expressed in units of kg/m², resulting from mass in kilograms and height in metres.

Content

The dataset contains information about gender, height, weight and BMI index of individuals

Gender : Male / Female

Height : Number (cm)

Weight : Number (Kg)

Index

0 - Extremely Weak

1 - Weak

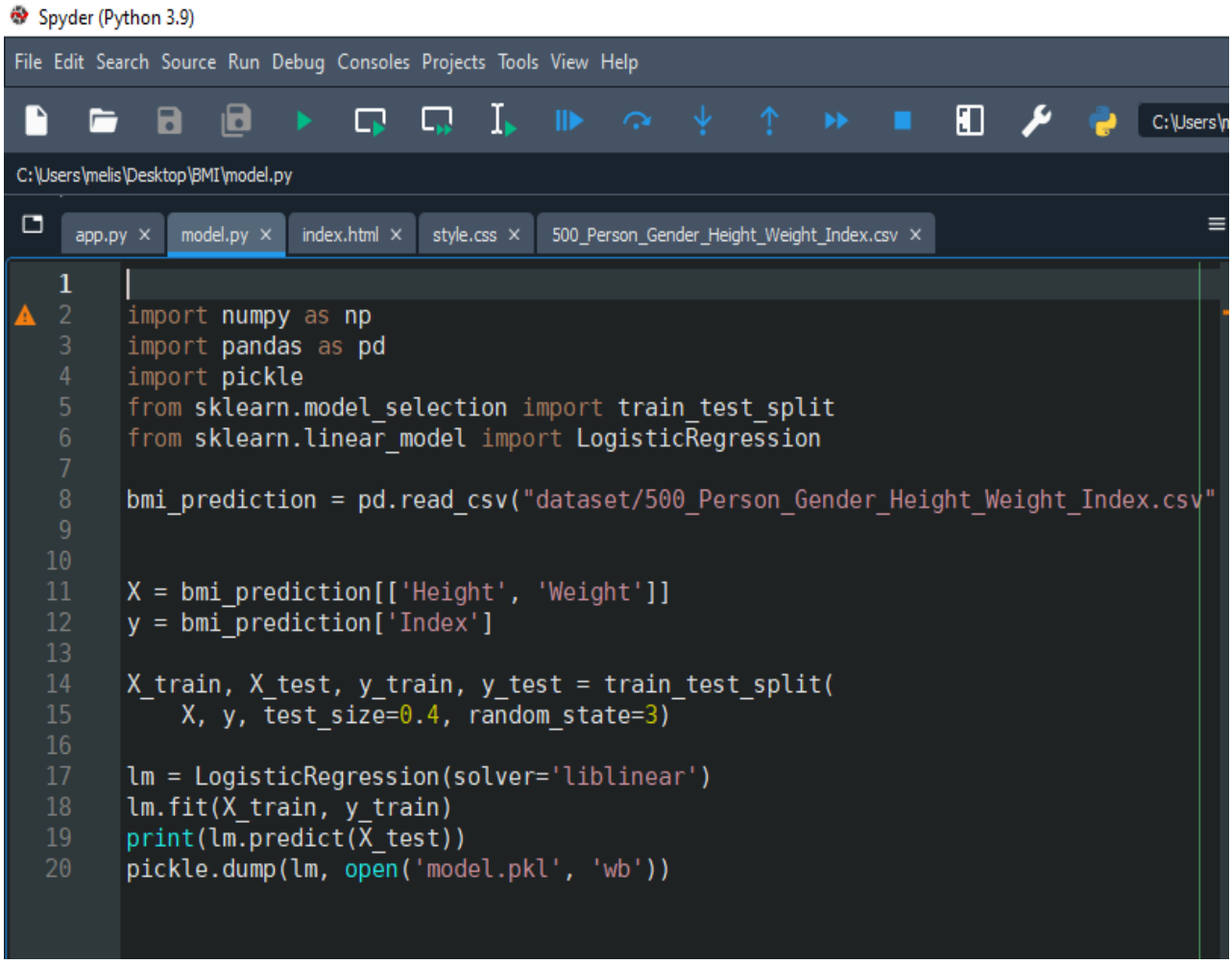
2 - Normal

3 - Overweight

4 - Obesity

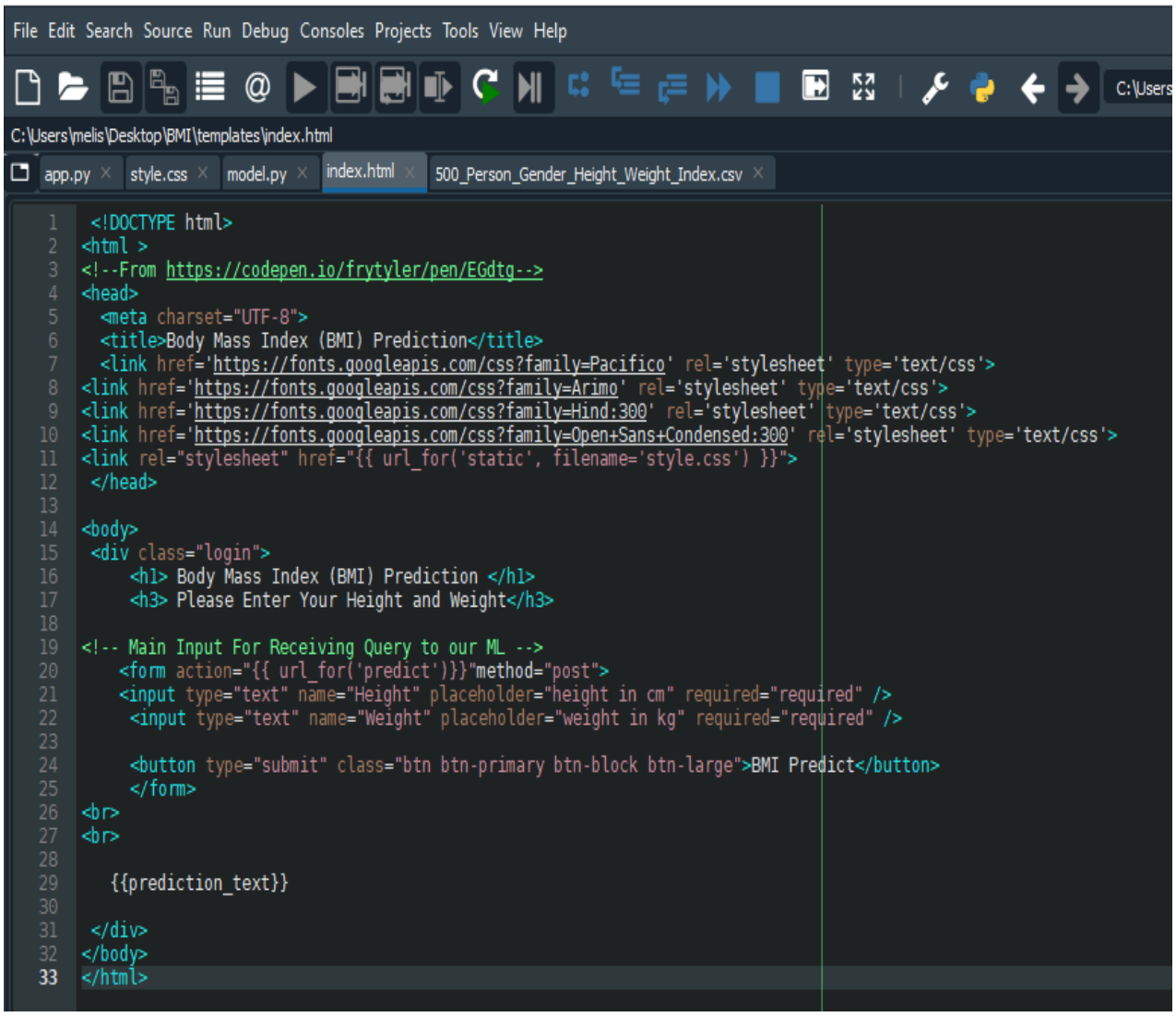
