Project 7 DigitalSkola

Preparation Data and Tools
1.Install Python
2.Requirement Package Python:
- flask
- Jinja2
- Pandas
- scikit-learnInstall Docker
3.Install VSCode
4.Install notebook in VSCode
5.Install Postman

6.Collect dataset from kaggle
7.Link:
https://www.kaggle.com/competitions/massp-health-insurance-prediction/data
8.Download script modeling ML Link:
https://drive.google.com/drive/folders/1UKRWdWw_tBsRW_QiCT2ZcAlFR-Q128RY?usp=sharing

Step by Step :
- Setelah mendownload file script modeling ML akan menghasilkan file "HEALTH INSURANCE PREDICTION"
    isi folder ini akan berisi folder "data" dan "modellingInsurance.ipynb".
- kemudian buat file app.py
  dengan isi sbb :

```python
from flask import Flask
from flask import request
from flask import jsonify
import pandas as pd
from modules.insurance_model import InsuranceModel

app = Flask(__name__)

@app.route('/')
def home():
    return "Welcome to the API Modeling Prefication Insurance!"

@app.route('/predict', methods=['POST'])
def predict():
    data = request.get_json()
    df = pd.DataFrame(data)
    result_predict = InsuranceModel().runModel(df, typed='single')
    return jsonify({
        "status": "predicted",
        "predicted_result": result_predict
    })

if __name__ == "__main__":
    app.run(port=8000)
```

- kemudian jalankan file python "modellingInsurance.ipynb", yang akan menghasilkan folder "packages"
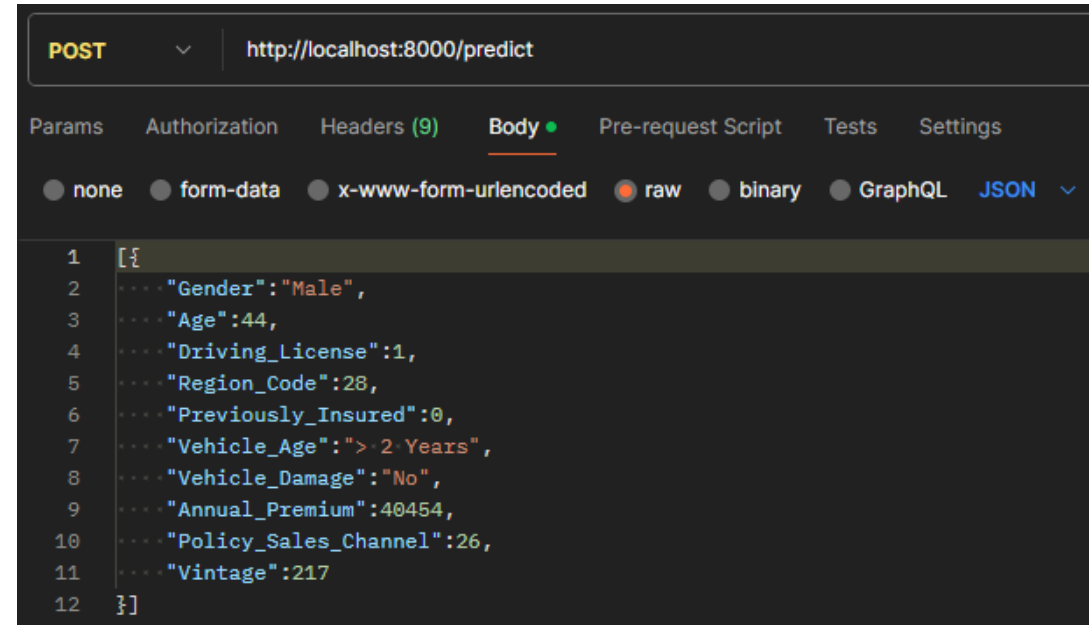- pindahkan folder "packages" ke dalam folder "modules", di dalam folder "modules" terdapat file python
    " insurance_model.py" dan "insurance_pre.py"

- buat environment folder dengan nama .venv dan install di dalam environment .venv "flask, Jinja2, Pandas & Scikit-learn"
- jalankan flask run –port 8000, dan akan tampil browser API "127.0.0.1:8000"
- jalankan aplikasi "postman"
- import code berikut melalui aplikasi "postman"

```
    curl --location --request POST
'http://localhost:8000/predict' \
--header 'Content-Type: application/json' \
--data-raw '[{
    "Gender":"Male",
    "Age":44,
    "Driving_License":1,
    "Region_Code":28,
    "Previously_Insured":0,
    "Vehicle_Age":"> 2 Years",
    "Vehicle_Damage":"No",
    "Annual_Premium":40454,
    "Policy_Sales_Channel":26,
    "Vintage":217
}]'
```

- kemudian cek "Body" pada aplikasi "postman" akan menghasilkan tampilan sbb :

- kemudian klik tombol SEND pada aplikasi "postman", jika berhasil akan menghasilkan tampilan sbb :