

# Manju Graded Coding Project 3

## Web Development using Flask

### House Loan eligibility check application

#### 1. Project Objective:

- 1.1. This is a standard supervised classification task. A classification problem where we have to predict whether a customer is eligible for loan or not based on a given set of independent variable(s).
- 1.2. To build a Python Flask ML application where a user has to get registered by entering the username and password and login to the website and then enter their details to check whether they are eligible for loan or not.

#### 2. Model Building and saving the model using Pickle

The python model building is attached as a python jupyter notebook below:

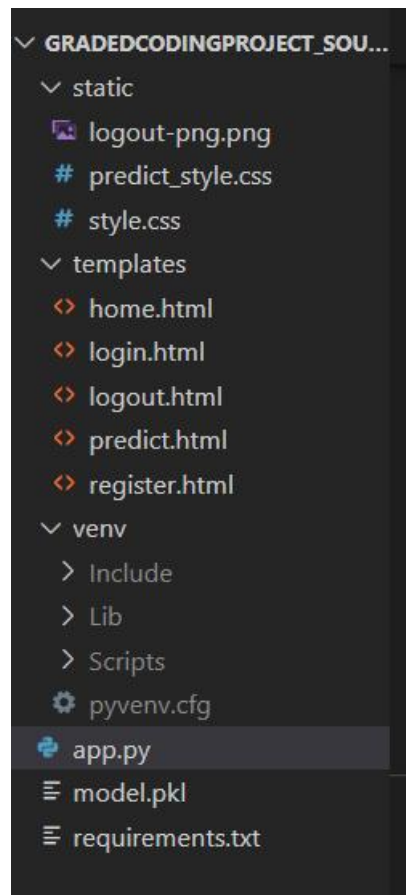


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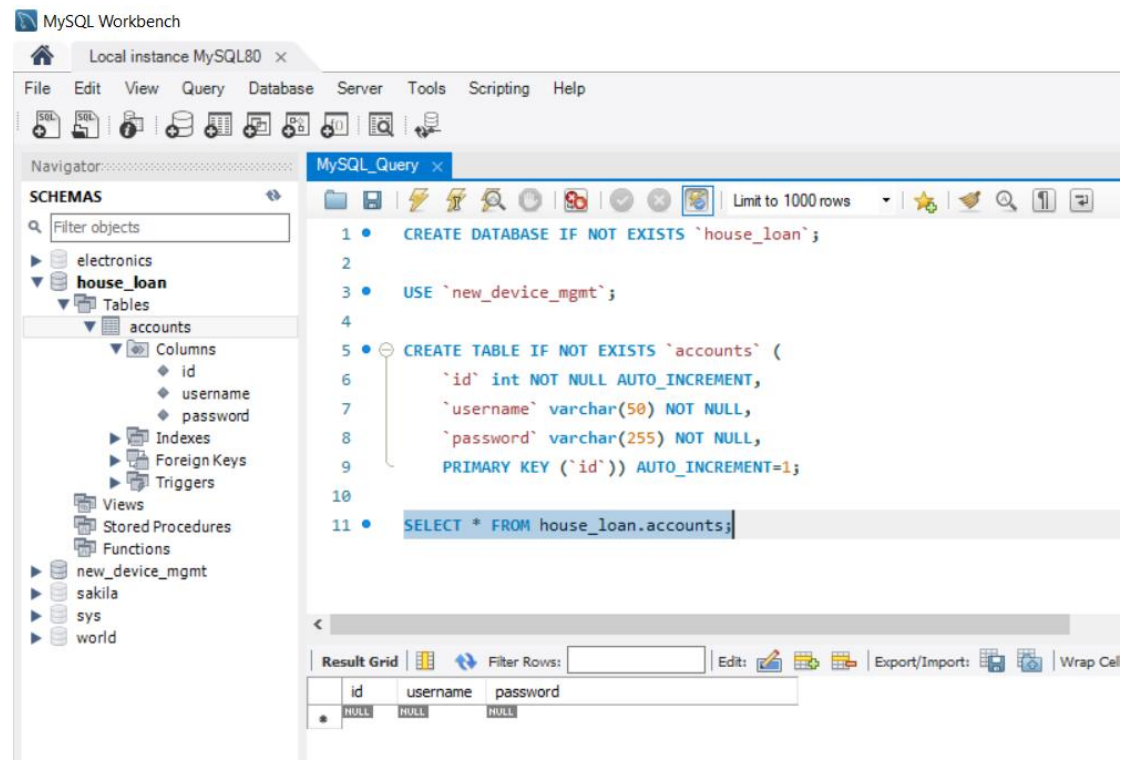
#### 3. Python Flask Application development

