1. Building a Serverless Web Application

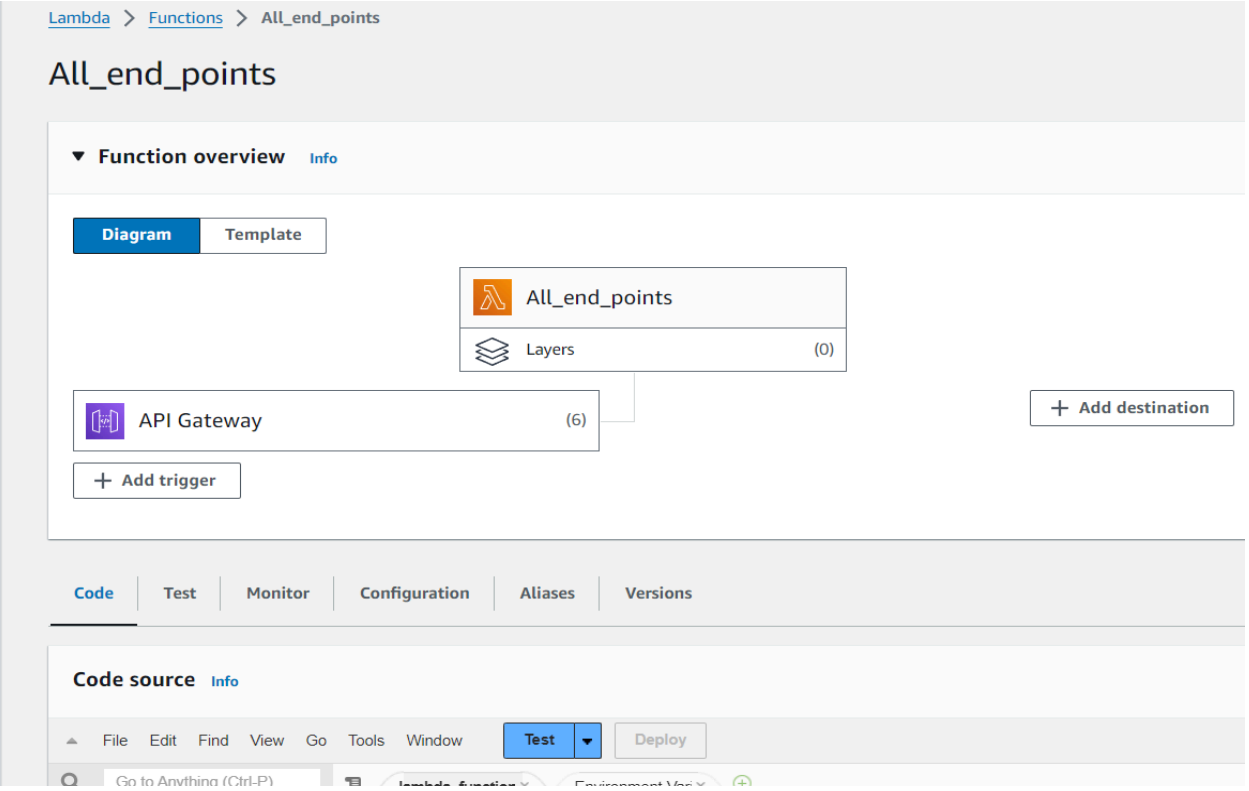
Objective: Create a serverless web application using AWS Lambda, API Gateway, S3, and DynamoDB.

Approach:

- **Set Up Backend**: Create Lambda functions to handle backend logic. These functions will interact with a DynamoDB table for data storage.
- **API Gateway**: Set up API Gateway to create RESTful endpoints that trigger the Lambda functions.
- **Frontend Hosting**: Host a static website on S3 that interacts with the backend via API Gateway.
- **Integration**: Ensure that the frontend can successfully send requests to the backend and display responses.

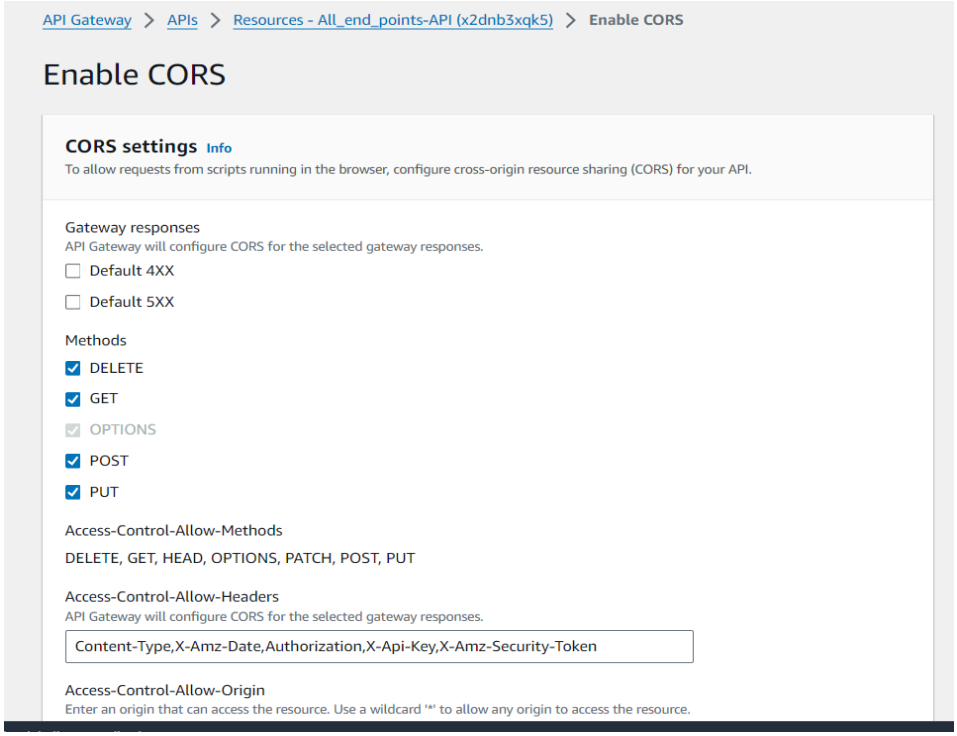
Goal: Understand the basics of building and connecting serverless backend services with a static frontend, enabling a fully serverless web application.

