

1. The Routing Constraint (405 Method Not Allowed)

- **The Bug:** The original code used `@app.route('/', methods=["POST"])`. This explicitly tells Flask to only accept POST requests for the home page.
- **The Impact:** When you try to visit the website in a browser, the browser sends a **GET** request. Since GET wasn't allowed, the application would return a 405 Method Not Allowed error immediately upon loading.
- **The Resolution:** I updated the methods to include both GET and POST: `@app.route('/', methods=["GET", "POST"])`. This allows the page to load (GET) and data to be submitted (POST).

2. Incorrect Data Retrieval Source

- **The Bug:** The application attempted to grab the note using `request.args.get("note")`.
- **The Impact:** In Flask, `request.args` is used to retrieve data from the URL query string (e.g., `?note=hello`). However, standard HTML forms send data in the request **body**.
- **The Resolution:** I switched the retrieval to `request.form.get("note")`. This is the correct way to access data sent via an HTML `<form>`.

3. Missing Form Method in HTML

- **The Bug:** The `<form>` tag in `home.html` did not have a `method` attribute.
- **The Impact:** HTML forms default to **GET** if no method is specified. This meant the note text was being appended to the URL instead of being sent as a POST request, causing a mismatch with the backend's expected behavior.
- **The Resolution:** I added `method="POST"` to the `<form>` tag in the HTML file to ensure the data is sent securely in the request body.

4. Unconditional Logic (The "Empty Note" Bug)

- **The Bug:** The original code ran `notes.append(note)` every time the function was called, regardless of whether a form was actually submitted.
- **The Impact:** Once the route was fixed to allow GET requests, every time you refreshed the page, a `None` value would be added to your list, cluttering your UI with empty bullets.
- **The Resolution:** I wrapped the logic in a conditional check: `if request.method == "POST":`. This ensures that the list is only modified when the user explicitly clicks the "Add Note" button.