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Batch code: LISUM03

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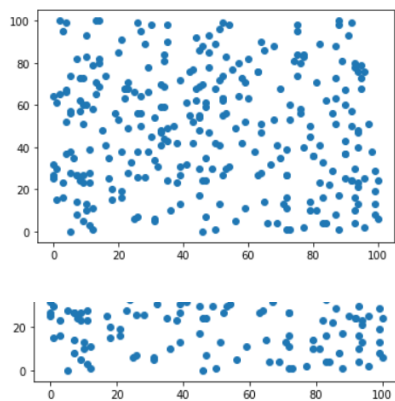
Submitted to: GitHub

```
In [1]: import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
from sklearn.linear_model import LinearRegression
```

```
In [3]: X=pd.read_excel('Linear_X.xlsx')
y=pd.read_excel('Linear_Y.xlsx')
```

```
In [4]: X=X.values
y=y.values
```

```
In [5]: plt.scatter(X,y)
plt.show()
```



```
In [6]: model=LinearRegression()
```

```
In [9]: model.fit(X,y)
```

```
Out[9]: LinearRegression(copy_X=True, fit_intercept=True, n_jobs=None, normalize=False)
```

```
In [11]: X_test = np.array(2)
X_test = X_test.reshape((1,-1))
```

```
In [12]: model.predict(X_test)
```

```
Out[12]: array([[51.29833068]])
```

