

Software System Development Project

CODE SNIPPET RECOMMENDER

Karan Bhatt - 2022202003

Deepak Singh Shekhawat - 2022202008

Pritha Ghosh - 2022201067

Devesh Nandan - 2022201080

Abstract

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, hence, hindering their bigger aim of bringing a significant project to life. Thus, a utility, which provides these users with a plethora of code snippets to choose from to serve their purpose might ease their work significantly. Our project aims to provide these individuals with the provision of searching codes which serve a particular purpose or demonstrate a particular syntax in languages that they desire. These codes are made available when people upload the code snippets serving a particular purpose.

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.
- 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.
- 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.

Architecture and Use case Diagram

User Authentication:

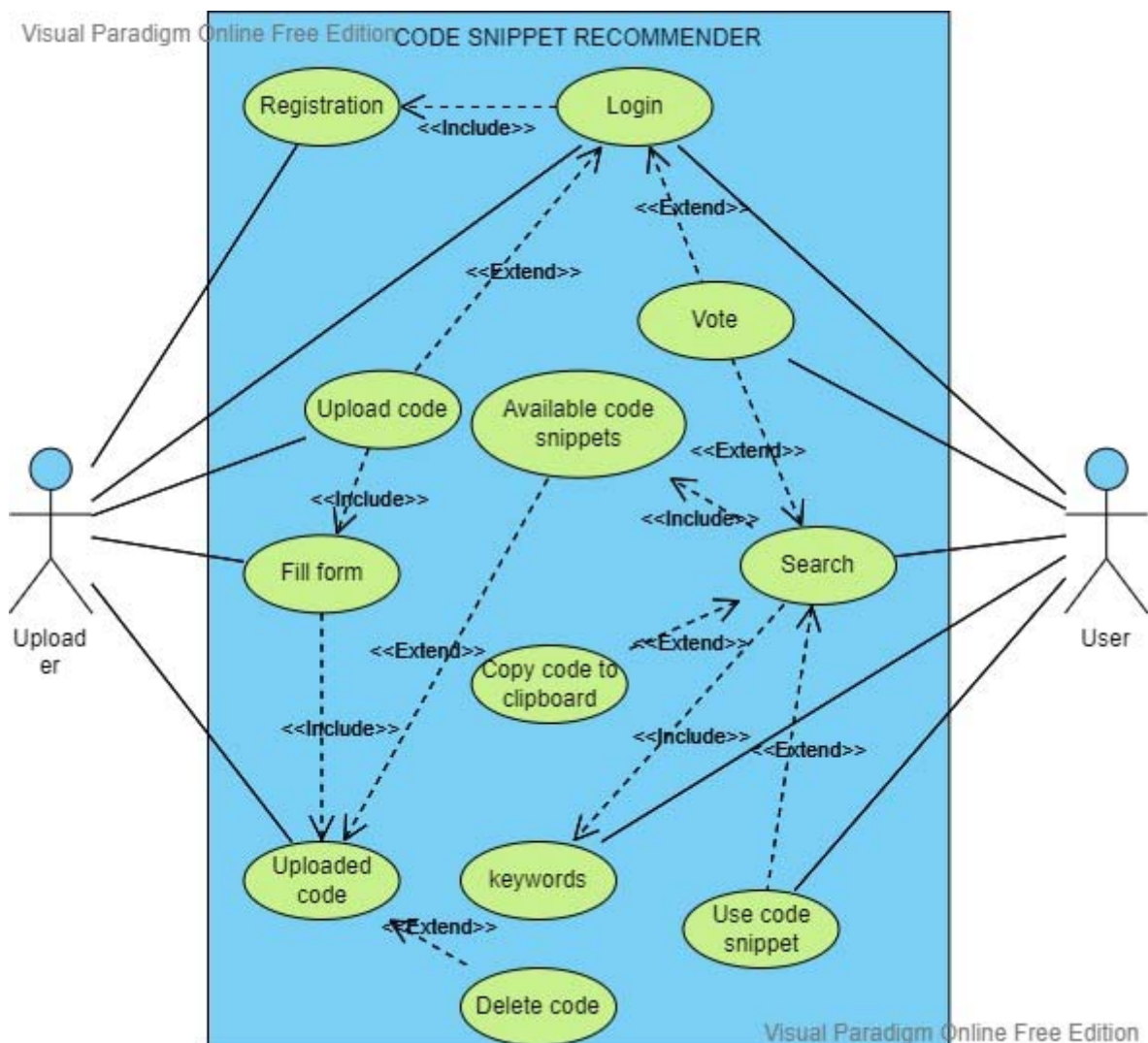
- Create Account
- Sign in
- Sign out

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



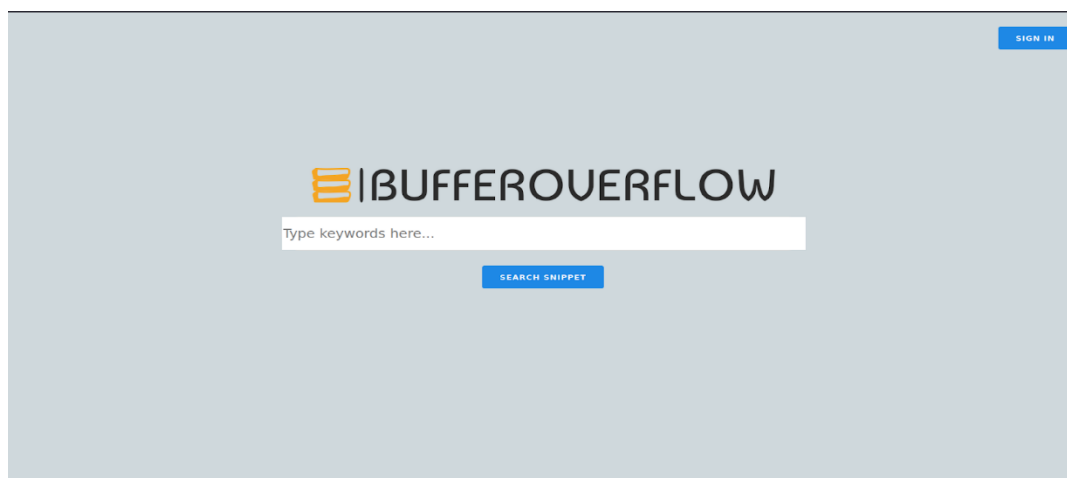
Working and Logic

- 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.
- 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
