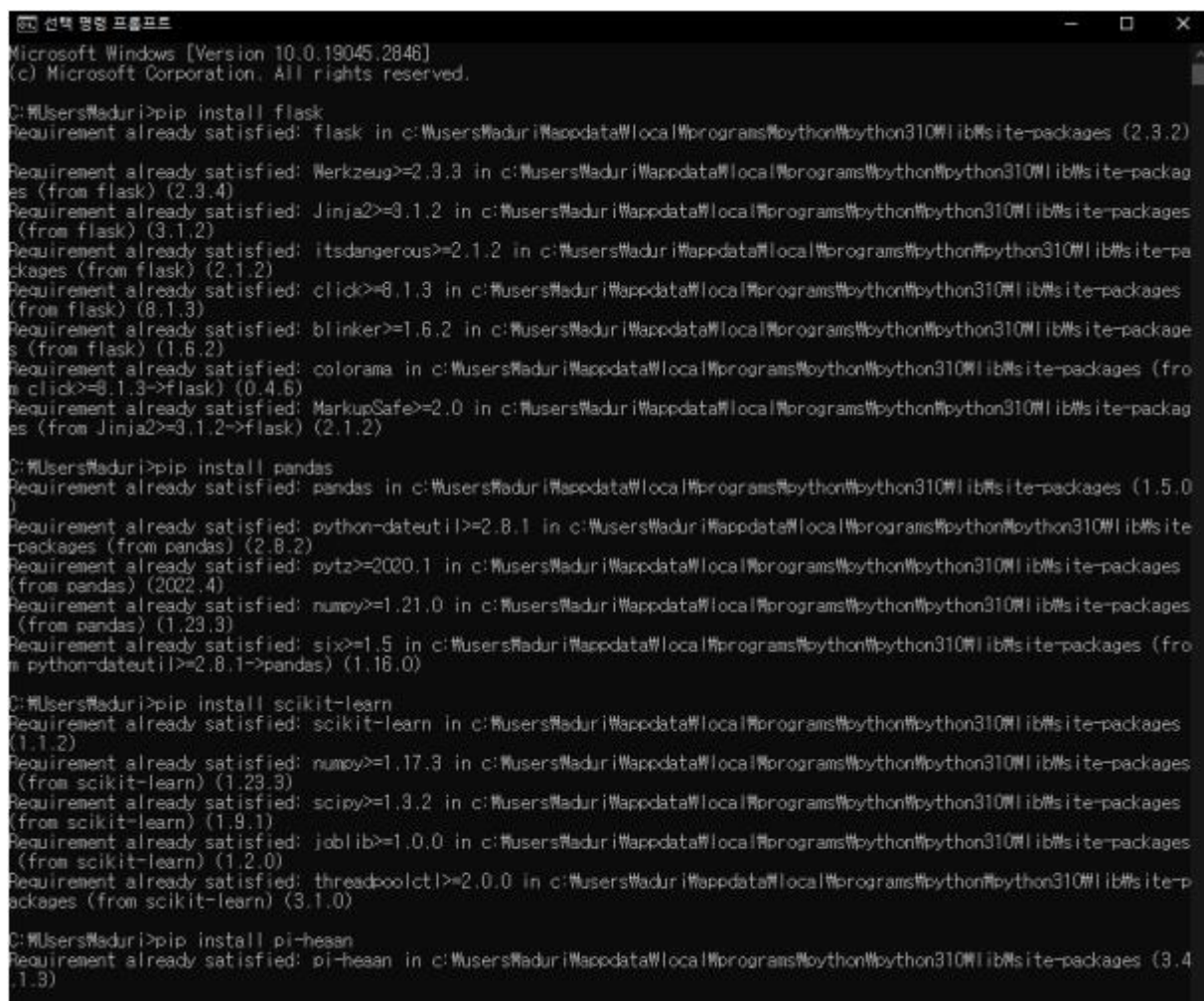


Execution Guideline

Team 3

1. Import needed libraries in your environment



```
Microsoft Windows [Version 10.0.19045.2846]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Maduri>pip install flask
Requirement already satisfied: flask in c:\Users\Maduri\AppData\Local\Programs\Python\Python310\lib\site-packages (2.3.2)
Requirement already satisfied: Werkzeug>=2.3.3 in c:\Users\Maduri\AppData\Local\Programs\Python\Python310\lib\site-packages (from flask) (2.3.4)
Requirement already satisfied: Jinja2>=3.1.2 in c:\Users\Maduri\AppData\Local\Programs\Python\Python310\lib\site-packages (from flask) (3.1.2)
Requirement already satisfied: itsdangerous>=2.1.2 in c:\Users\Maduri\AppData\Local\Programs\Python\Python310\lib\site-packages (from flask) (2.1.2)
Requirement already satisfied: click>=8.1.3 in c:\Users\Maduri\AppData\Local\Programs\Python\Python310\lib\site-packages (from flask) (8.1.3)
Requirement already satisfied: blinker>=1.6.2 in c:\Users\Maduri\AppData\Local\Programs\Python\Python310\lib\site-packages (from flask) (1.6.2)
Requirement already satisfied: colorama in c:\Users\Maduri\AppData\Local\Programs\Python\Python310\lib\site-packages (from click>=8.1.3->flask) (0.4.6)
Requirement already satisfied: MarkupSafe>=2.0 in c:\Users\Maduri\AppData\Local\Programs\Python\Python310\lib\site-packages (from Jinja2>=3.1.2->flask) (2.1.2)

C:\Users\Maduri>pip install pandas
Requirement already satisfied: pandas in c:\Users\Maduri\AppData\Local\Programs\Python\Python310\lib\site-packages (1.5.0)
Requirement already satisfied: python-dateutil>=2.8.1 in c:\Users\Maduri\AppData\Local\Programs\Python\Python310\lib\site-packages (from pandas) (2.8.2)
Requirement already satisfied: pytz>=2020.1 in c:\Users\Maduri\AppData\Local\Programs\Python\Python310\lib\site-packages (from pandas) (2022.4)
Requirement already satisfied: numpy>=1.21.0 in c:\Users\Maduri\AppData\Local\Programs\Python\Python310\lib\site-packages (from pandas) (1.23.3)
Requirement already satisfied: six>=1.5 in c:\Users\Maduri\AppData\Local\Programs\Python\Python310\lib\site-packages (from python-dateutil>=2.8.1->pandas) (1.16.0)

C:\Users\Maduri>pip install scikit-learn
Requirement already satisfied: scikit-learn in c:\Users\Maduri\AppData\Local\Programs\Python\Python310\lib\site-packages (1.1.2)
Requirement already satisfied: numpy>=1.17.3 in c:\Users\Maduri\AppData\Local\Programs\Python\Python310\lib\site-packages (from scikit-learn) (1.23.3)
Requirement already satisfied: scipy>=1.3.2 in c:\Users\Maduri\AppData\Local\Programs\Python\Python310\lib\site-packages (from scikit-learn) (1.9.1)
