



INNOMATICS[®]
RESEARCH LABS

INNOVATION. AUTOMATION. ANALYTICS

PROJECT ON

**Code Refactoring and Bug Fixing
NOTE TAKING APP USING FLASK**

Presented by Pooja Ekbote

About me

- **Background :**

I Pooja Ekbote currently pursuing a Bachelor's degree in Computer Science, demonstrating a keen interest and dedication to the field of Data Science and Web Development.

- **Why you want to learn Data Science**

I want to learn data science because I'm fascinated by the power of data to uncover insights, solve problems, and drive decision-making.

- **Any work experience**

While I'm currently a student and don't have industry-driven experience, I've gained valuable hands-on experience through personal projects in data science.

- **Share your linkedin and github profile urls**

[Linkedin](#) and [GitHub](#)

Agenda

- Code Review and Understanding
- Bug Identification
- Bug Fixing Process
- Testing and Validation

Code Review and Understanding

```
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)
```

Code Review and Understanding

From the following code it can be observed that the code replicates to be a simple flask app for note taking app, where the notes are stored in 'notes' list. The 'home.html' page consists an input field from where data is getting loaded or taken.

```
<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>
```

Bug Identification

Now in the following code there exist some bugs because of which the code is not working. So here are the identified bugs which are causing the errors.

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

The app needs both “POST” and “GET” methods to handle the “GET” request as well

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

The ‘args.get’ will access the query parameter, because of which the error may encounter

Bug Identification

In the HTML the form needs a method attribute, but in this given code it is missing

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

which is causing the another issue.

```
<button>Add Note</button>
```

It can be observed that the 'type=submit' attribute is also missing in this line, however it is not going to affect that much but as a good practise it should be mentioned

Bug Fixing Process

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

With methods=["POST", "GET"], the route decorator will now handle both POST and GET requests. Inside the index function.

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

Using request.args.get() is not suitable for retrieving form data in a POST request because request.args accesses the query parameters in the URL, not form data

Bug Fixing Process

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

Currently, the form is missing the method attribute, which specifies the HTTP method to use when submitting the form data. Since the Flask route expects a POST request (`@app.route('/', methods=["POST"])`), we need to set the method attribute of your form to "POST".

```
<button type="submit">Add Note</button>
```

Changed `<button>` to `<button type="submit">` to ensure that clicking the button submits the form.

Testing and Validation

Now while testing a logical error can be encountered which can be seen as follows



Enter a note Add Note

- None
- hello

When the 'notes' list is empty we are rendering the page initially so we are getting 'None' because at that instance the list is empty and in return it returns 'None' as return value which gets appended.

This can be solved by conditional rendering by adding in app.py

```
if (note):  
    notes.append(note)
```

THANK
YOU