The below screen prints represent the working of the application flow.

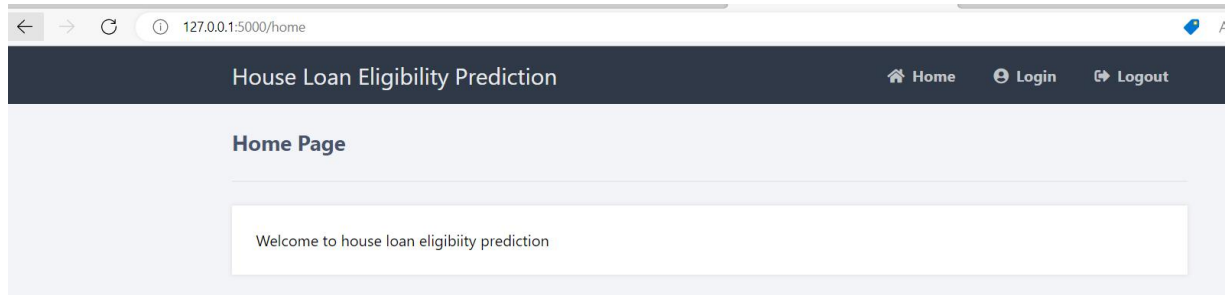
### 3.1. Project Structure



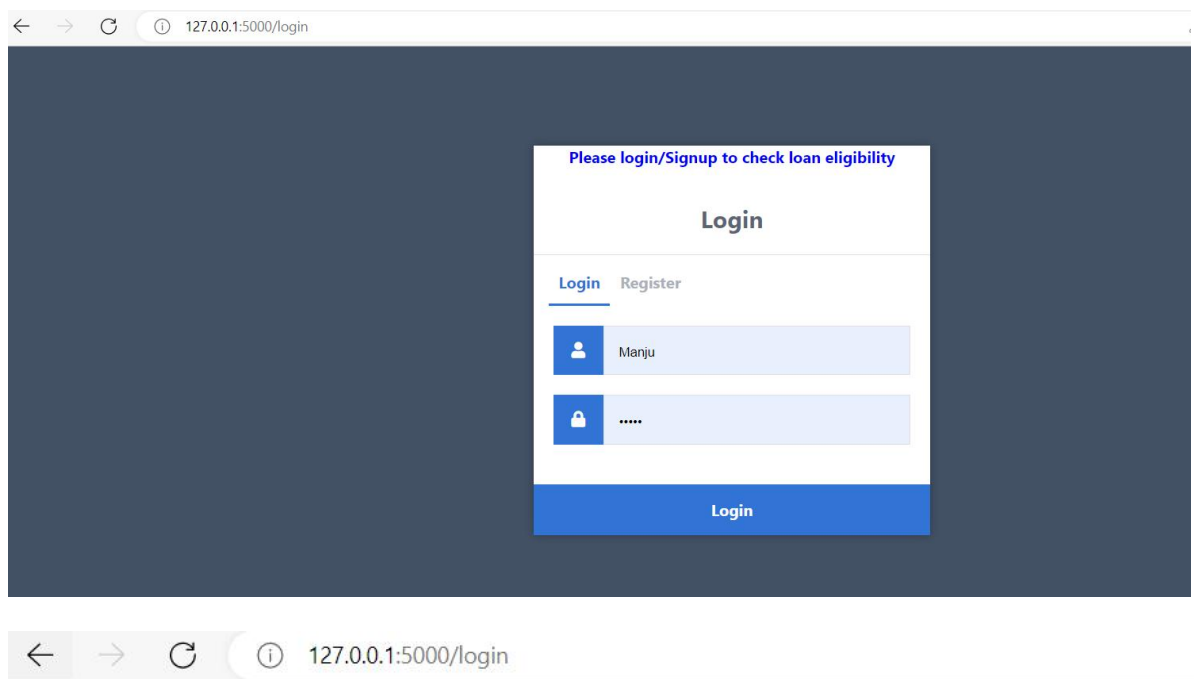
### 3.2. Database before starting the application



