CODE SNIPPET RECOMMENDER

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OBJECTIVE

People who are not usually proficient in writing codes from scratch, tend to struggle for long stretches of time to write a piece of code, which is just a small part of a bigger assignment.

Therefore, in these situations, it would be very helpful if these small snippets of codes were available in a single platform for people to look them up. This project aims to do that.

PROJECT OVERVIEW

- We have used the Python web development framework Flask for our project.
- We have a simple UI which has two options on screen, one is to contribute by uploading a code snippet, and the other one is search for code snippets serving a certain purpose.
- The user clicks on the button corresponding to their requirement and then they are redirected to another page accordingly.
- If the user intends to upload a particular code snippet, the user is redirected to the sign-up page where the user either signs up or registers if they are a first time user.

PROJECT OVERVIEW

- After logging in, the user is redirected to a form.
- The form asks the user for the language in which the code snippet is written, the keywords describing the code snippet, and finally the snippet itself.
- If the user intends to upload a particular code snippet, the user is redirected to the sign-up page where the user either signs up or registers if they are a first time user.
- After logging in, the user is redirected to a form.

PROJECT OVERVIEW

- The form asks the user for the language in which the code snippet is written, the keywords describing the code snippet, and finally the snippet itself.
- If the user wants to rate a particular snippet according to their experience and satisfaction, the user will have to register if they are a new user or login if they are already a registered user.
- To search for code snippets, the user need not register or log in. They can simply search in the search bar to view the desired snippets.

TOOLS AND SYSTEM REQUIREMENTS

Programming language: Python, HTML, CSS, Javascript

Framework: Flask

Database: Mongodb

PROJECT ARCHITECTURE

User Authentication:

- Create Account
- Sign in
- Sign out

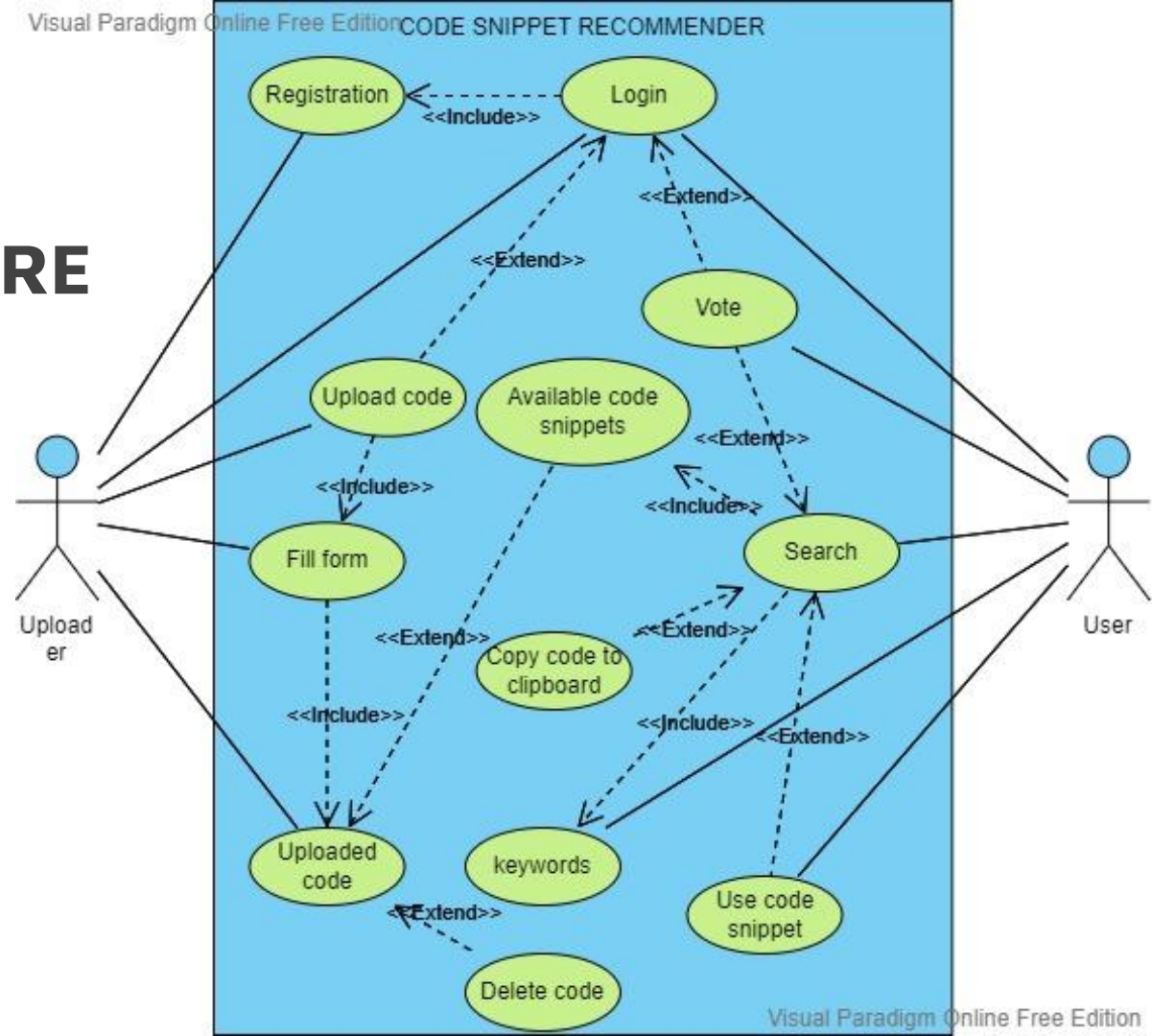
Search:

- Keywords based searching
- Upvote/Downvote code snippets
- Copy code to clipboard

Upload Code Snippet:

- Contribute code snippet by filling a form
- View contributed code snippets
- Delete uploaded code snippets

PROJECT ARCHITECTURE



FUNCTIONALITIES AND LOGIC

- At first, user lands on **search page** from where he/she can directly search for code snippets(without signing in) by providing keywords.
- After the user searches for code, he/she is **redirected on the search results page.**
- On the search result page, all the **matching code snippets are shown** and user is given the option to copy the code to clipboard.
- Search results shows details like user who uploaded the code snippet, language, description, vote counts and the code itself

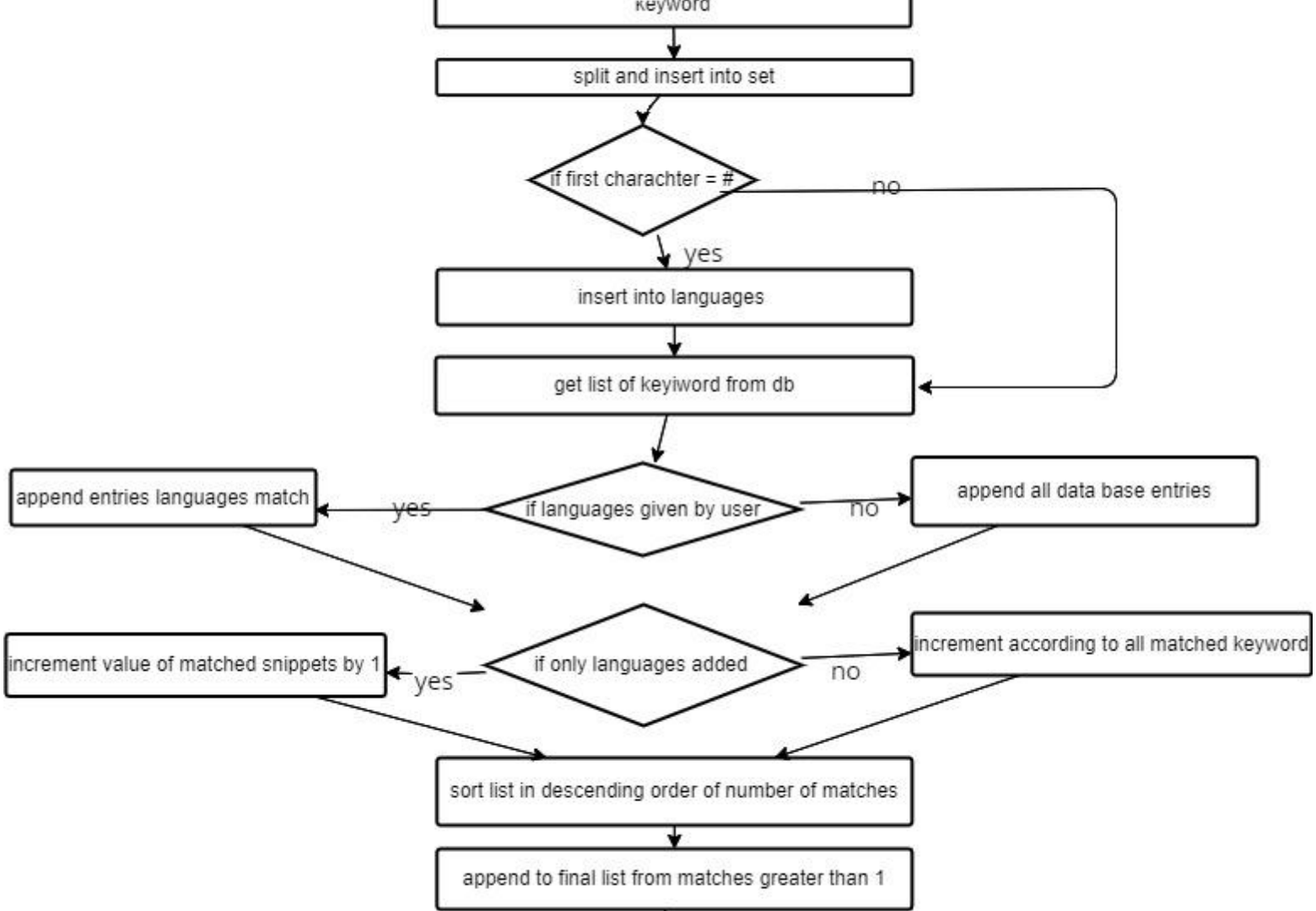
FUNCTIONALITIES AND LOGIC

- When the user searches by entering a particular type of code snippet, the search takes into consideration the matching of the keywords first, followed by the number of upvotes received by a particular code snippet.
- The uploader can delete their own snippet by clicking on the delete button
- Also there are options to Upvote or Downvote the code snippets, but user needs to be logged in for that functionality.
- User can create account and log in to upload code snippets.

FUNCTIONALITIES AND LOGIC

- After logging in, user is provided with the form to upload code snippets.
- All the code snippets uploaded by a user is shown on the dashboard page itself.
- User can delete the uploaded code snippet from the dashboard.
- After logging in, there is search bar on the dashboard page from where user can search for code snippets and also upvote/downvote it.

Next slide shows the flowchart for the keyword based search:


keyword
split and insert into set
if first charachter = #
no
yes
insert into languages
get list of keyiword from db
append entries languages match
yes
if languages given by user
no
append all data base entries
increment value of matched snippets by 1
yes
if only languages added
no
increment according to all matched keyword
sort list in descending order of number of matches
append to final list from matches greater than 1

DATABASE DESIGN

Mongodb has been used for the database requirement of our project.

User:

- _id
- name
- email
- password

Code Snippet:

- _id
- user_email
- language
- keywords
- description
- code snippet
- votes

RESULTS AND SCREENSHOTS

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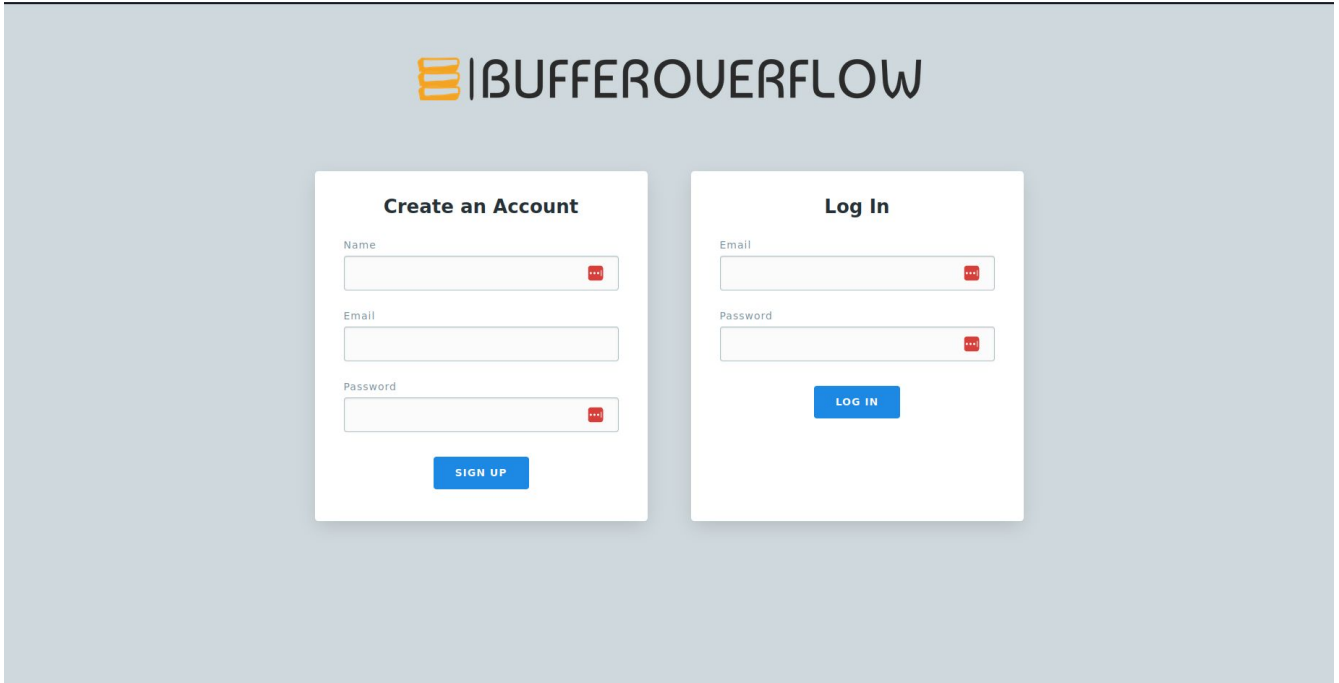
