

Identified Bugs and Fixes

1. Bug: Incorrect HTTP Method for Form Submission

Issue: The `@app.route` decorator only allowed POST requests, but the form submission requires both GET and POST methods.

Fix: Updated the route to accept both GET and POST methods:

python

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```
@app.route('/', methods=["GET", "POST"])
```

2. Bug: Using request.args Instead of request.form

Issue: The code used `request.args.get("note")` to retrieve form data, which is incorrect for POST requests. `request.args` is used for query parameters in the URL, not form data.

Fix: Replaced `request.args.get("note")` with `request.form.get("note")` to correctly retrieve form data:

python

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```
note = request.form.get("note")
```

3. Bug: No Redirection After Form Submission

Issue: After submitting the form, the page would reload, but the form data could be resubmitted if the user refreshed the page, leading to duplicate notes.

Fix: Added a redirect to the same route after processing the form data to prevent form resubmission:

python

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```
return redirect(url_for('index'))
```

4. Bug: No Validation for Empty Notes

Issue: The application allowed empty notes to be added, which is not useful.

Fix: Added a check to ensure the note is not empty before appending it to the list:

python

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```
if note:
```

```
    notes.append(note)
```

5. Bug: Missing HTML Template

Issue: The code references a `home.html` template, but no template was provided in the original codebase.

Fix: Created a `home.html` file with a form for adding notes and a list to display all notes.

6. Bug: No Required Attribute in Input Field

Issue: The input field for the note did not have the required attribute, allowing users to submit empty notes.

Fix: Added the required attribute to the input field in the HTML template:

html

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```
<input type="text" id="note" name="note" required>
```

Run