### 3.3. Home page



### 3.4. Try to login without register



**Incorrect username/password!**


### 3.5. Register the user without username


→ ↻ ⓘ 127.0.0.1:5000/register

Already have an account ? please login.

## Register

Login Register

Username

.....

Please fill out this field.

Register


### 3.6. Register the user without password


ⓘ 127.0.0.1:5000/register

Already have an account ? please login.

## Register

Login Register

Manju

Password

Please fill out this field.

Register


### 3.7. Register the user with proper values


127.0.0.1:5000/register

Already have an account ? please login.

## Register

[Login](#) [Register](#)

 Manju



....

Register

127.0.0.1:5000/register

House Loan Eligibility Prediction

[Home](#) [Login](#) [Logout](#)

### Home Page

Welcome to house loan eligibiity prediction

**Registered successfully !! Please login to check loan eligibility.**

### 3.8. Database after registration

The screenshot shows the MySQL Workbench interface. On the left, the 'SCHEMAS' pane displays the 'house\_loan' database structure, including tables like 'accounts'. The main editor shows a SQL query that creates a database, uses a schema, creates a table 'accounts' with columns 'id', 'username', and 'password', and then selects all data from the 'accounts' table. The 'Result Grid' at the bottom shows the output of the query, displaying a single row with the ID 1, username 'Manju', and password 'bWFuanU='.

```
1 • CREATE DATABASE IF NOT EXISTS `house_loan`;  
2  
3 • USE `new_device_mgmt`;  
4  
5 • CREATE TABLE IF NOT EXISTS `accounts` (  
6   `id` int NOT NULL AUTO_INCREMENT,  
7   `username` varchar(50) NOT NULL,  
8   `password` varchar(255) NOT NULL,  
9   PRIMARY KEY (`id`)) AUTO_INCREMENT=1;  
10  
11 • SELECT * FROM house_loan.accounts;
```

id	username	password
1	Manju	bWFuanU=

### 3.9. Register the user who has already registered

← → ↺ ⓘ 127.0.0.1:5000/register

User already registered !! Please go to HOME page to login.

### 3.10. Login the user without user name

127.0.0.1:5000/login

Please login/Signup to check loan eligibility

## Login

[Login](#) [Register](#)

Please fill out this field.

Login

### 3.11. Login the user without password

127.0.0.1:5000/login

Please login/Signup to check loan eligibility

## Login

[Login](#) [Register](#)

Please fill out this field.

Login

### 3.12. Login the user without register

The screenshot shows the MySQL Workbench interface for a local instance of MySQL 8.0. The left sidebar displays the 'SCHEMAS' tree, with 'house\_loan' expanded to show its 'accounts' table. The 'accounts' table has columns 'id', 'username', and 'password'. The main editor shows a SQL query that creates a database 'house\_loan', uses it, and creates a table 'accounts' with the specified columns and a primary key on 'id'. Below the query, the 'Result Grid' shows the output of the query, which is an empty table with columns 'id', 'username', and 'password'.

```
1 • CREATE DATABASE IF NOT EXISTS `house_loan`;
2
3 • USE `new_device_mgmt`;
4
5 • CREATE TABLE IF NOT EXISTS `accounts` (
6   `id` int NOT NULL AUTO_INCREMENT,
7   `username` varchar(50) NOT NULL,
8   `password` varchar(255) NOT NULL,
9   PRIMARY KEY (`id`)) AUTO_INCREMENT=1;
10
11 • SELECT * FROM house_loan.accounts;
```

id	username	password
1	Manju	bWFunU=

The screenshot shows a web browser window with the address bar displaying '127.0.0.1:5000/login'. The page has a dark blue background and a white login form. The form has a title 'Please login/Signup to check loan eligibility' and a 'Login' button. The form also has a 'Register' link and a 'Login' link. The 'Login' link is selected, and the form contains input fields for 'username' (with the value 'Suresh') and 'password' (with masked characters '.....').