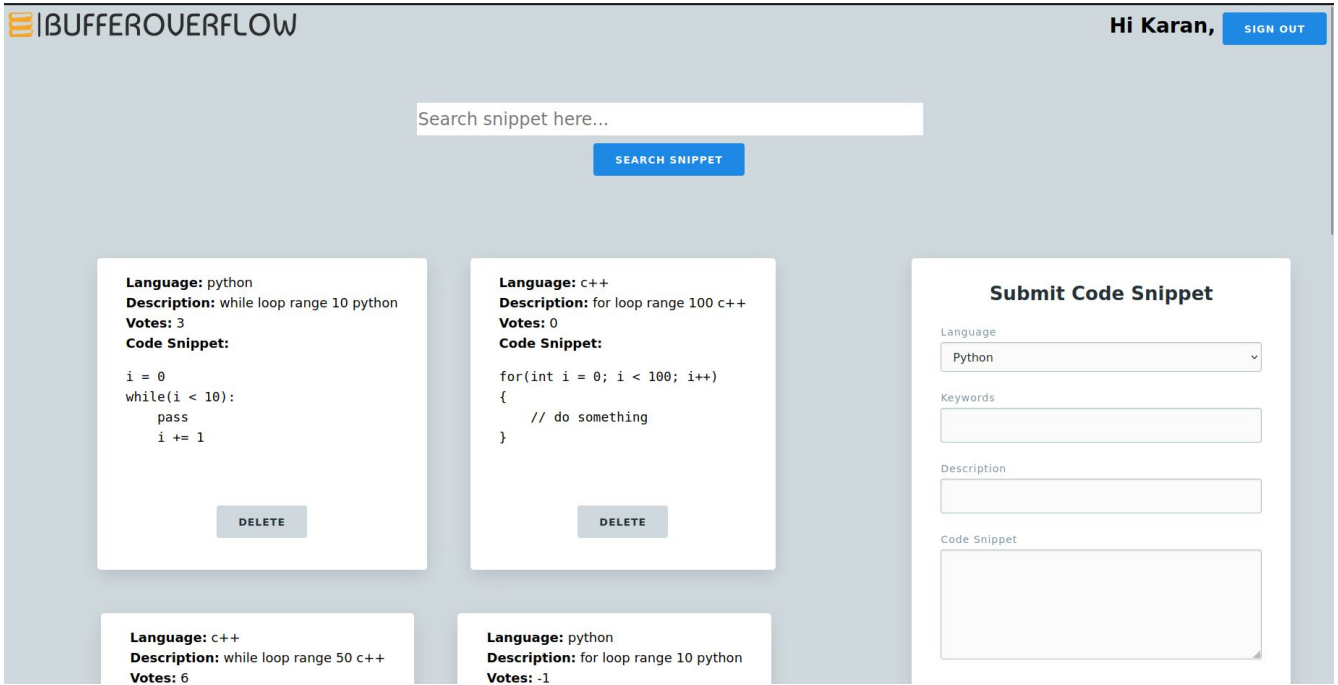
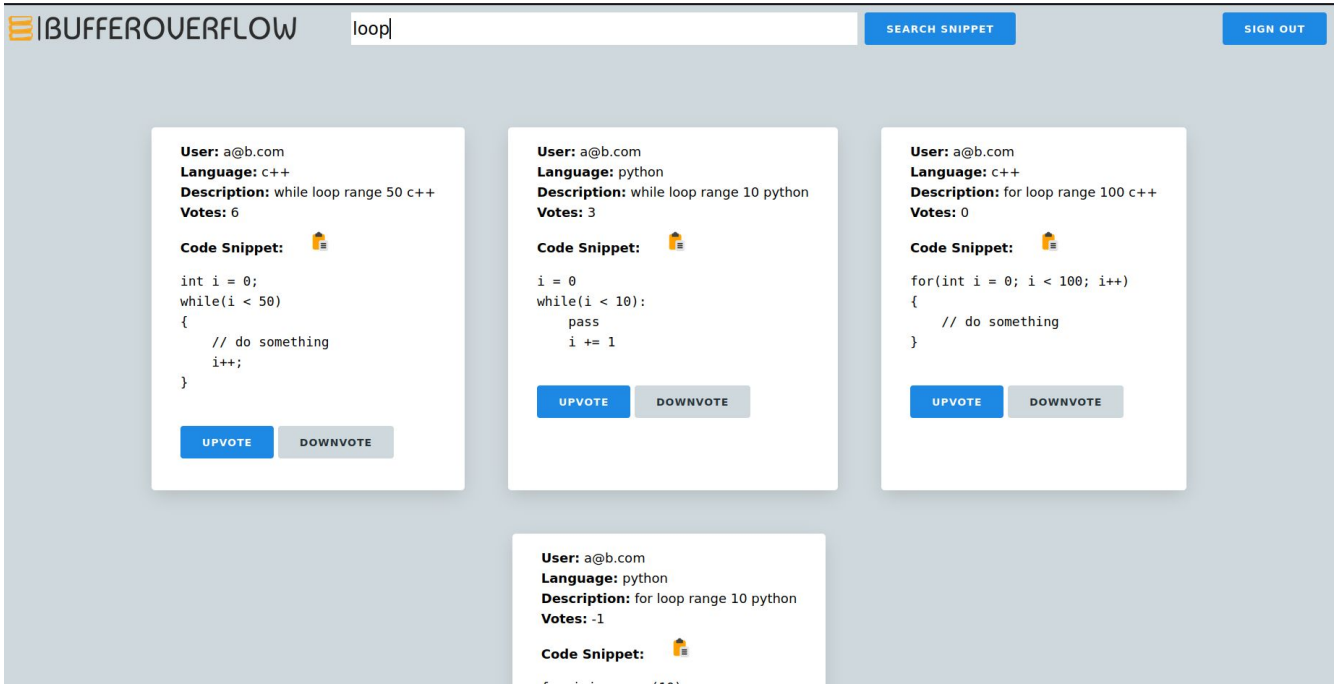


RESULTS AND SCREENSHOTS



RESULTS AND SCREENSHOTS



Thank You