INNOMATICS®
RESEARCH LABS

INNOVATION. AUTOMATION. ANALYTICS

Code Refactoring and Bug Report Analysis

On

Note taking Application

Prepared By – Mahima Churi

About Me

I've always been a proactive learner, a dedicated student currently finalizing my B.E. in Computer Engineering, and prepared to contribute to organizational success while developing new skills and gaining real-world experience. I am highly responsible and organized with excellent writing, communication, and critical thinking abilities.

I am excited to learn data science because it is an ideal way to combine my love of technology and my passion for solving problems. There is a tonne of information generated every second in today's data-driven society, and I'm enthusiastic about the possibility of gaining insightful knowledge from this data to inform choices and address practical problems.

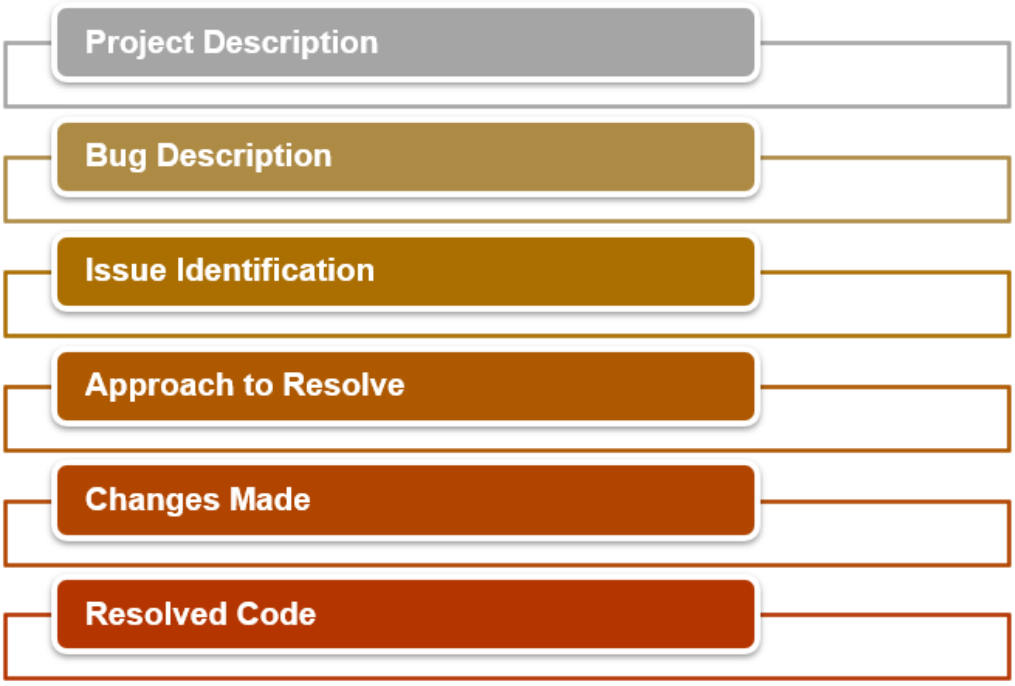
I have worked on many individual and team projects in different domains, full stack being the primary focus and have developed my coding skills. I am also familiar with a few popular programming languages like C++, Python, PHP, Javascript, etc. I'm looking forward to connecting with outstanding people in the industry to work with them and explore more!!

Connect with me



INNOMATICS RESEARCH LABS

Agenda of Report



Tech Stack:

- **Python**
- **Flask**
- **HTML**
- **CSS**

Link to Project Repo: https://github.com/Mahitej28/Note-Taking-App

Link to Website: https://mahima.pythonanywhere.com/

Project Description

Notefy is a simple Notes Application built using Flask, a Python web framework. The app provides a simple and intuitive interface that allows users to add new notes, update existing ones, or even delete some of them as per the user's choice.

Bug Description

Initially, the Flask application is configured to handle only POST requests in the **index()** route, and it attempts to retrieve the note from the request arguments using **request.args.get("note")**.

Initial Codebase:

app.py 1

app.py > ...

Click here to ask Blackbox to help you code faster

```python
from flask import Flask, render_template, request

app = Flask(__name__)

notes = []
@app.route('/', methods=["POST"])
def index():
    note = request.args.get("note")
    notes.append(note)
    return render_template("home.html", notes=notes)


if __name__ == '__main__':
    app.run(debug=True)
```

home.html

templates > home.html > ...

Click here to ask Blackbox to help you code faster

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <form action="">
        <input type="text" name="note" placeholder="Enter a note">
        <button>Add Note</button>
    </form>

    <ul>
    {% for note in notes%}
        <li>{{ note }}</li>
    {% endfor %}
    </ul>
</body>
</html>
```

Issue Identification

The issue arises because the form in the HTML template submits data using the POST method (method="POST"), but it sends the data as form data, not as query parameters. Therefore, accessing the note using request.args.get("note") results in None.

Approach to Resolve

After debugging, the approach to resolve the bug involves modifying the Flask route to handle both GET and POST requests and updating the logic to retrieve the note from the form data for POST requests.

Changes Made

Changed the route decorator to handle both GET and POST requests (methods=["GET", "POST"]).

Updated the logic to retrieve the note from the form data for POST requests using request.form.get("note").

Resolved Code

home.html app.py M

src > app.py > ...

Click here to ask Blackbox to help you code faster

```python
from flask import Flask, render_template, request, redirect, url_for

app = Flask(__name__)
app.static_folder = 'static'

notes = []