Please login/Signup to check loan eligibility

## Login

[Login](#) [Register](#)

Login

**Incorrect username/password!**



### 3.13. Login with proper user

127.0.0.1:5000/login

Please login/Signup to check loan eligibility

## Login

[Login](#) [Register](#)

Login

127.0.0.1:5000/login

Please enter the details in order to check your House Loan Eligibility

Gender	<input type="text" value="Male"/>
Married	<input type="text" value="Married"/>
Dependents	<input type="text"/>
Education	<input type="text" value="Graduate"/>
Self Employed	<input type="text" value="Yes"/>
Applicant's Income (\$)	<input type="text"/>
Co Applicant's Income (\$)	<input type="text"/>
Loan amount in thousands (\$)	<input type="text"/>
Loan amount term (in months)	<input type="text"/>
Credit History	<input type="text" value="Yes"/>
Property Area	<input type="text" value="Urban"/>

Predict House Loan Eligibility

[Logout](#)

### 3.14. Enter the details to check loan eligibility without the required fields

127.0.0.1:5000/login

Please enter the details in order to check your House Loan Eligibility

Gender	Male
Married	Married
Dependents	
Education	
Self Employed	Please fill out this field.
Applicant's Income (\$)	
Co Applicant's Income (\$)	
Loan amount in thousands (\$)	
Loan amount term (in months)	
Credit History	Yes
Property Area	Urban

Predict House Loan Eligibility

[Logout](#)

127.0.0.1:5000/login

Please enter the details in order to check your House Loan Eligibility

Gender	Male
Married	Married
Dependents	3
Education	Graduate
Self Employed	Yes
Applicant's Income (\$)	
Co Applicant's Income (\$)	Please fill out this field.
Loan amount in thousands (\$)	
Loan amount term (in months)	
Credit History	Yes
Property Area	Urban

Predict House Loan Eligibility

[Logout](#)

## Please enter the details in order to check your House Loan Eligibility

Gender

Married

Dependents

Education

Self Employed

Applicant's Income (\$)

Co Applicant's Income (\$)

Loan amount in thousands (\$)

Loan amount term (in months)

Credit History

Property Area

Please fill out this field.

Predict House Loan Eligibility

[Logout](#)

### 3.15. Enter the details to check loan eligibility with all the details filled

## Please enter the details in order to check your House Loan Eligibility

Gender

Married

Dependents

Education

Self Employed

Applicant's Income (\$)

Co Applicant's Income (\$)

Loan amount in thousands (\$)

Loan amount term (in months)

Credit History

Property Area

Predict House Loan Eligibility

[Logout](#)

127.0.0.1:5000/predict

## Please enter the details in order to check your House Loan Eligibility

**Congrats you are eligible for loan**

Gender	<input type="text" value="Male"/>
Married	<input type="text" value="Married"/>
Dependents	<input type="text"/>
Education	<input type="text" value="Graduate"/>
Self Employed	<input type="text" value="Yes"/>
Applicant's Income (\$)	<input type="text"/>
Co Applicant's Income (\$)	<input type="text"/>
Loan amount in thousands (\$)	<input type="text"/>
Loan amount term (in months)	<input type="text"/>
Credit History	<input type="text" value="Yes"/>
Property Area	<input type="text" value="Urban"/>

**Predict House Loan Eligibility**

[Logout](#)

### 3.16. Log out the application

127.0.0.1:5000/logout

[Home](#) [Login](#) [Logout](#)

**Thank you !!! You have successfully Logged Out**