5 - Extreme Obesity

1. **Modeling the dataset “500_Person_Gender_Height_Weight_Index.csv”**



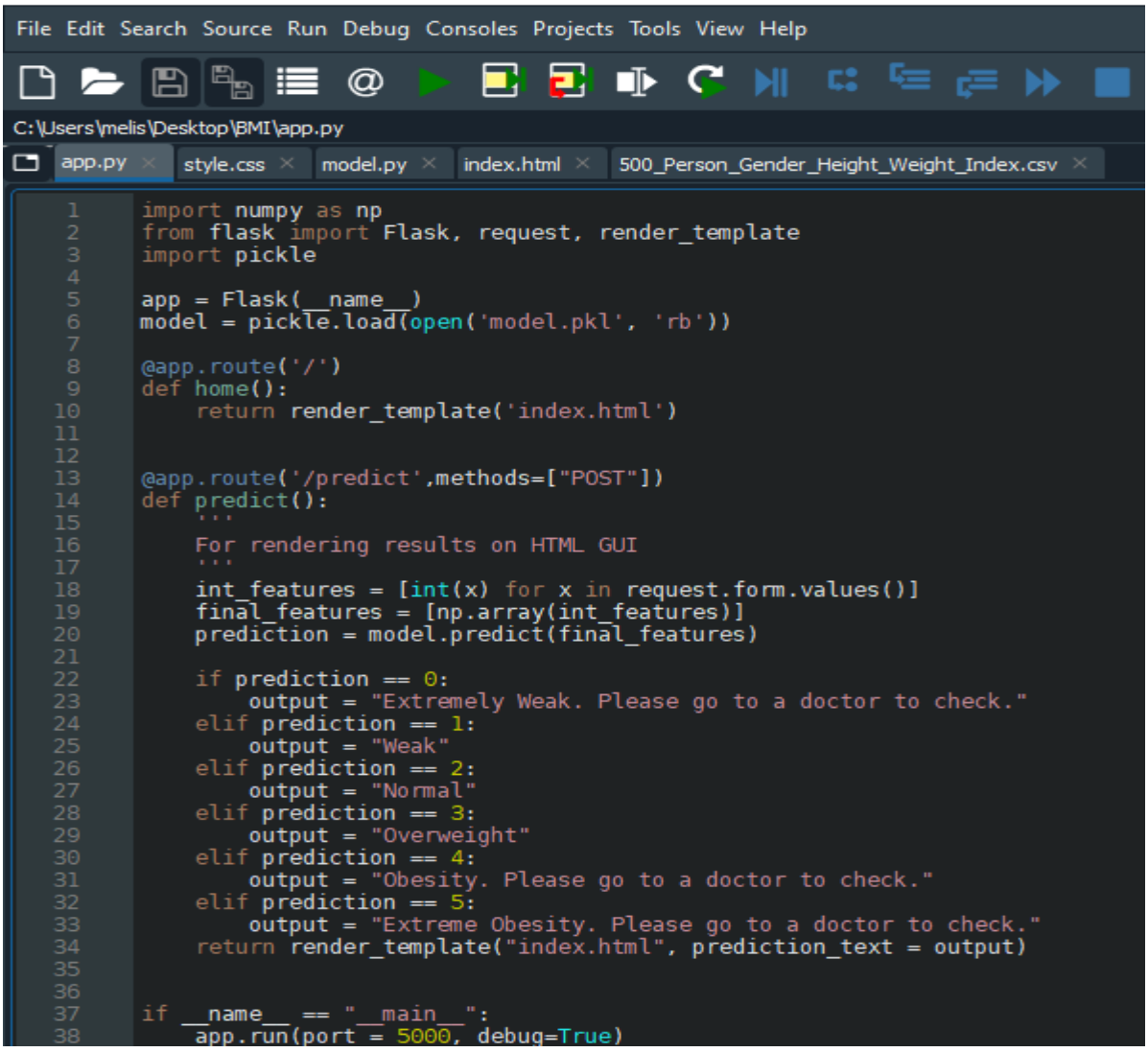
2. HTML codes (index.html)

Spyder (Python 3.8)



3. app.py

Spyder (Python 3.8)