@app.route('/', methods=["GET", "POST"])
def index():
        if request.method == "POST":
            note = request.form.get("note")
            if note:
                notes.append(note)
            return redirect(url_for('index'))
        indexed_notes = list(enumerate(notes))
        return render_template("home.html", notes= indexed_notes)

@app.route('/edit', methods=["GET","POST"])
def edit_note():
    if request.method == "POST":
        note_index = int(request.form.get("note_index"))
        new_note = request.form.get("new_note")
        notes[note_index] = new_note
    return redirect(url_for('index'))

@app.route('/delete', methods=["GET","POST"])
def delete_note():
    if request.method == "POST":
        note_index = int(request.form.get("note_index"))
        del notes[note_index]
    return redirect(url_for('index'))


if __name__ == '__main__':
    app.run(debug=True)
```

home.html app.py

src > templates > home.html > html > head > link

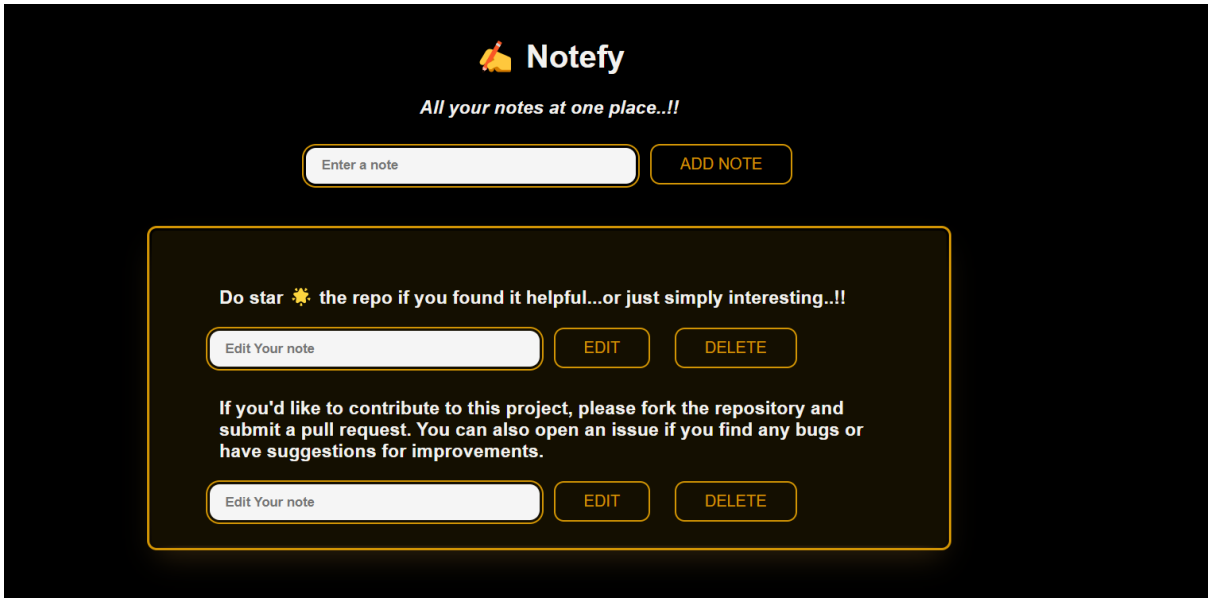
Click here to ask Blackbox to help you code faster

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="stylesheet" type="text/css" href="{{ url_for('static', filename='style.css') }}">
    <link rel="shortcut icon" type="image/x-icon" href="{{ url_for('static', filename='favicon.png') }}">
    <title>Notefy</title>
</head>
<body>
    <div class="container">
        <div class="heading">
            <h1>✍ Notefy</h1>
            <h3 style="margin: 10px;"><i>All your notes at one place..!!</i></h3>
        </div>
        <div class="top">
            <form method="POST" action="/">
                <input type="text" name="note" placeholder="Enter a note">
                <input type="hidden" name="action" value="add">
                <button type="submit">Add Note</button>
            </form>
        </div>
        <div class="todo">
            {% for index, note in notes %}
            <div class="text">
                    <h3>{{ note }}</h3>
            </div>
            <div class="buttons">
                <form method="POST" action="/edit">
                    <input type="hidden" name="action" value="edit">
                    <input type="hidden" name="note_index" value="{{ index }}">
                    <input type="text" name="new_note" placeholder="Edit Your note">
                    <button type="submit">Edit</button>
                </form>
                <form method="POST" action="/delete">
```

Verification

After implementing the changes, the application was able to correctly handle both GET and POST requests. When submitting the form, the note was added to the list of notes without encountering any errors.

Final Output and Directory Structure




```
note_taking_app/
│
├── src/                  # Source code directory
│   ├── app.py            # Main Flask application file
│   ├── static/           # Static assets (CSS, images, etc.)
│   │   └── style.css     # Custom CSS styles
│   └── templates/        # HTML templates
│       └── home.html     # Main template for the note-taking interface
└── README.md             # Documentation file
```

Conclusion

By updating the Flask route to handle both GET and POST requests and adjusting the logic to retrieve the note from the form data for POST requests, the bug was been successfully resolved, and the application now functions as intended. Additionally, the application's functionality has been enhanced with a more intuitive and user-friendly interface, along with the incorporation of features such as note updating and editing. These improvements collectively contribute to a smoother and more efficient user experience.