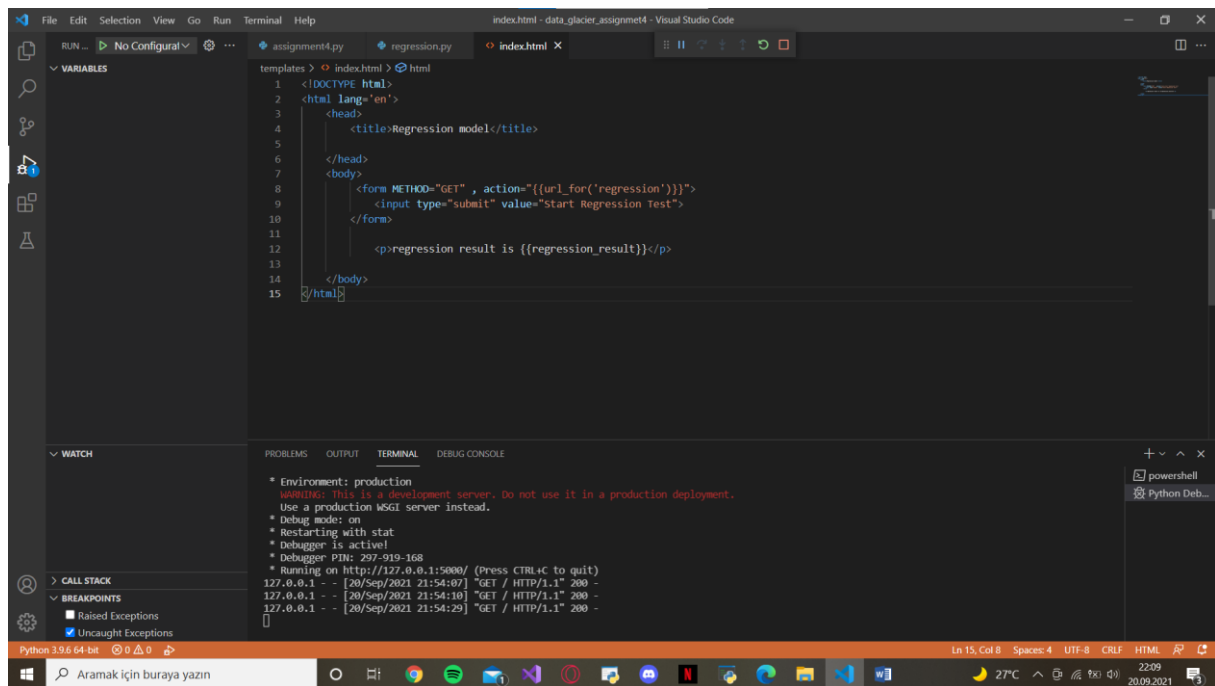
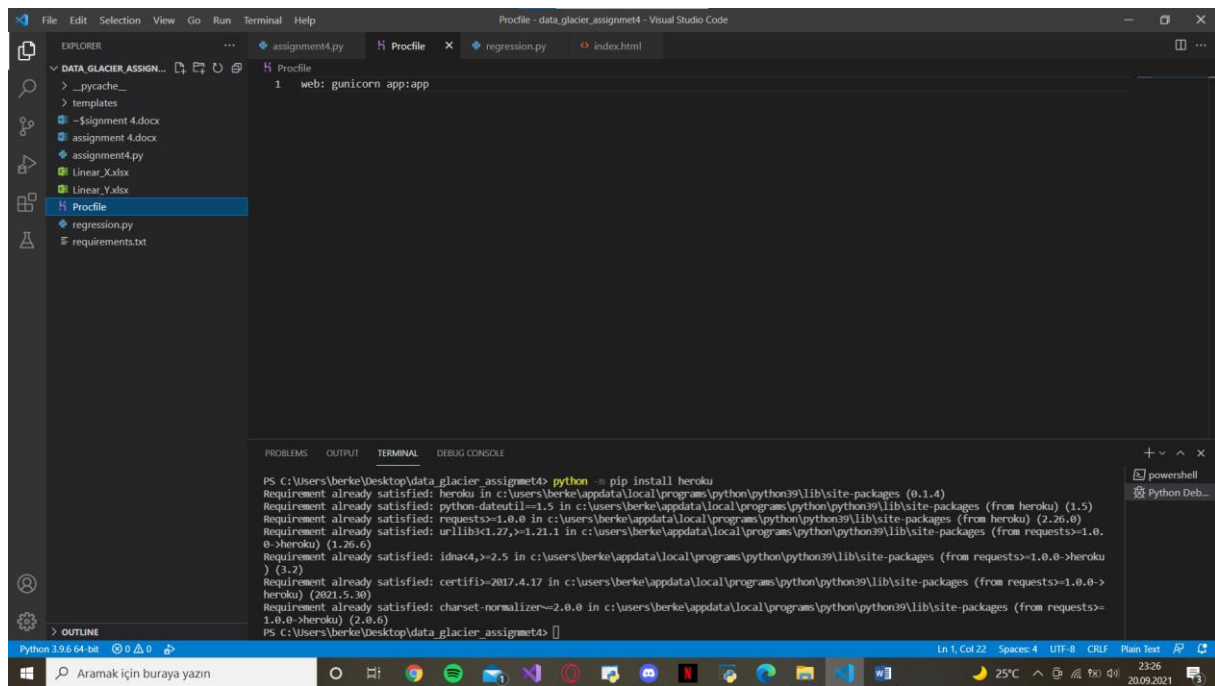
```
In [ ]:
```

