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Batch Code: LISUM37
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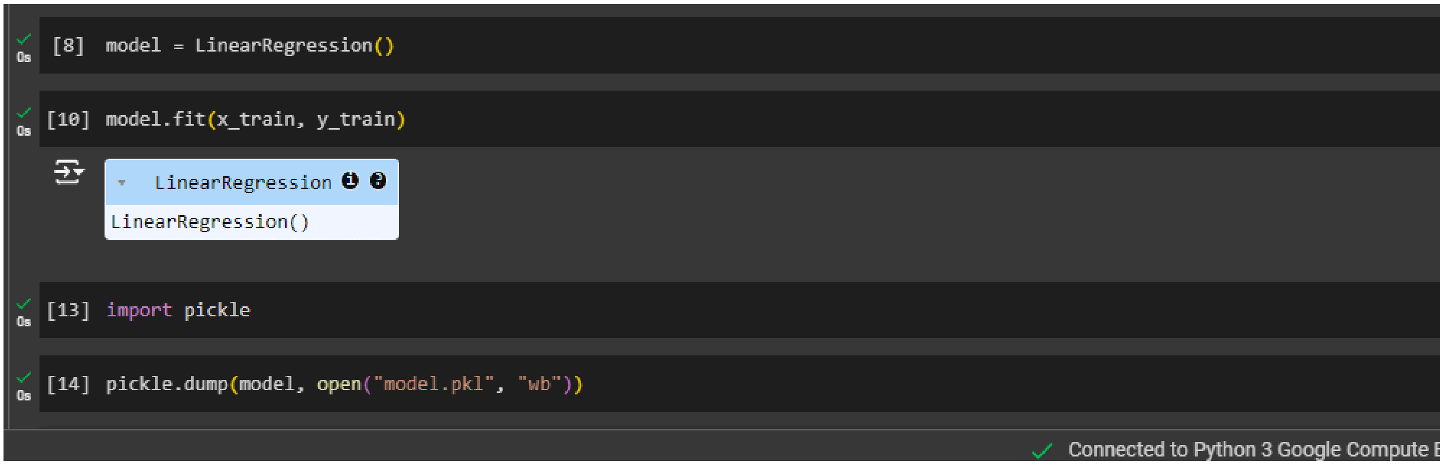
Submitted to: Data Glacier

STEP 1: CREATING AND SAVING THE MACHINE LEARNING MODEL

The Linear regression model was trained to predict student scores based on sleep and studying hours.

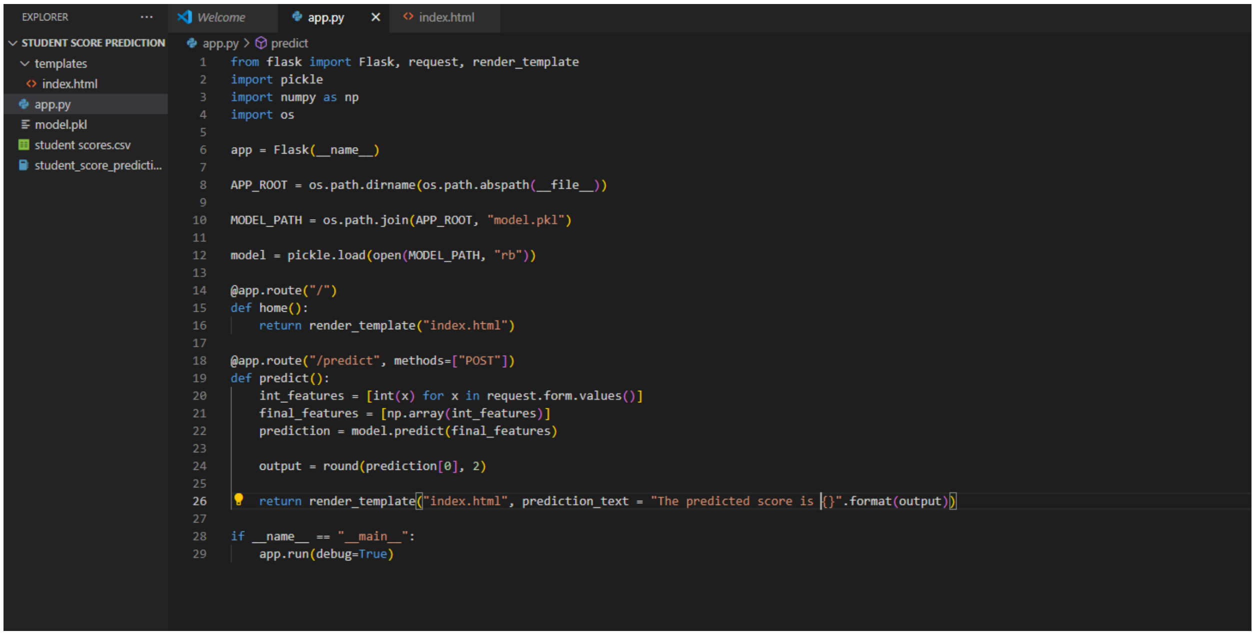
The model was then saved using Python’s Pickle module.



```
[8]  model = LinearRegression()

[10] model.fit(x_train, y_train)

      ▾ LinearRegression
      LinearRegression()

[13] import pickle

[14] pickle.dump(model, open("model.pkl", "wb"))
```