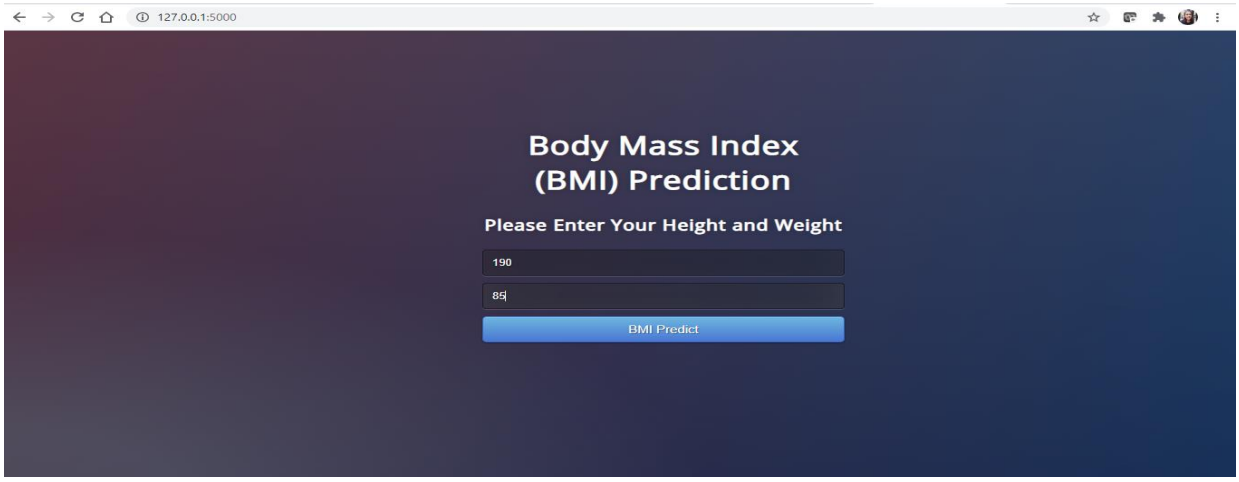


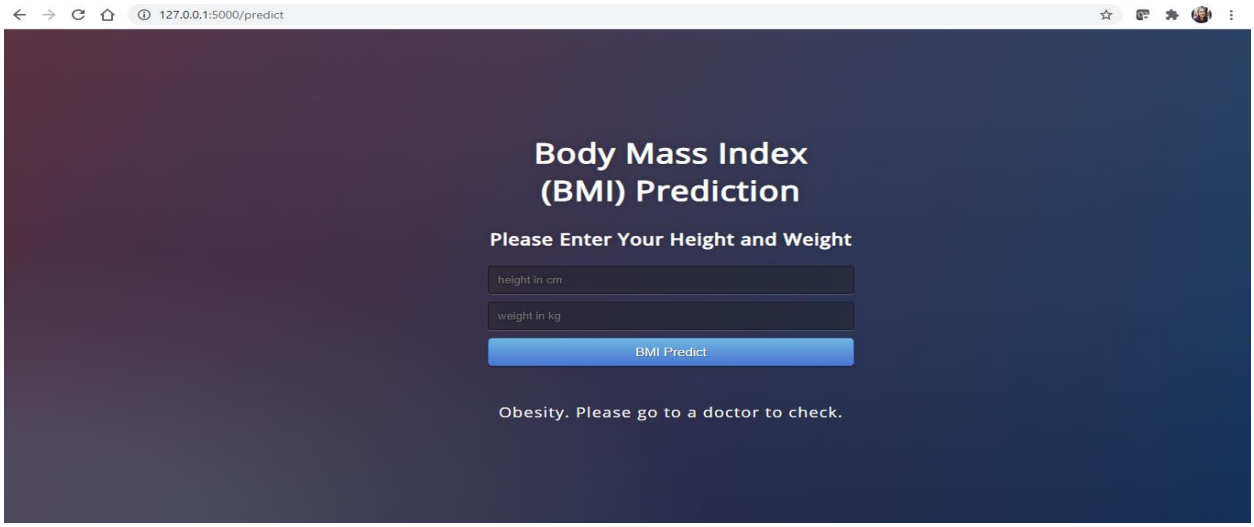

```python
import numpy as np
from flask import Flask, request, render_template
import pickle

app = Flask(__name__)
model = pickle.load(open('model.pkl', 'rb'))

@app.route('/')
def home():
    return render_template('index.html')


@app.route('/predict',methods=["POST"])
def predict():
    '''
    For rendering results on HTML GUI
    '''
    int_features = [int(x) for x in request.form.values()]
    final_features = [np.array(int_features)]
    prediction = model.predict(final_features)

    if prediction == 0:
        output = "Extremely Weak. Please go to a doctor to check."
    elif prediction == 1:
        output = "Weak"
    elif prediction == 2:
        output = "Normal"
    elif prediction == 3:
        output = "Overweight"
    elif prediction == 4:
        output = "Obesity. Please go to a doctor to check."
    elif prediction == 5:
        output = "Extreme Obesity. Please go to a doctor to check."
    return render_template("index.html", prediction_text = output)


if __name__ == "__main__":
    app.run(port = 5000, debug=True)
```

