

Database Final Project

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Disclaimer

Tech stack

- Backend technologies: Python (version 3.7) + Flask
- Frontend technologies: HTML (plain) + JavaScript (script inside HTML)

How to run

Flask

Use the following command to start the Flask server:

```
$ flask --app cookzilla_cl6530 run
```

It will run on localhost with port number 5000, so visit <http://127.0.0.1:5000> in your web browser.

MySQL

My flask server is trying to connect to the MySQL instance through port number 8889 on localhost. The database name is “FlaskDemo”.

The DDL SQL file is also included in the github repo.

1 - Required Cases

My implementation supports all required cases. In the following sections I will introduce them one by one.

1.1 - Search for Recipes

After the user logs in, the server will take the user to the homepage. Inside the homepage, there is a section call “Search Recipes”, which is highlighted by the red rectangle in the snapshot below.

Users can actually do more complex searches (additional feature) here: the server just needs you to fill in only one blank to search, but you are able to add more criterias to refine the search.

Supported searching criterias includes: keyword in recipe title, recipe tag, recipe author, recipes reviewed by the given reviewer, and recipe review star.

The screenshot shows a web browser window with the address bar set to 127.0.0.1. The main content area displays a search form titled "Search Recipes". The form includes fields for "keyword", "tag", "author", "reviewer", and "star", each with a corresponding input field. A red box highlights this search form area. Below the form are links: "Manage your recipes", "Post a recipe", "Manage groups and events", and "Logout".

recipe1

author: test1

[View](#)

test1

author: test1

[View](#)

After clicking the “Search” button, the server will run the complex queries and render you the results in another page. The following snapshot shows the search results that are recipes with the tag “Asian”. Clicking the “View” button on this page will take you to the recipe info page (I will talk more on this in the next section).

The screenshot shows a web browser window with the address bar set to 127.0.0.1. The main content area displays a heading "Search Results". Below it, there are two search results: "recipe1" and "rice1". Each result has a "View" link and is attributed to "author: test1". At the bottom left, there is a "home" link.

1.2 - Display Recipe Info

Again in the home, there is a search bar called “Go to Recipe by ID” (highlighted in red), you can put the recipe ID here and it will take you to the “Recipe Details” page.

Welcome test1

Go to Recipe by ID

recipeID
Go

Search Recipes

keyword: Asian
author: reviewer: star:
Search

[Manage your recipes](#)
[Post a recipe](#)
[Manage groups and events](#)
[Logout](#)

recipe1
author: test1
[View](#)

test1
author: test1
[View](#)

The “Recipe Details” page contains:

- Recipe ID
- Recipe author
- Recipe title
- Ingredients
- Steps of the recipe
- Recipe tags
- Pictures of the recipe
- User’s review of the recipe (if any)
 - If the user didn’t review the recipe before, the server will insert a new record into the database.
 - If the user has reviewed the recipe, the server will update the existing record with the user’s new input.
 - The form for the user to add or update the review
 - Users can add unlimited review pictures by clicking the “add picture” button.
- A link to view recipe reviews
- A link to go back to the home page

The snapshot below shows the “Recipe Details” for recipe ID 12:

Private < > 127.0.0.1 +

Recipe Details

RecipeID: 12

Author: test1

Title

rice2

Number of servings

3

Ingredients

rice 3cup
water 500ml

Steps

cook with water

Tags

Asian

Chinese

Pictures



Your review

I did it!

Good rice recipe!

Star rating: 5



Private < > 127.0.0.1 +

Your review

I did it!

Good rice recipe!

Star rating: 5



Add or update review

title

review

1 Star

Add

add picture

[View reviews](#)
None

You can also visit this “Recipe Details” page by clicking the “View” button in the “Search Results” page.

1.3 - Login

The first page the user will see after starting the server is the index page. You can either choose to log in or register.



Cookzilla (cl6530)

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

1.3.1 - Registration

If you choose to register a new user, you have to provide the following information in the registration page:

- Unique user name
- Password
- First name
- Last name
- Email address
- User profile

username
password
first name
last name
email
profile

[Go back](#)

The password is salted and hashed. You can see for password “test1”, the encrypted password stored in the database will be

“\$2b\$12\$zZdO/L1mlsQNwJPaptCNfuPxmCgRBrJJNSmOBM4Who9s92hv.wFdG”.

