

1. Installation and environment preparation:

- Download and install **Python 3.7.4**.
- Create a folder under your local drive "flask_app". Set the virtual environment by using the following command: **py -m venv env**. Finally activate the virtual environment using the following command: **env\Scripts\activate**
- Install flask using the following command: **pip install flask**
- Download an editor for Python and HTML coding purpose. **Sublime Text 3** was downloaded and installed.
- Download **MySQL 5.6** version compatible with Windows 7 and install. MySQL56 service requires should be for database.

The above steps prepares the environment for web application development with Python/Flask/MySQL.

2. Scope:

- Adds new employees to the database.
- Lists the employees from the database.
- Deletes the employees based on employee name.
- Searches the database provided employee name/designation/phone number.

3. Programming: Includes Python file: **EmployeePy** and HTML files: **index.html**, **add.html**, **success.html**, **view.html**, **delete.html**, **deleterecord.html**, **search.html**

Python file is saved in the directory **flask_app**, created during installation. HTML files are saved in folder "**templates**" under the **flask_app** folder.

Python programming: File Name: **EmployeePy.py**.

Import files: import everything from flask library → **from flask import *** and **import MySQL from flaskext.mysql** for handling database tasks. Database connection details like: Hostname, Port, User Name, and Password details are initialized.

EmployeePy.py: add.html initiates the saveDetails method. **Savedetails** method reads input data from add.html file and stores in variables like Name, Designation, Address, Phone. Database connection is initiated and "autocommit" is set to True. Insert statement is executed and the message is displayed.

view.html executes the selected statement on the employee table and displays the data from the table.

delete.html has an input field of Employee Name. The name field is validated for wildcard search. Delete statement is executed and displays a message of successful deletion of employee.

search.html has three input fields: Employee Name, Designation, Phone. User can enter either of the three fields and the result is displayed accordingly.

Attached below are the screenshots of the Employee Database web application:

URL routing to localhost **"/"** renders **"index.html"**. Displays the user to select :



Employee Information website

[Add Employee](#)

[List Records](#)

[Delete Record](#)

[Search Employee](#)

On clicking **Add Employee**: Displays the following page



The screenshot shows a web browser window with the title 'Add Employee'. The address bar displays '127.0.0.1:5000/add'. The page content includes a title 'Employee Information' and four input fields: 'Name', 'Designation', 'Address', and 'Phone'. A 'Submit' button is located below the 'Phone' field.

Employee Information

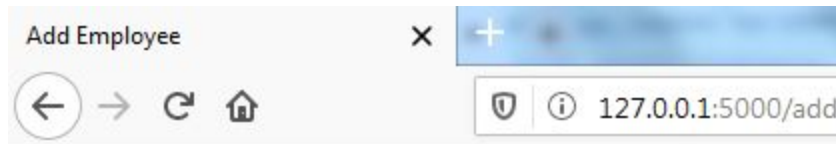
Name

Designation

Address

Phone

Enter the details into each field. And click submit, it saves the data into the database.



The screenshot shows the same web browser window as before, but now the input fields contain data: 'Name' is 'MukeshAmbani', 'Designation' is 'CEO', 'Address' is 'Mumbai', and 'Phone' is '1234'. The 'Submit' button remains below the 'Phone' field.

Employee Information

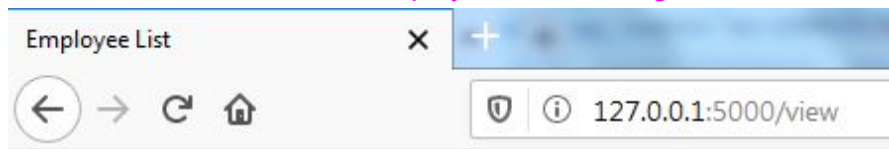
Name

Designation

Address

Phone

We can view the addition of employee details using the link “**View Employees**”



View employee details

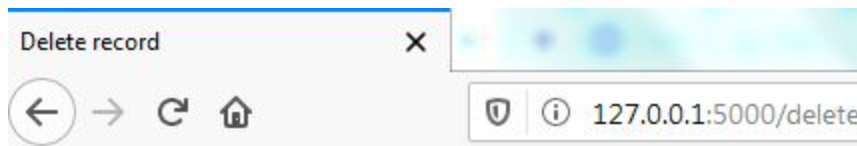
Employee ID	Employee Name	Designation	Address	Phone
13	MukeshAmbani	CEO	Mumbai	1234

[Home page](#)

Return to main page: Follow the link: [Home page](#)

List Records: The second link displays a list of all the employee information from the database. Redirects to the view.html page to display the records present in the database.

