🚀 AWS Automation Dashboard

📖 Guidelines - How to Use This Web App

Welcome to the **AWS Automation Dashboard** 👋

This tool helps you manage essential AWS services (EC2, RDS, S3) through a user-friendly interface.

📃 Prerequisites

- ✅ You must have a valid AWS account.
- ✅ IAM credentials with permissions for EC2, RDS, and S3.
- ✅ `.env` file set up with `AWS_ACCESS_KEY_ID`, `AWS_SECRET_ACCESS_KEY`, and `AWS_DEFAULT_REGION`.

🔐 Step 1: Login

- Enter your **username and password** in the sidebar.
- On successful login, you'll be redirected to the main dashboard.

🧭 Step 2: Navigate Sections

Use the left sidebar menu to explore:

- 🏠 Home (Main EC2, RDS, and S3 interface)
- 📖 Guidelines (This help section)
- 🧠 Project Applications (Use cases for this tool)

🖥️ EC2 (Elastic Compute Cloud)

- **Launch EC2 Instance**: Automatically creates a t2.micro instance with pre-configured settings.
- **Terminate Instance**: Requires you to input the instance ID (e.g., `i-xxxxxxxxxxxxxxxxx`) to delete.

💡 **Tip**: Use AWS Console or CLI to get the instance ID if needed.

🛢️ RDS (Relational Database Service)

- **Create DB Instance**: Launches a MySQL instance.
- **Delete DB Instance**: Removes the running database.
- **Create Snapshot**: Takes a backup (snapshot) of the RDS instance.
- **Modify DB Class**: Upgrade/downgrade database size (e.g., t3.micro → t3.medium).

- **Restore Snapshot**: Recreate DB from snapshot if needed.

⚠️ **Note**: Some changes may take a few minutes due to AWS provisioning time.

📁 S3 (Simple Storage Service)

- **Upload Files**: Choose an existing S3 bucket and upload any file from your computer.
- Use this for storing:
  - Images
  - PDFs or Docs
  - Backups
  - Dataset files

🛡️ Best Practices

- Always delete unused instances to avoid charges.
- Store IAM credentials securely and never push them to GitHub.
- Periodically create RDS snapshots if working on a live DB.

📌 *This dashboard simplifies repetitive cloud management tasks and enhances learning and development experience.*