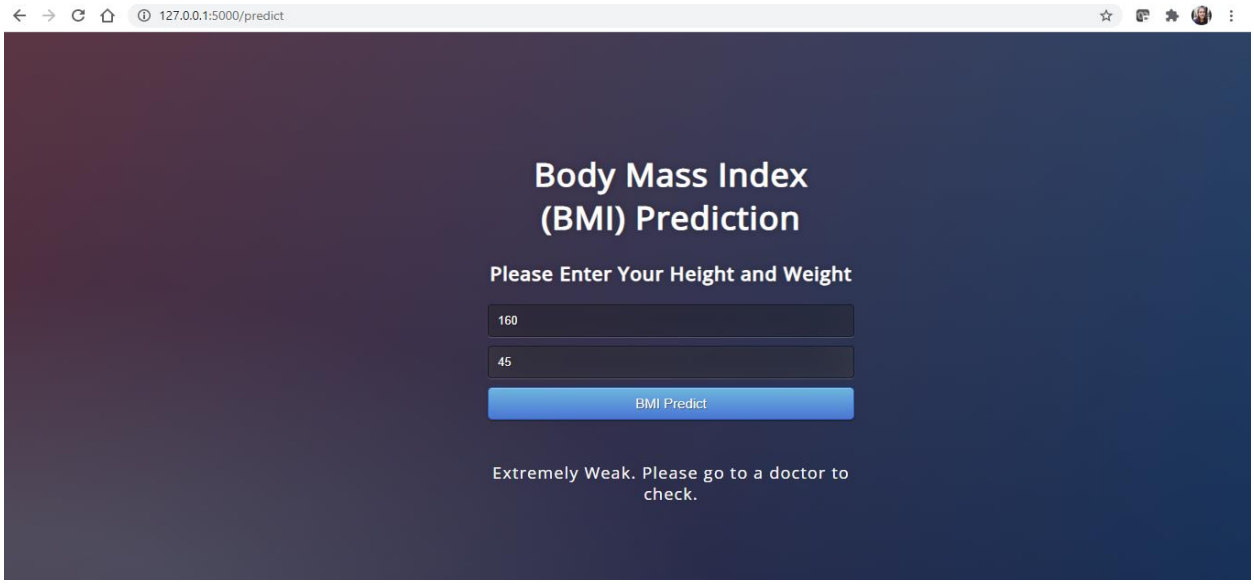
4. Converting notebook to .py file and running python code