Browse Structure SQL Search Insert Export Import Privileges Operations Triggers

Showing rows 0 - 8 (9 total, Query took 0.0002 seconds.)

fName	lName	email	profile
cat	cat	cat@cat.cat	cat
c	I	ccc@ccc.com	III
test1	test1	test1@test1.com	test1 profile

1.3.2 - Login

If you choose to log in, you have to provide the user name and password.



[Go back](#)

The server is able to compare the plain password with the encrypted one stored in the database. If the password doesn't match, an error message "Invalid password" will be printed out.



Error: Invalid password

[Go back](#)

After the user logs in successfully, the user can choose to view their own recipes or manage the groups. Again in the home page, you can click "Manage your recipes", which will take you to the "Search Results" page that shows all your recipes; or you can click "Manage groups and events", which will take you to the "Manage Groups" page. I have implemented several additional features there.



Welcome test1

Go to Recipe by ID

Search Recipes

[Manage your recipes](#)

[Post a recipe](#)

[Manage groups and events](#)

[Logout](#)

Manage Groups

Search Groups

<input type="text" value="group name"/>
<input type="text" value="creator"/>
<input type="text" value="description"/>

Search Events

<input type="text" value="event ID"/>
<input type="text" value="group name"/>
<input type="text" value="creator"/>
<input type="text" value="people who participate"/>

Create Group

<input type="text" value="group name"/>
<input type="text" value="description"/>

[Owned Groups](#)

[Joined Groups](#)

[RSVPed events](#)

[home](#)

If you click “Owned Groups” in the “Manage Groups” page, the server will show you the “Search Group Results” page that lists all the groups you own. Clicking the “View” button will take you to the “Group Info” page. There are a lot of additional features in the “Group Info” page too.

Group Info

test1

Search Group Results

test1

Creator: test1

Description: test1 group

[View](#)

test1 group2

Creator: test1

Description: test1 group2 good

[View](#)

[home](#)

Create Event

Event Name
Event Description
YYYY-MM-DD HH:MM:SS
[Create](#)

[home](#)

1.4 - Post a Recipe

As always, on the home page, you can click “Post a recipe”. This action tells the server to take you to the “Add New Recipe” page. On top you can add the recipe title as well as the number of

Add New Recipe

title
numServings
ingredient
amount
cup
link
step
step
tag
Picture URL
relatedRecipe
Picture URL
relatedRecipe

[Add Recipe](#)

[add ingredient](#) [add step](#) [add tag](#) [add related recipe](#) [add picture](#) [home](#)

servings. At the bottom I have 5 different buttons for you to add unlimited:

- Ingredients
 - New ingredient will be added to the database if not existed in database

- Ingredient unit are pre-defined in drop-down
- Cooking steps
 - Can add as many steps as needed
- Tags
 - Add new tags if not already exist in database
- Pictures
 - Can add pictures in the form of url
- Related recipe IDs

After you add all the information, you can click the “Add Recipe” button to submit and it will take you to the “Recipe Details” page.

2 - Additional Features

I implemented many additional features, I will introduce them one by one.

2.1 - Post a review

Your review

good!

good recipe!

Star rating: 5

Add or update review

title	<input type="text"/>
review	<input type="text"/>
1 Star	<input type="button" value="▼"/>
<input type="button" value="Add"/>	
<input type="button" value="add picture"/>	

[View reviews](#)

[home](#)

Inside the “Recipe Details” page, users can add or update their reviews. If the user has posted a review for the recipe, they can choose to update it. If the user hasn’t, they can add a new one. The review includes title, review content, ratings in stars, and pictures. You can add as many pictures as you want to a review.

2.2 - View all the reviews of a recipe

First of all, the “Recipe Details” page shows your review if you have reviewed the recipe. And you can also click “View reviews” to view more. The following snapshot shows the reviews for recipe ID 12.

Reviews for Recipe 12

cat review2

cat review2 2

Star rating: 5



Reviewer: cat

I did it!

Good rice recipe!

Star rating: 5



2.3 - Reviews pagination

Given in the real world there are much more reviews than recipes. I also split the reviews of a recipe into multiple pages. If you click the “More reviews” button, it will take you to the next page of reviews. The server will print “No more reviews!” when you reach the end.