Requirement already satisfied: joblib>=1.0.0 in c:\Users\Maduri\AppData\Local\Programs\Python\Python310\lib\site-packages (from scikit-learn) (1.2.0)
Requirement already satisfied: threadpoolctl>=2.0.0 in c:\Users\Maduri\AppData\Local\Programs\Python\Python310\lib\site-packages (from scikit-learn) (3.1.0)

C:\Users\Maduri>pip install pi-heaan
Requirement already satisfied: pi-heaan in c:\Users\Maduri\AppData\Local\Programs\Python\Python310\lib\site-packages (3.4.1.3)
```

- ☐ You need to provide 4 lines in cmd:
 - pip install flask
 - pip install pandas
 - pip install scikit-learn
 - pip install pi-heaan
- ☐ Make sure directory is set as your python basic directory

2. Extract src.zip file in your python basic directory

- src.zip includes following files:
 - 'templates' folder which includes main.html and result.html
 - 'app.py' which contains code of web service
 - 'LR_with_enc.py' which contains code of machine learning model
 - 'Dataset.csv' which is required to train model

3. Make sure 'Dataset.csv' must be located in your python basic directory

: we set dataset's directory as './Dataset.csv', so Dataset.csv should be able to access in basic directory of python. The directory can be changed as your preference, but please make sure change the according directory of dataset in 'app.py' and 'LR_with_enc.py'.

4. Run 'app.py'

: it may take several minutes to train model. After training is done, you can access to web service.

5. Access to webpage and insert your information

```
PS C:\Users\aduri> & C:/Users/aduri/AppData/Local/Programs/Python/Python310/python.exe c:/Users/aduri/ISteam/app.py
1
Training Success!
5
* Serving Flask app 'app'
* Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on http://127.0.0.1:5000
Press CTRL+C to quit
* Restarting with stat
1
Training Success!
5
* Debugger is active!
* Debugger PIN: 658-759-979
```

Please click the link 'http://127.0.0.1:5000' after the second 'Training Success!' message is revealed. If you click the link, you can see the page below and can insert your information

LOAN APPROVAL

To see if you're eligible for a loan, please fill out the information below

Name:

Gender: ☐ Male ☐ Female

Are you Married? ☐ Yes ☐ No

Are you a graduate? ☐ Yes ☐ No

Are you self-employed? ☐ Yes ☐ No

How many dependents do you have? ☐ 0 ☐ 1 ☐ 2 ☐ 3+

Income(\$):

Coapplicant income(\$):

Do you have a credit history that meets our guidelines? ☐ Yes ☐ No

Where is the property area? ☐ Urban ☐ Semiurban ☐ Rural

Desired loan amount (1000\$):

Desired loan term (months):

6. Press 'submit' button and watch result of the loan application