

# Explanation of Debugging the Note Taking Application

---

## Task

- I was provided with a note taking application with only one route (i.e., Home Route) and the application was broken. It was related to Flask.
- The task given, is to refactor the code and to make sure the application works properly.
- Home route contains a 'text field' and a 'button'. User can add a note and all the notes will be displayed as an unordered list below the text field on the same page.

## Approach

### 1. To debug backend file:

- Firstly, I added “GET” and “POST” both the methods to the default route (‘/’) so that the home page i.e., home.html get displayed when application run using GET method and the information i.e., notes get fetched using POST method as this method provide security to data from getting revealed.
- Now, the information fetched using POST so we also have to convert the fetching method from “.args” which is used for GET method to “.form” which is for POST method.
- In order to made the application used by many users simultaneously, Flask-Session is imported so that every user find their data separately.
- Sessions allow a user to get a specific value for them in the duration of their login and logout in an application.
- session.get(“notes”) is None is added to check whether the user already have a list if not then provided with a empty one.
- note != “” is added in order to not add any empty string as note.

- Finally, the final list passed to .html file by passing session['notes'].

- Code Before Debugging-

```

1  from flask import Flask, render_template, request
2
3  app = Flask(__name__)
4
5  notes = []
6  @app.route('/', methods=["POST"])
7  def index():
8      note = request.args.get("note")
9      notes.append(note)
10     return render_template("home.html", notes=notes)
11
12
13  if __name__ == '__main__':
14      app.run(debug=True)

```

- Code After Debugging-

```

note_taking_app > app.py > ...
1  from flask import Flask, render_template, request, session
2  from flask_session import Session
3
4  app = Flask(__name__)
5  app.config["SESSION_PERMANENT"] = False
6  app.config["SESSION_TYPE"] = "filesystem"
7  Session(app)
8
9  notes = []
10 @app.route('/', methods=["GET", "POST"])
11 def index():
12     if session.get("notes") is None:
13         session["notes"] = []
14     if request.method == 'POST':
15         note = request.form.get("note")
16         if note != "":
17             session["notes"].append(note)
18
19     return render_template("home.html", notes=session['notes'])
20
21 if __name__ == '__main__':
22     app.run(debug=True)

```

## 2. To debug frontend file:

- In frontend part, there is not a lot of changes, we just have to add a POST method in the form so that the values fetched through form sent back to POST method in the backend file.
- Code Before Debugging-

```
note_taking_app > templates > home.html > html > body > form
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta http-equiv="X-UA-Compatible" content="IE=edge">
6      <meta name="viewport" content="width=device-width, initial-scale=1.0">
7      <title>Document</title>
8  </head>
9  <body>
10     <form action="">
11         <input type="text" name="note" placeholder="Enter a note">
12         <button>Add Note</button>
13     </form>
14
15     <ul>
16         {% for note in notes %}
17         <li>{{ note }}</li>
18         {% endfor %}
19     </ul>
20 </body>
21 </html>
```

- Code After Debugging-

```
note_taking_app > templates > home.html > html > body > ul
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta http-equiv="X-UA-Compatible" content="IE=edge">
6      <meta name="viewport" content="width=device-width, initial-scale=1.0">
7      <title>Document</title>
8  </head>
9  <body>
10     <form action="" method="post">
11         <input type="text" name="note" placeholder="Enter a note">
12         <button>Add Note</button>
13     </form>
14
15     <ul>
16         {% for note in notes %}
17         <li>{{ note }}</li>
18         {% endfor %}
19     </ul>
20 </body>
21 </html>
```