Delete Record: Takes input of Employee Name to delete the record. The user can enter a partial name or the complete name of the employee. The delete operation on Employee Name works as a wildcard search.



Remove Employee from the list

Enter Employee Name

On submit button click.

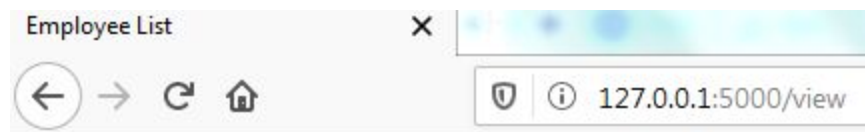


Record successfully deleted

[View List](#)

[Home page](#)

View List should display zero records.



View employee details

Employee ID	Employee Name	Designation	Address	Phone
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[Home page](#)

After adding three employee records, the employee database view is as below:



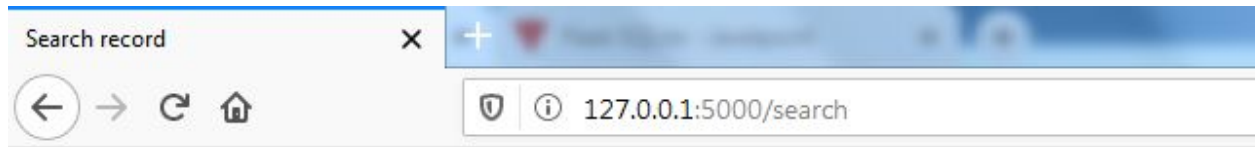
View employee details

Employee ID	Employee Name	Designation	Address	Phone
14	MukeshAmbani	CEO	Mumbai	1234
15	AnandMahindra	CFO	Mumbai	2345
16	NarayanMurthy	CEO	Bangalore	3456

[Home page](#)

Search Employee: Searches based on employee name or employee designation or employee number. From the above list of employees,

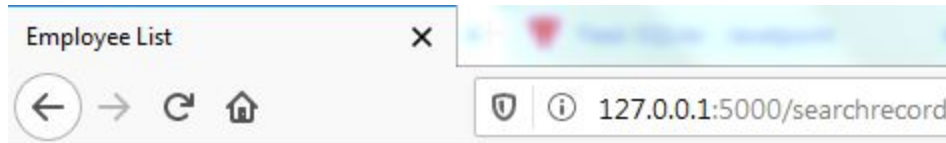
Search on designation :



Employee Search

Name / Designation / Phone

Result:

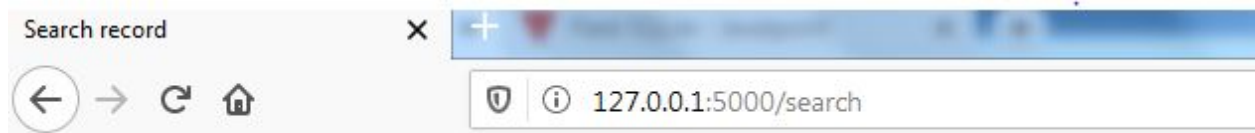


Employee Information

ID	Name	Designation	Address	Phone
14	MukeshAmbani	CEO	Mumbai	1234
16	NarayanMurthy	CEO	Bangalore	3456

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Employee Search:



Employee Search

Name / Designation / Phone

Result:

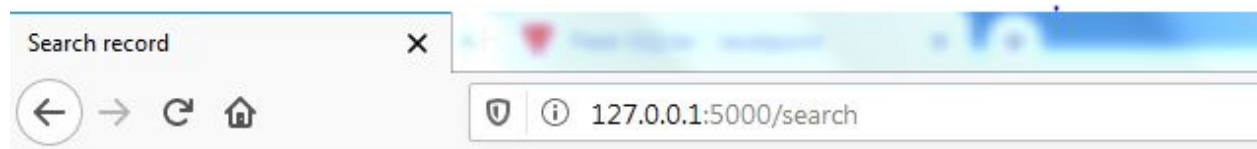


Employee Information

ID	Name	Designation	Address	Phone
15	AnandMahindra	CFO	Mumbai	2345

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Search on Phone field:



Employee Search

Name / Designation / Phone

Result:



Employee Information

ID	Name	Designation	Address	Phone
16	NarayanMurthy	CEO	Bangalore	3456

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