- Search results shows details like user who uploaded the code snippet, language, description, vote counts and the code itself.
- 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.
- 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.


Below given is a flowchart for keyword based search :



Results and Screenshots



Search page and search bar for code snippet recommender



Create an Account

Name

Email

Password

[SIGN UP](#)


Log In

Email

Password

[LOG IN](#)

Login and registration page



Hi Karan, [SIGN OUT](#)

[SEARCH SNIPPET](#)

Language: python
Description: while loop range 10 python
Votes: 3
Code Snippet:

```
i = 0
while(i < 10):
    pass
    i += 1
```

[DELETE](#)

Language: c++
Description: for loop range 100 c++
Votes: 0
Code Snippet:

```
for(int i = 0; i < 100; i++)
{
    // do something
}
```

[DELETE](#)

Language: c++
Description: while loop range 50 c++
Votes: 6

Language: python
Description: for loop range 10 python
Votes: -1

Submit Code Snippet

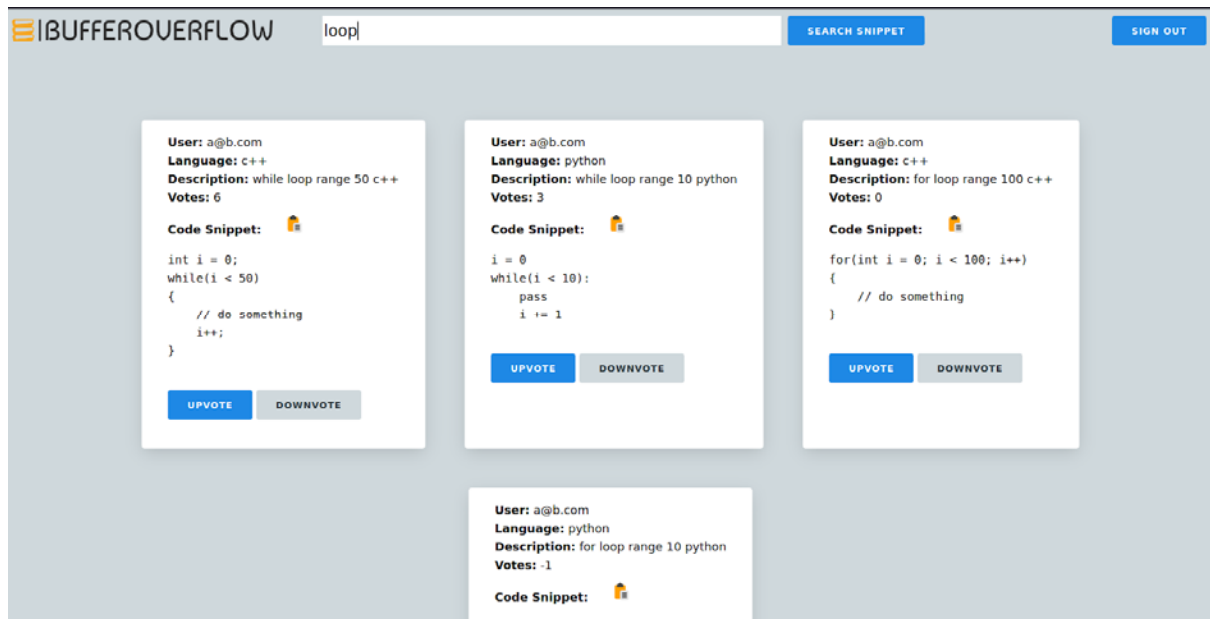
Language

Keywords

Description

Code Snippet

Upload snippet interface which also display the previously uploaded code snippet by the particular user



Results of search, in this case loop

Conclusion:

In this project we have successfully implemented a code snippet recommender which recommend code snippet on basis of keyword given by user.