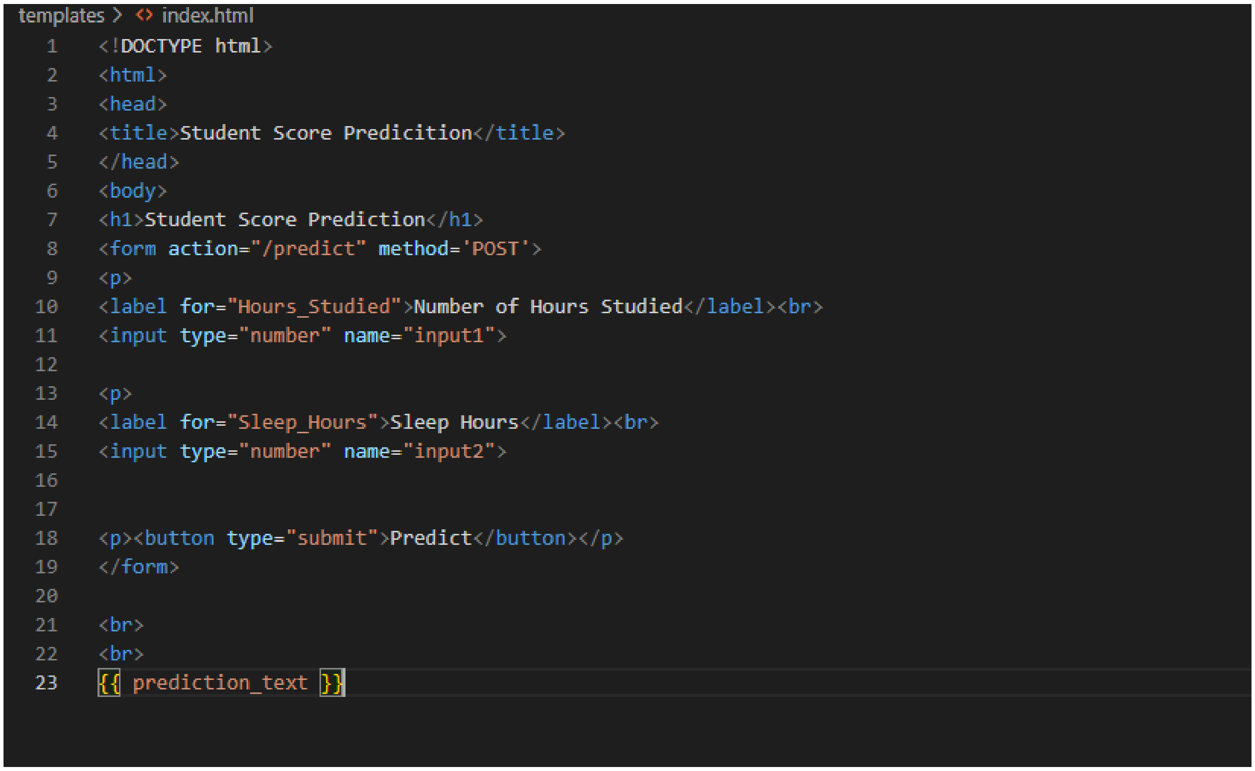
STEP 2: CREATING THE FLASK APP

A new file app.py was created in the same directory as the model and the model was then loaded into the flask file.