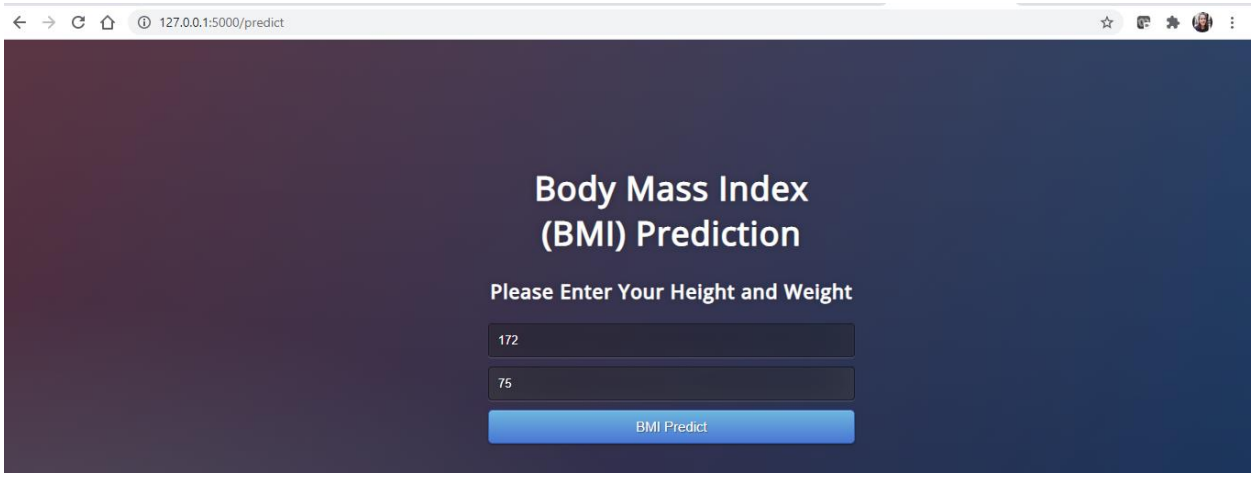
```
Microsoft Windows [Version 10.0.19043.1165]
(c) Microsoft Corporation. Tüm hakları saklıdır.

C:\Users\melis>cd desktop

C:\Users\melis\Desktop>cd BMI

C:\Users\melis\Desktop\BMI>python app.py
 * Serving Flask app "app" (lazy loading)
 * Environment: production
   WARNING: This is a development server. Do not use it in a production deployment.
   Use a production WSGI server instead.
 * Debug mode: on
 * Restarting with windowsapi reloader
 * Debugger is active!
 * Debugger PIN: 280-934-384
 * Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
```

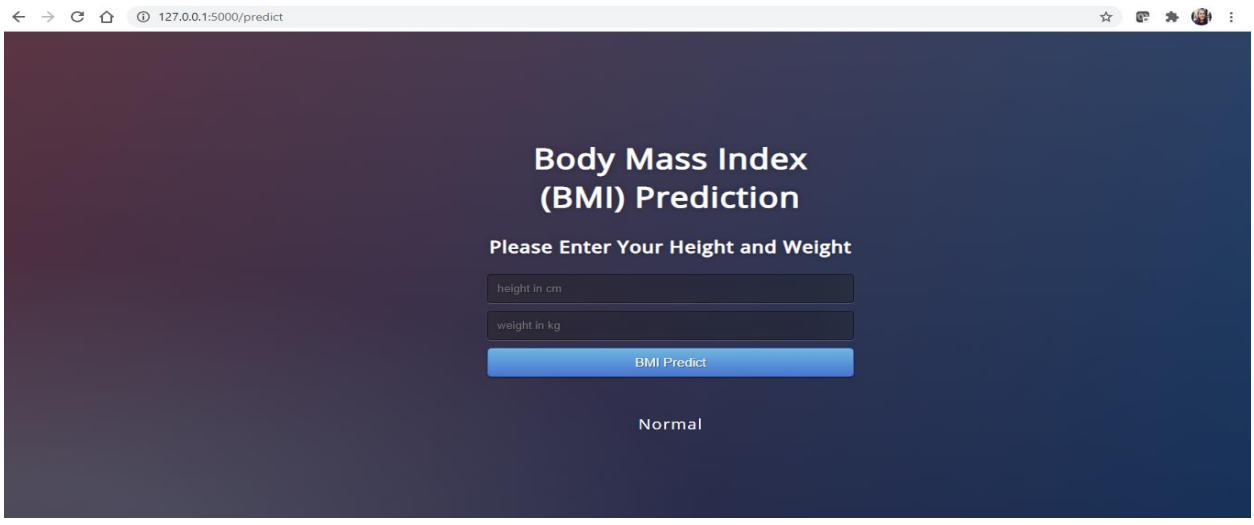
5. Examples of the model






127.0.0.1:5000/predict
Body Mass Index
(BMI) Prediction
Please Enter Your Height and Weight
160
45
BMI Predict
Extremely Weak. Please go to a doctor to check.


127.0.0.1:5000/predict
Body Mass Index
(BMI) Prediction
Please Enter Your Height and Weight
172
75
BMI Predict


127.0.0.1:5000/predict
Body Mass Index
(BMI) Prediction
Please Enter Your Height and Weight
height in cm
weight in kg
BMI Predict
Normal