

## Bug Report & Refactoring Explanation

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Below is a complete list of bugs found and how I fixed each one of them.

### 1. Home Route Did Not Support GET Requests

#### Bug

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

- The home page could not be loaded initially because only POST was allowed.
- Visiting <http://127.0.0.1:5000/> caused a **405 Method Not Allowed** error.

#### Fix

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

#### Reason

- The page must render on GET
  - Form submission happens on POST
- 

### 2. Incorrect Data Retrieval Method

#### Bug

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

- request.args is only for **query parameters (GET)**
- The form sends data using POST

#### Fix

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

#### Reason

- request.form correctly reads POSTed form data
- 

### 3. Form Did Not Specify Method

#### Bug (HTML)

```
<form action="">
```

- Default method is GET
- This conflicted with server-side POST logic

#### **Fix**

```
<form method="POST" action="/">
```

#### **Reason**

- Explicitly aligns frontend form submission with Flask route
- 

### **4. Notes Appended Even When Empty**

#### **Bug**

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

- Empty notes (None or blank strings) were added to the list

#### **Fix**

```
if note:
```

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

#### **Reason**

- Prevents empty list items from rendering
- 

### **5. Page Refresh Caused Duplicate Notes**

#### **Bug**

- Refreshing the page after submitting re-sent the POST request
- This duplicated the last note

#### **Fix**

```
return redirect(url_for("index"))
```

#### **Reason**

- Implements the **POST** → **Redirect** → **GET (PRG)** pattern
  - Prevents duplicate submissions on refresh
-

## 6. Template Assumed notes Always Exists

### Bug

- If the page loaded without notes, template could break in some setups

### Fix

```
return render_template("home.html", notes=notes)
```

### Reason

- Always sends notes context variable to the template

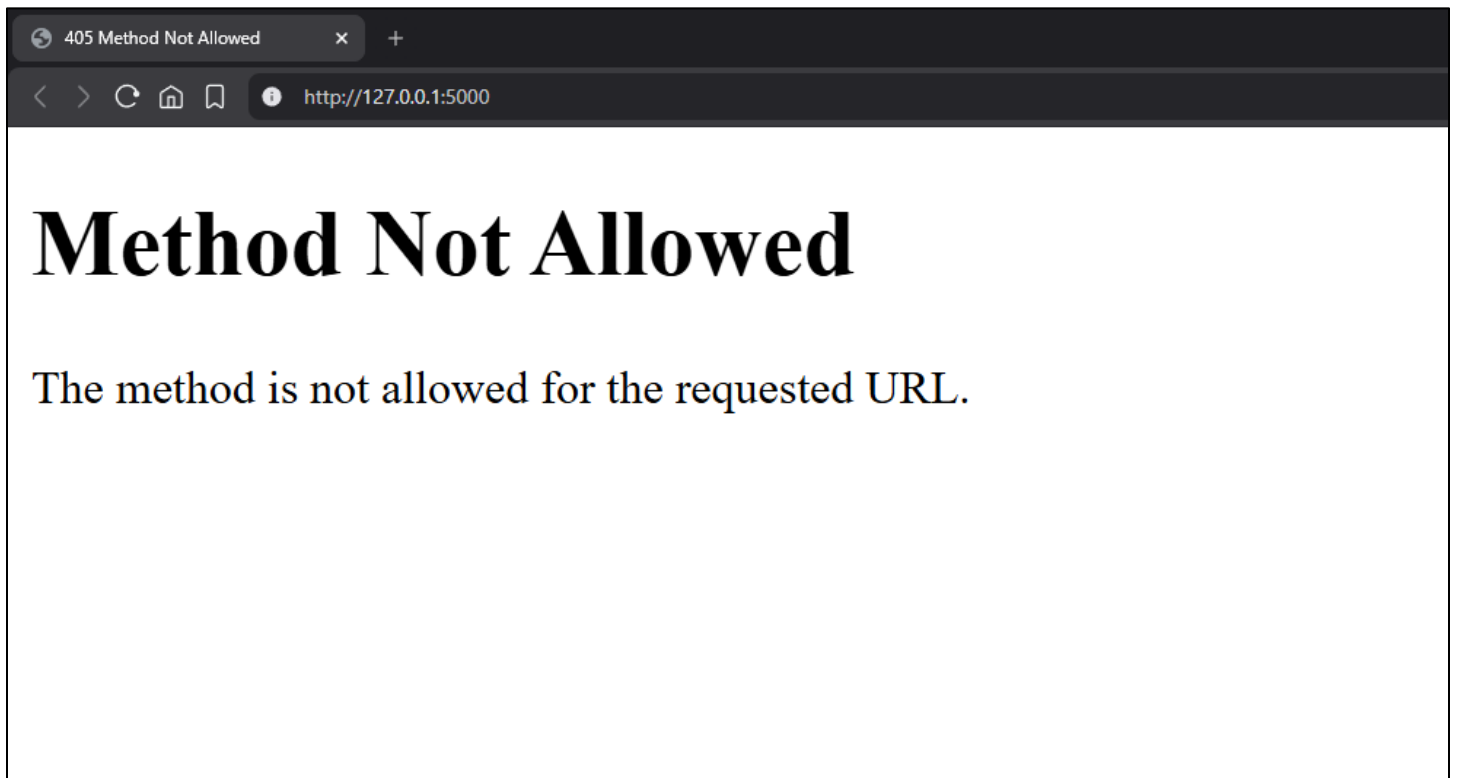
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### How the App works:

- User loads / → GET request → page renders
- User submits note → POST request
- Note is validated and stored
- App redirects back to /
- Notes render as an unordered list

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### App Screenshot (before fixing the bugs):



## App Screenshot (after fixing the bugs):