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

app = Flask(__name__)

APP_ROOT = os.path.dirname(os.path.abspath(__file__))

MODEL_PATH = os.path.join(APP_ROOT, "model.pkl")

model = pickle.load(open(MODEL_PATH, "rb"))

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

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

    output = round(prediction[0], 2)

    return render_template("index.html", prediction_text = "The predicted score is {}".format(output))

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

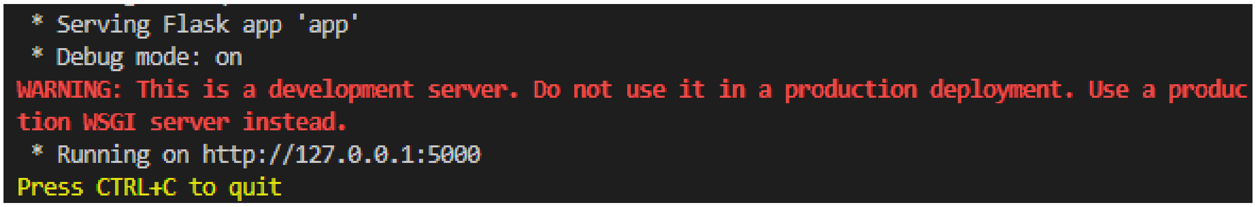
STEP 3: CREATING an HTML page that contains a form to fill out values that will be sent as input to the model and will return the results when the “Predict” button is clicked



templates > <> index.html

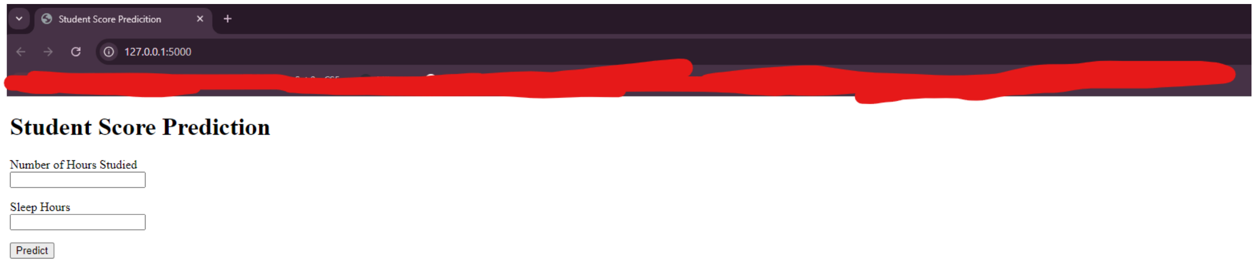
```html
<!DOCTYPE html>
<html>
<head>
<title>Student Score Predicition</title>
</head>
<body>
<h1>Student Score Prediction</h1>
<form action="/predict" method='POST'>
<p>
<label for="Hours_Studied">Number of Hours Studied</label><br>
<input type="number" name="input1">

<p>
<label for="Sleep_Hours">Sleep Hours</label><br>
<input type="number" name="input2">


<p><button type="submit">Predict</button></p>
</form>

<br>
<br>
{{ prediction_text }}
```

STEP 4: Running python app.py in the terminal and getting the URL: http://127.0.0.1:5000



```
 * Serving Flask app 'app'
 * Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a produc
tion WSGI server instead.
 * Running on http://127.0.0.1:5000
Press CTRL+C to quit
```

STEP 5: Opening the URL



[redacted]

Student Score Prediction

Number of Hours Studied

Sleep Hours