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PROJECT ON

Code Refactoring and Bug Fixing

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About me

- I am Yonas, pursuing a BCA from Maharishi Markandeshwar University. This journey, to step into the world of technology, was commenced with a diploma in Electrical Engineering. Besides, I also pursued a Google and Coursera Cybersecurity course to secure the digital environment with updated skills.
- What does excite me is the potential of data in revolutionizing a couple of fields. With an educational background in electrical engineering and expertise in cybersecurity, I am targeting bringing the best solutions to problems in real-world experiences through innovation using Data Science and Machine Learning.
- I am currently an intern at Innomatics Research Lab, where I have an exposure opportunity of getting practical knowledge in leading techniques in data analysis and machine learning. The internship is going to provide an opportunity to work under real-world applications of data science. Meanwhile, I am pursuing a rigorous Data Science Bootcamp from Hyperion Dev to further strengthen my skills in data analytics and machine learning algorithms.
- **Github repository:**https://github.com/yonasashagrie
- **My Linkdin profile :**https://www.linkedin.com/in/yonas-ashagrie

OBJECTIVE

This project aims to refactor and fix current codebase of a Note Taking Application that is developed using Python, Flask and HTML. In this application, users will be able to put notes which will then appear on the same screen.

Enhance readability, maintainability and efficiency of the codebase.

Track down all bugs in the system and eliminate them to ensure proper functioning.

There should be no errors that would prevent users from adding notes and viewing them on the same page.

In a report document all known bugs with how every such bug was solved.

Bug Identification

Bug 1:Method is Not Allowed in app.py the method was “POST” while the error occurs when “GET”Request was made .

```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)
```

Bug 2:there is no specific method in home html for form submission

Bug 3:there is no form action defined

```
<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>
```

Bug 4: **Privacy error** - it was showing the notes that were written on other devices.

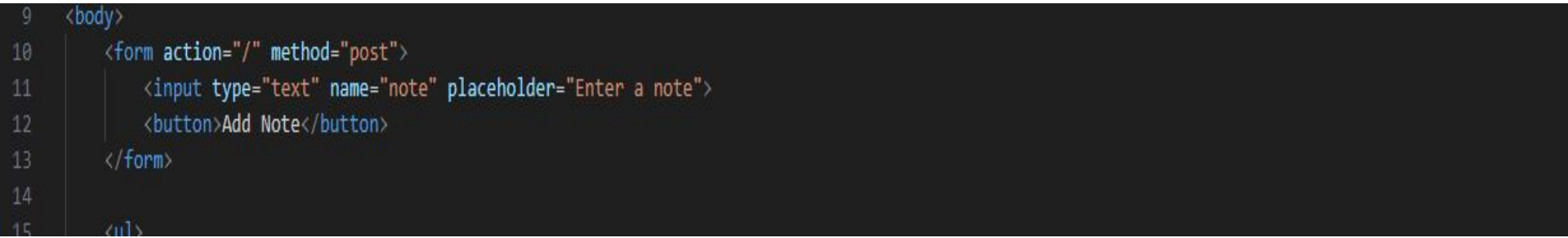
BUG FIXING

Instead to fix the identified bug i use :

For the first bug :i modified the route method to take GET also

```
6
7   @app.route('/', methods=["GET", "POST"])
8   def index():
9       if 'notes' not in session:
10          session['notes'] = []
11
```

2)I added the method and specified the route named \ in the form action to address the issues described on bug 2 and 3



Instead to fixing bug 4, I generated a secret key randomly, which will be assigned uniquely to each user, ensuring their privacy.

In conclusion, the fixing of bugs in Note Talking Application has been successfully completed. In the course of examining and testing the present code base, I encountered several bugs that were interfering with the application’s operation. Effective debugging techniques and necessary code changes were used to solve all problems previously discovered.