Reviews for Recipe 9

good!

good recipe!

Star rating: 5

Reviewer: test1

test2 good!

test2 good recipe!

Star rating: 5

Reviewer: test2

test3 good!

test3 good recipe!

Star rating: 4

Reviewer: test3

[More reviews](#)

[Back to recipe](#)

[home](#)

Reviews for Recipe 9

test4 good!

test4 good recipe!

Star rating: 3

Reviewer: test4

test5 good!

test5 good recipe!

Star rating: 2

Reviewer: test5

[More reviews](#)

[Back to recipe](#)

[home](#)

Reviews for Recipe 9

No more reviews!

[Back to recipe](#)

[home](#)

2.4 - Post an event for a group that user belongs to

After the user joins the group, she/he can post an event in the “Group Info” page. The user needs to put event name, event description, and event time information.

Group Info

[test1](#)

Creator

Creator: test1

Description

Description: test1

[Get list of group members](#)
[Show group events](#)

You have joined group!

Create Event

Event Name
Event Description
YYYY-MM-DD HH:MM:SS
<input type="button" value="Create"/>

The “Event Info” page shows the event details and the members of the group can RSVP the event by Y/N or leave blank;

Event Info

[Event ID: 4](#)

Description

Description: cats

Date

Description: 2023-01-19

Group Name

Name: test1

Group Creator

Creator: test1

[List of member RSVPed](#)

RSVP event

Y/N
<input type="button" value="RSVP"/>

[home](#)

2.5 - RSVP to an event that the user belongs to

As the snapshot above shows, there is a section called “RSVP event” in the “Event Info” page, only group members will be able to see it and RSVP. The “Group Member RSVPed” page shows the event information, the list of members who have RSVPed, as well as the pictures of the event. The members can also post unlimited pictures of the event here.

Group Member RSVPed

Event ID: 4

Description

Description: cats

Date

Description: 2023-01-19

RSVPed Members

Member: cat Response: Y

Pictures



Picture URL
 Add Picture
[Back to event info](#)
[home](#)

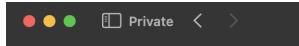
2.6 - More complex searches

As I mentioned in Part 1.1, users can search recipes by a complex combination of various fields on the home page. They can do complex searches on the “Manage Groups” page too.

Search Recipes

<input type="text"/> keyword
<input type="text"/> tag
<input type="text"/> author
<input type="text"/> reviewer
<input type="text"/> star
<input type="button"/> Search

Besides creating groups, users can also view the list of groups they own, the list of groups they've joined and the list of group events they have RSVPed.



Manage Groups

Search Groups

group name
creator
description
<input type="button" value="Search"/>

Search Events

event ID
group name
creator
people who participate
All events <input type="button" value=""/>
<input type="button" value="Search"/>

Create Group

group name
description
<input type="button" value="Create"/>

[Owned Groups](#)
[Joined Groups](#)
[RSVPed events](#)
[home](#)

I also provide two search features: one is to search the groups and the other is to search the events.

For group searching, the server allows you to leave everything blank, in which case all groups will be returned. You can also refine the search by group name, group owner, and keyword in group description.

For event searching, it is also fine to leave everything blank, and all the events will be returned. Or you can search events using event ID, group name, the group owner, and the group member who RSVPed the event. I also create a drop-down to let you specify whether previous events will be returned or not.

The sample output of group searching and event searching:

Search Group Results

test1

Creator: test1

Description: test1 group

[View](#)

test1 group2

Creator: test1

Description: test1 group2 good

[View](#)

[home](#)

Search Event Results

Event ID: 4

Event Name: Cat event

Description: cats

Date: 2023-01-19 12:12:12

Group Name: test1

Group Creator: test1

[View](#)

Event ID: 2

Event Name: test1

Description: test1 event1

Date: 2022-12-30 10:00:00

Group Name: test1

Group Creator: test1

[View](#)

2.7 - User feed on the home page

I also added the feature to feed random recipes (at most 5) on the lower half of the home page.

Welcome test1

Go to Recipe by ID

recipeID

Search Recipes

keyword

tag

author

reviewer

star

[Manage your recipes](#)
[Post a recipe](#)
[Manage groups and events](#)
[Logout](#)

abcd

author: cat

[View](#)

cat food

author: cat

[View](#)

test1