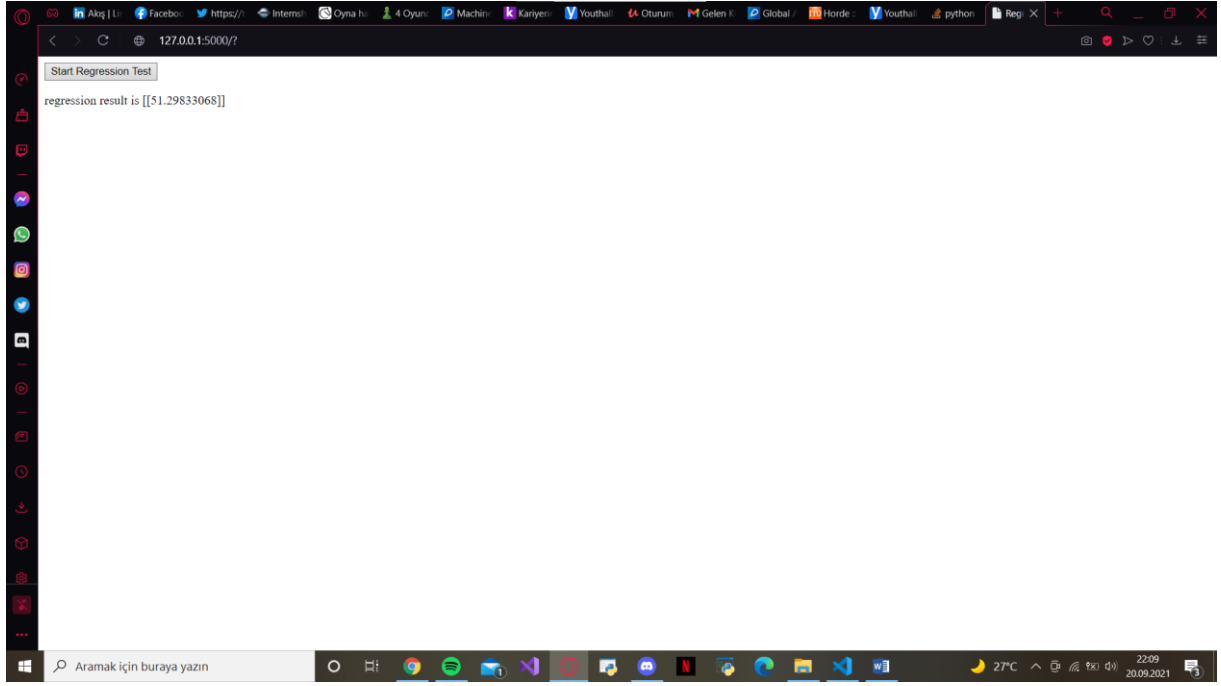
The screenshot shows the Visual Studio Code editor with a Python file named `assignment4.py`. The code is a Flask application that uses a `regression` module. The `regression` module has a `regression_test()` function that returns a result. The Flask application has a route `/` that calls `regression_test()` and renders the `index.html` template with the result. The application is running on `http://127.0.0.1:5000/`. The terminal shows the following output:

```
* 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 stat
* Debugger is active!
* Debugger PIN: 297-919-168
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
127.0.0.1 - - [20/Sep/2021 21:54:07] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [20/Sep/2021 21:54:10] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [20/Sep/2021 21:54:29] "GET / HTTP/1.1" 200 -
```

The screenshot shows the Visual Studio Code editor with a Python file named `regression.py`. The code defines a `regression_test()` function that uses `pandas`, `numpy`, and `sklearn.linear_model` to perform a linear regression. The function reads data from `Linear_X.xlsx` and `Linear_Y.xlsx`, fits a `LinearRegression` model, and returns the predicted values for a test set. The terminal shows the same output as the first screenshot.

```
1 import pandas as pd
2 import numpy as np
3 import matplotlib.pyplot as plt
4 from sklearn.linear_model import LinearRegression
5
6 def regression_test():
7     x=pd.read_excel('Linear_X.xlsx')
8     y=pd.read_excel('Linear_Y.xlsx')
9
10    X=x.values
11    y=y.values
12
13    model=LinearRegression()
14
15    model.fit(X,y)
16
17    X_test = np.array(2)
18    X_test = X_test.reshape((1,-1))
19
20    return model.predict(X_test)
```





#### Manual deploy

Deploy the current state of a branch to this app.

#### Deploy a GitHub branch

This will deploy the current state of the branch you specify below. [Learn more](#)

Choose a branch to deploy

main

Deploy Branch

Receive code from GitHub



Build main a8c949f9



Release phase



Deploy to Heroku



Your app was successfully deployed.

View