Lambda function structure:

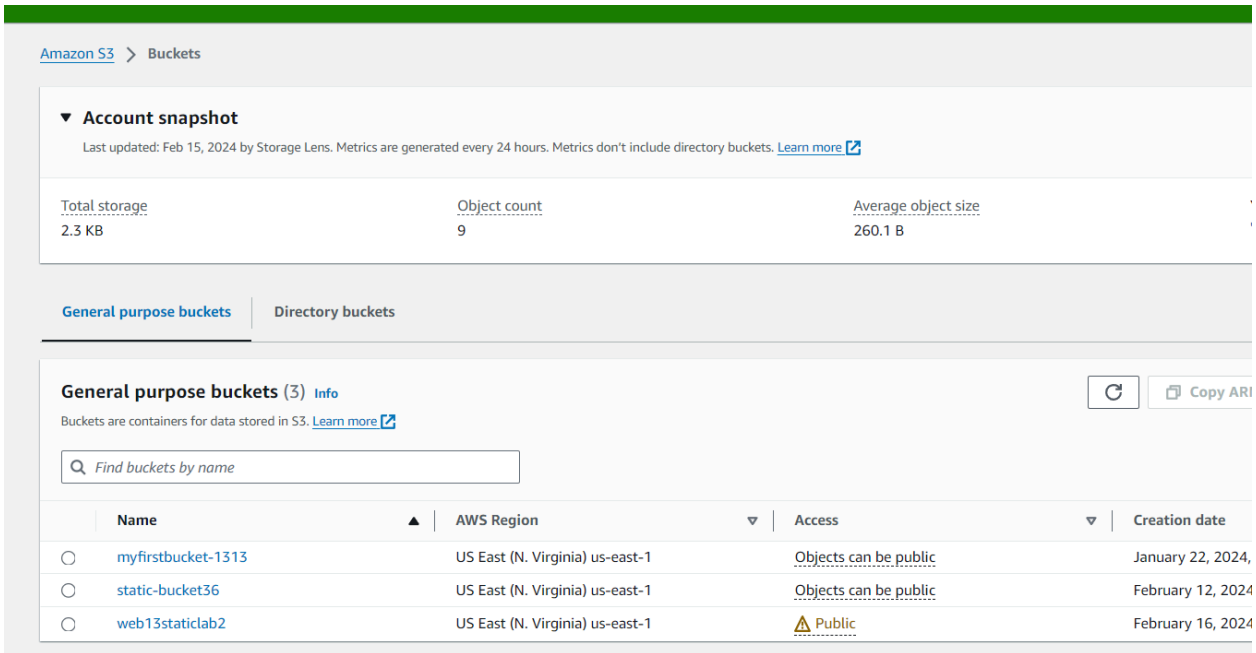


Same structure of serverless 2 is used.
Also the Api gateway integration is shown in serverless lab 2.

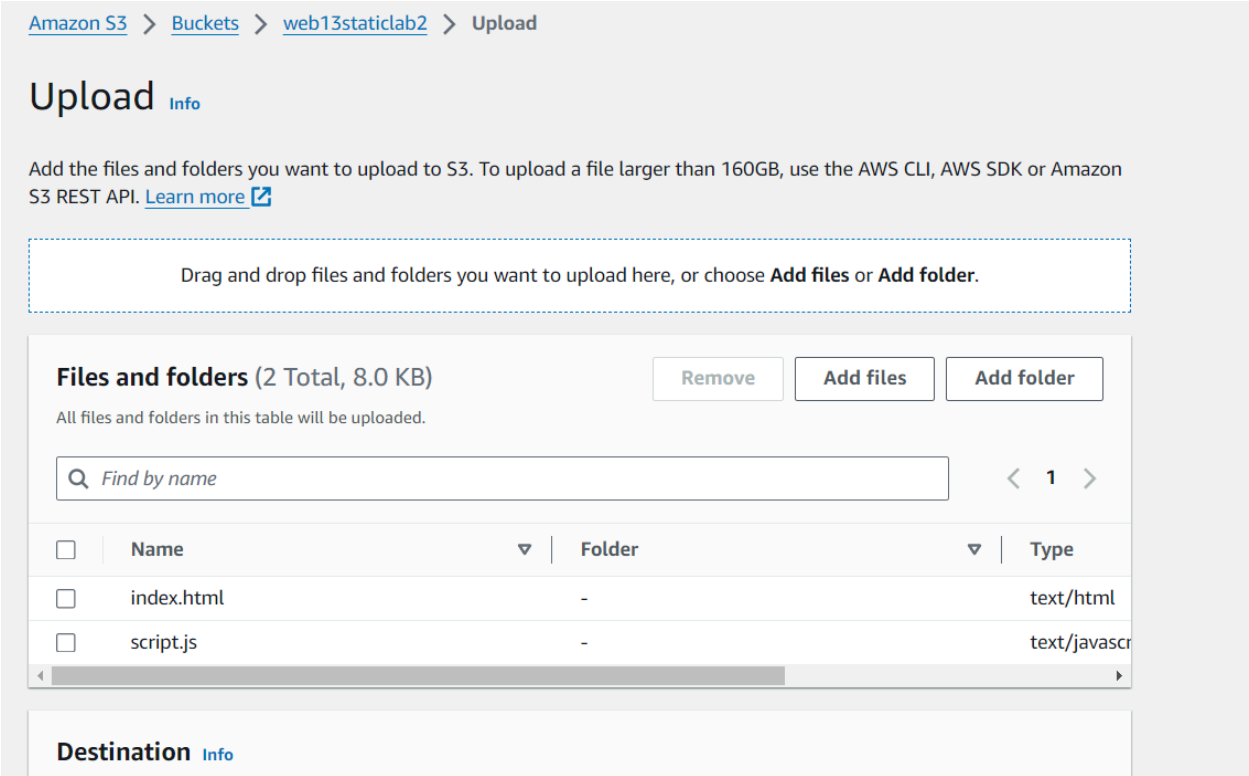
Enabling cors for api gateway:



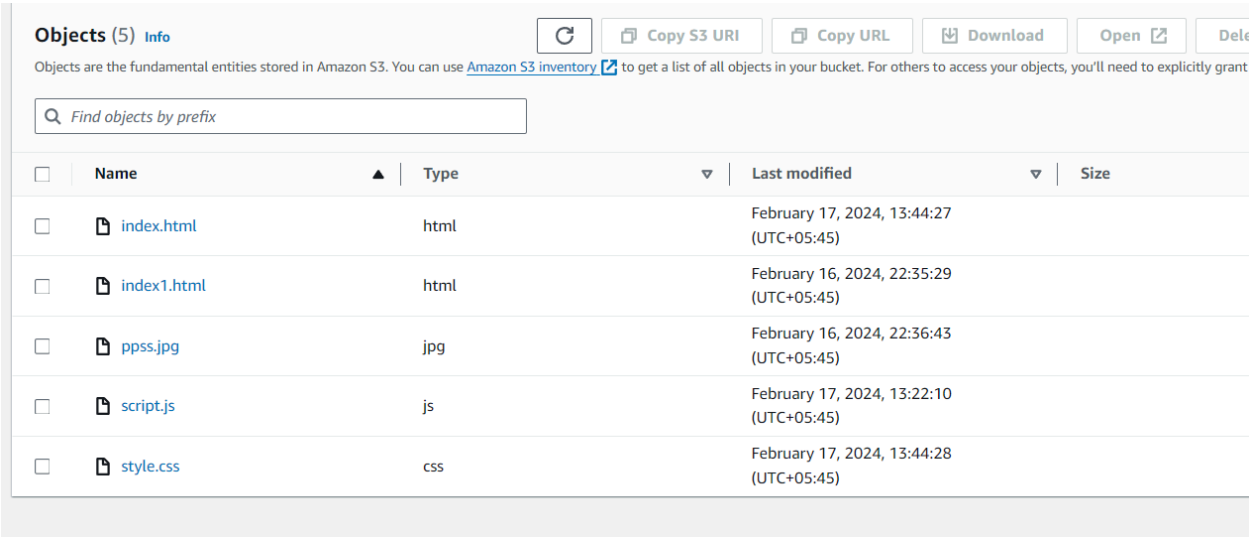
Create a S3 bucket to add the website files:



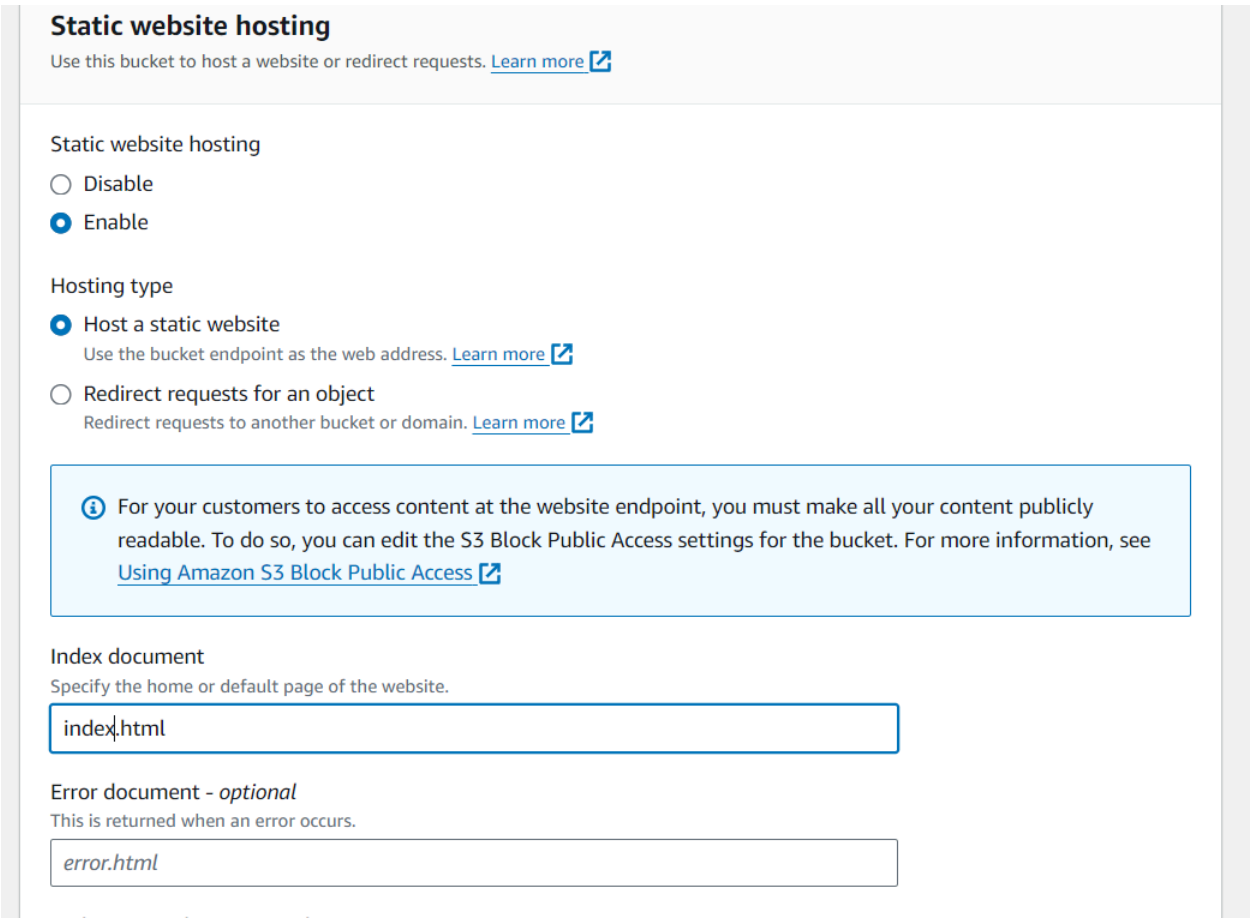
Add the html and js file to s3:



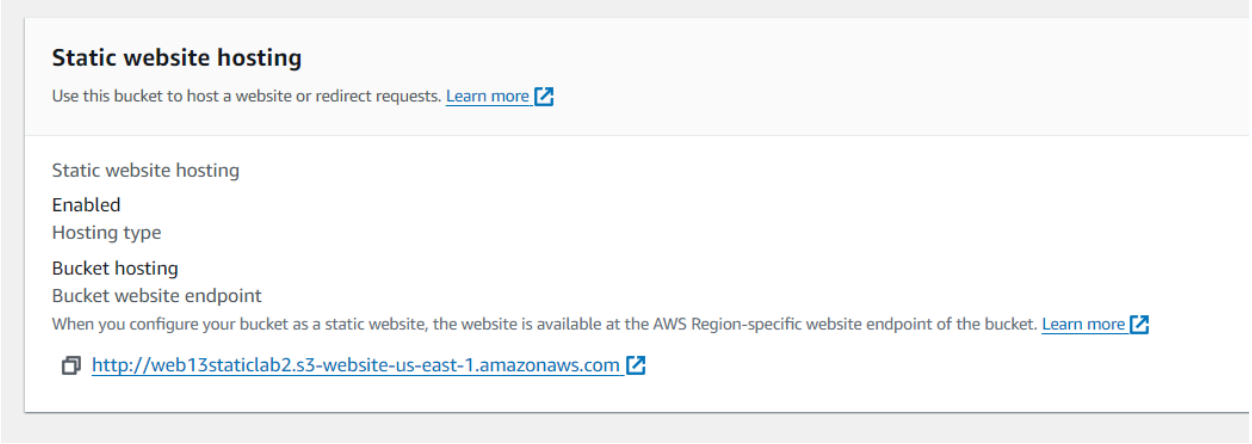
All files in S3:



Enable static hosting:

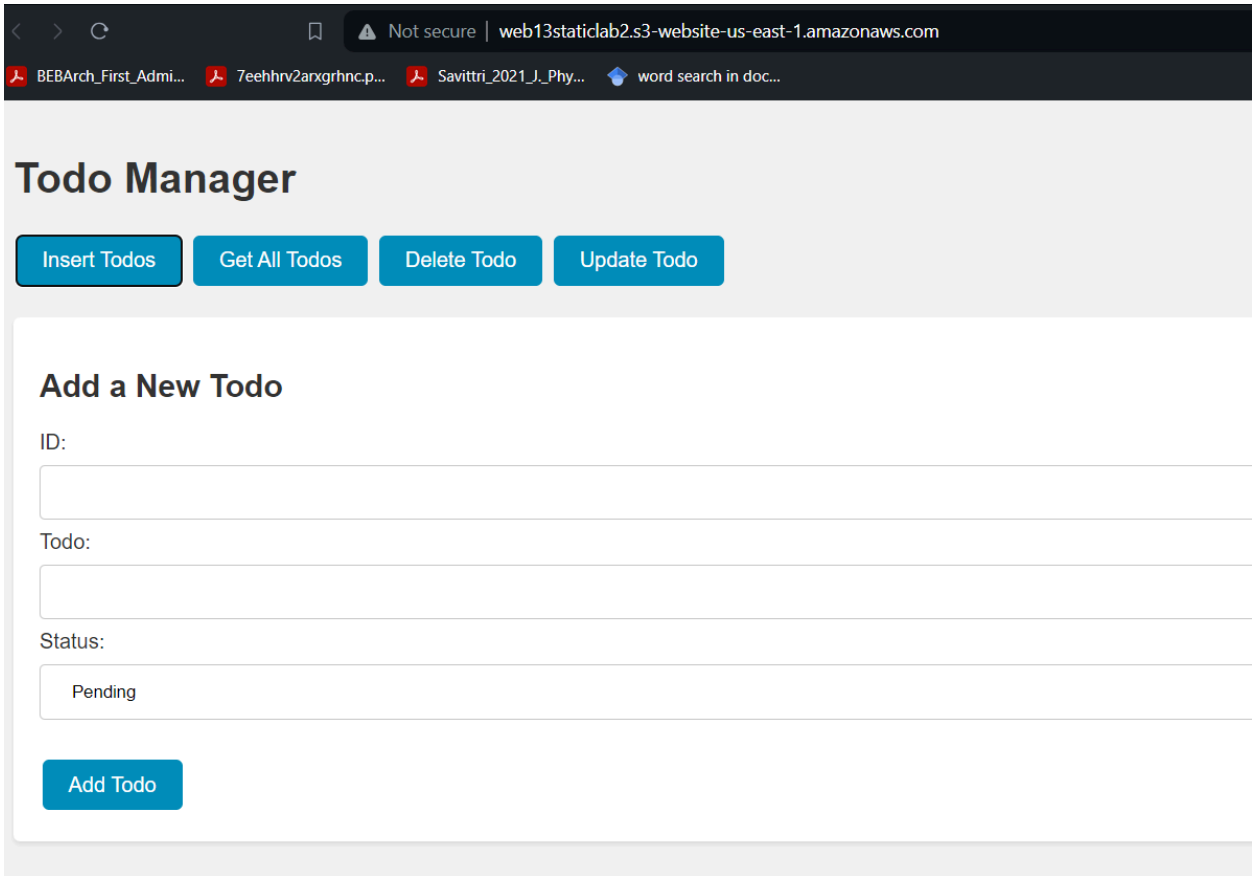


Now navigate to the provided static website URL:

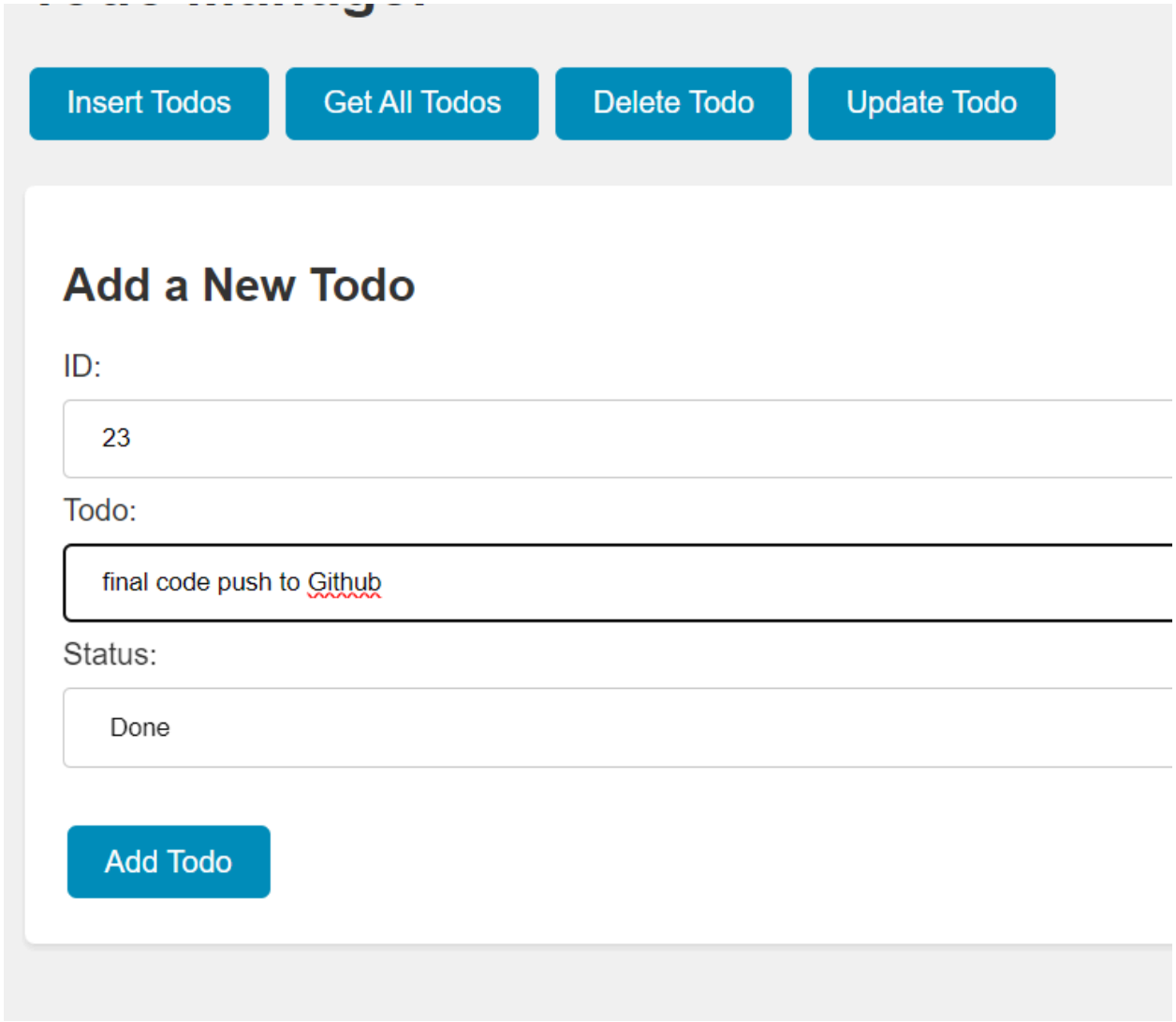


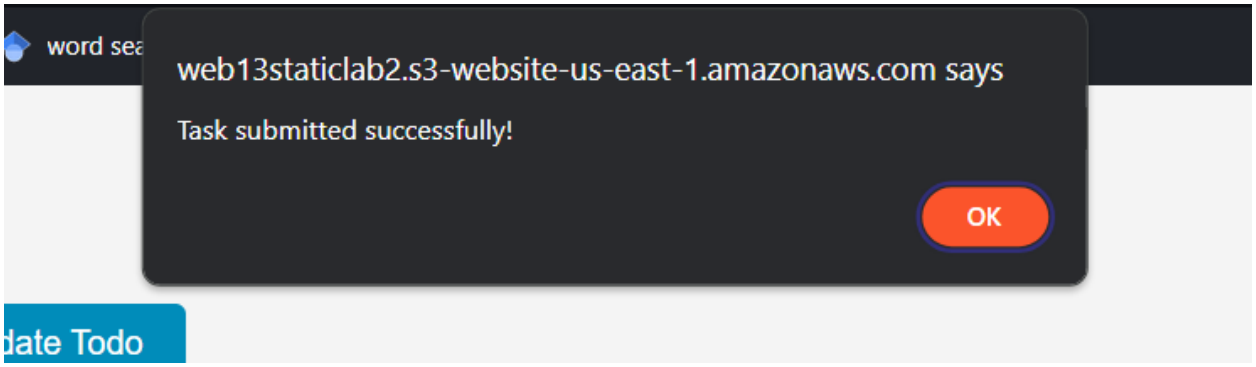
Checking the application functionalities:

Basic UI for ToDo application:

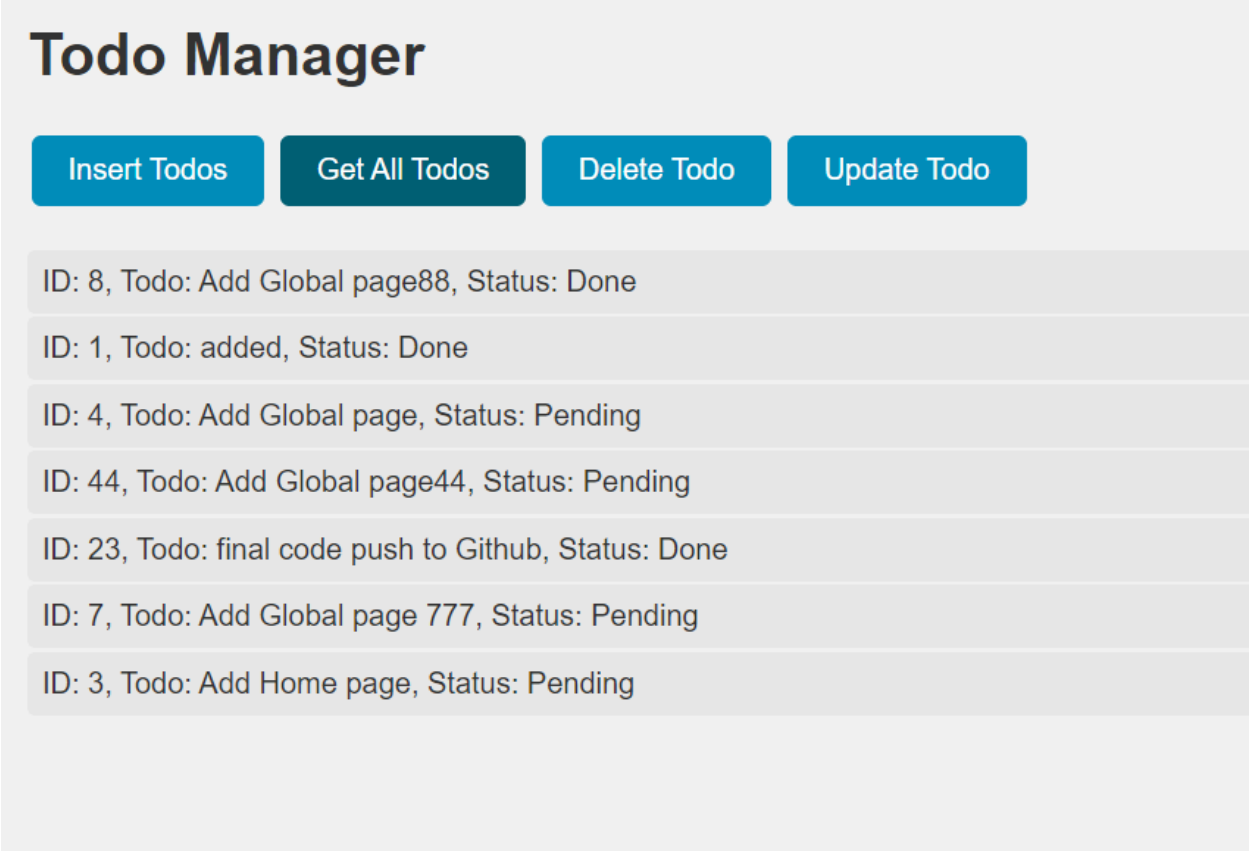


Adding the todos:

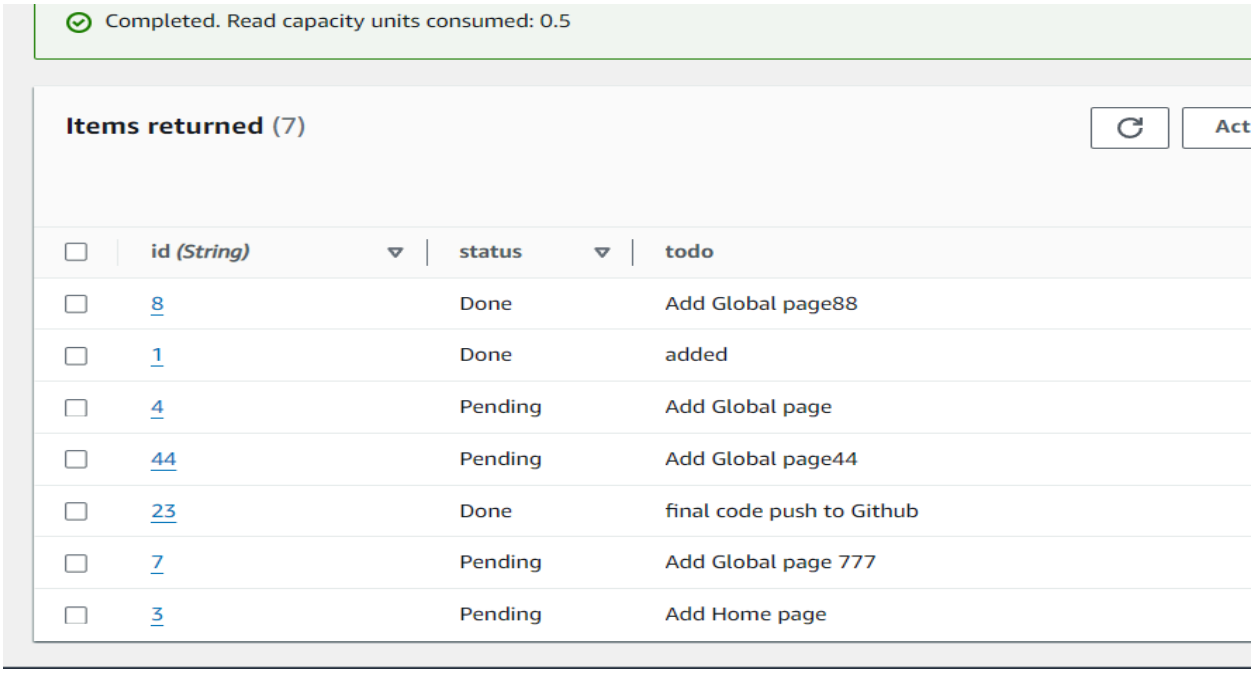




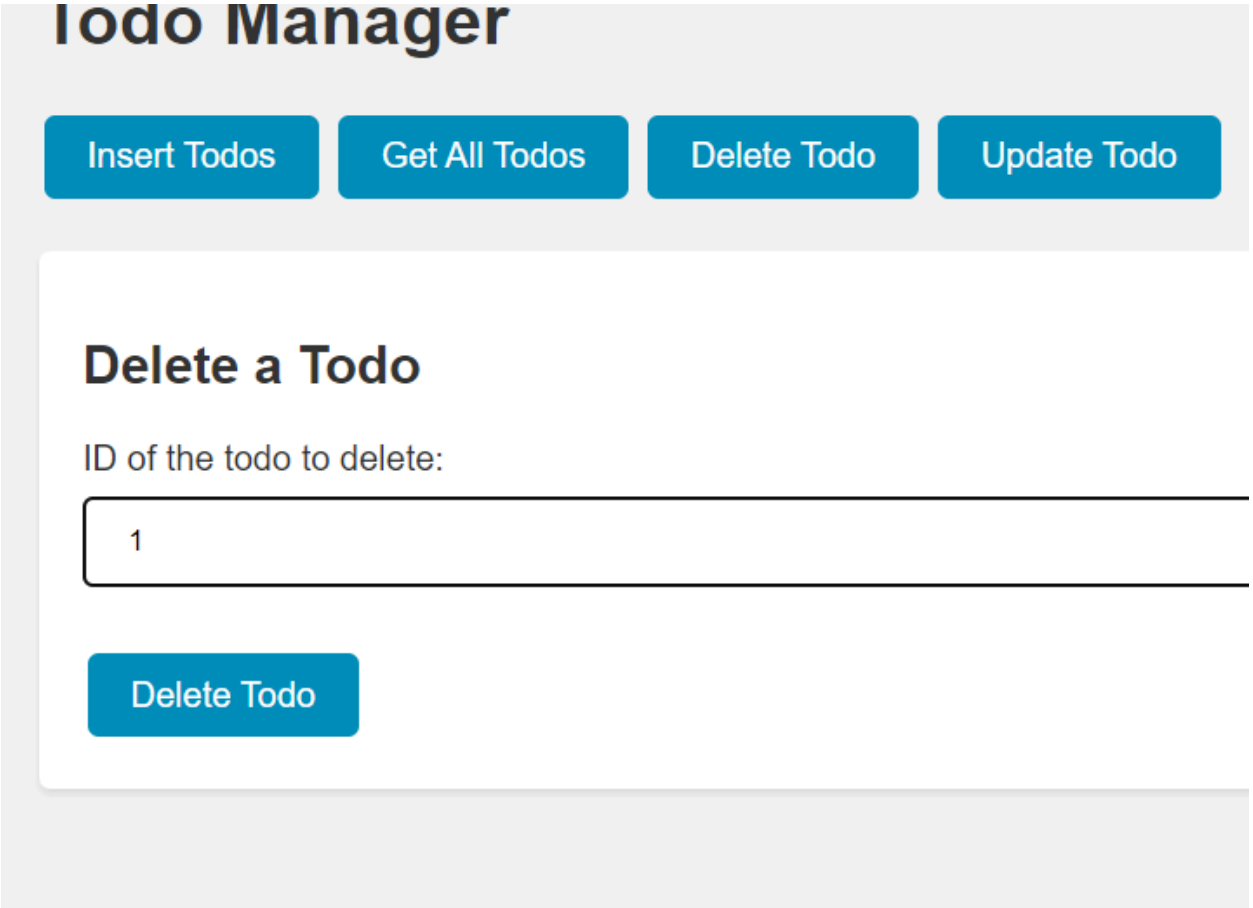
View all Todos:

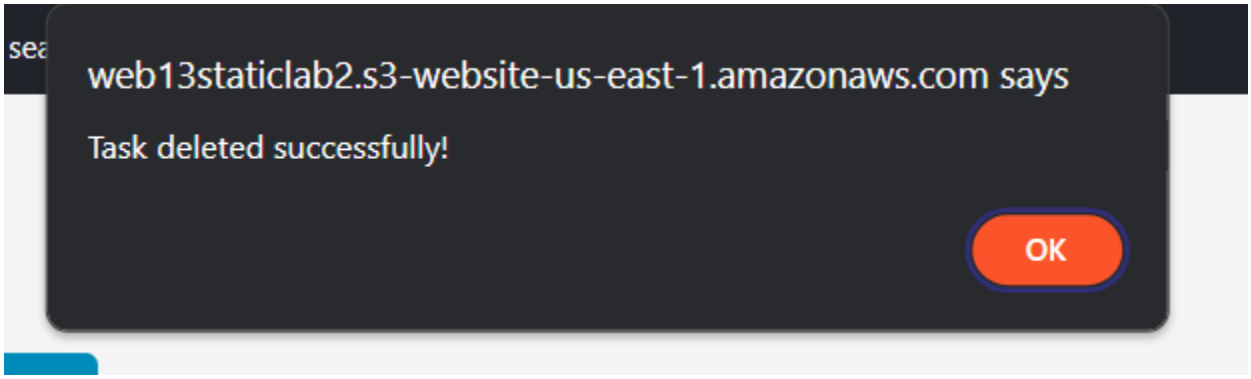


Also we can visualize in dynamoDb table as:

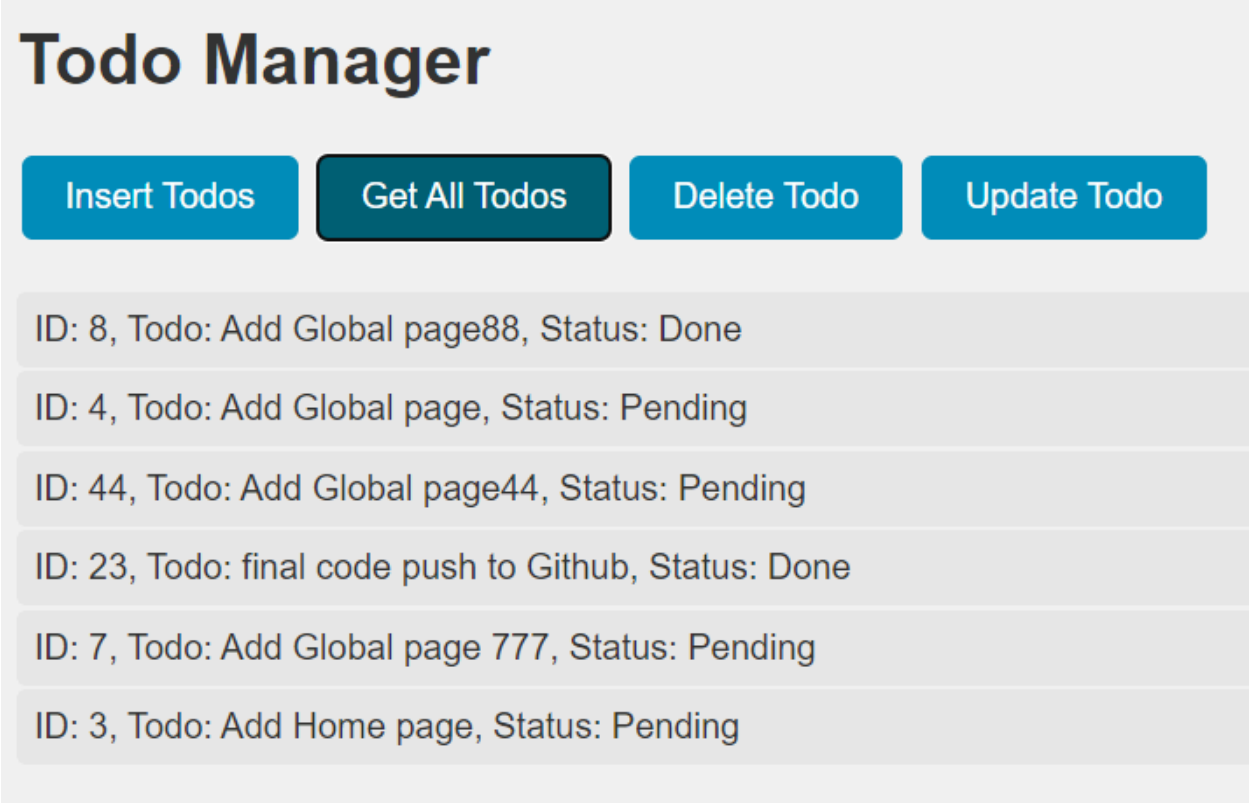


Delete todo functionality:

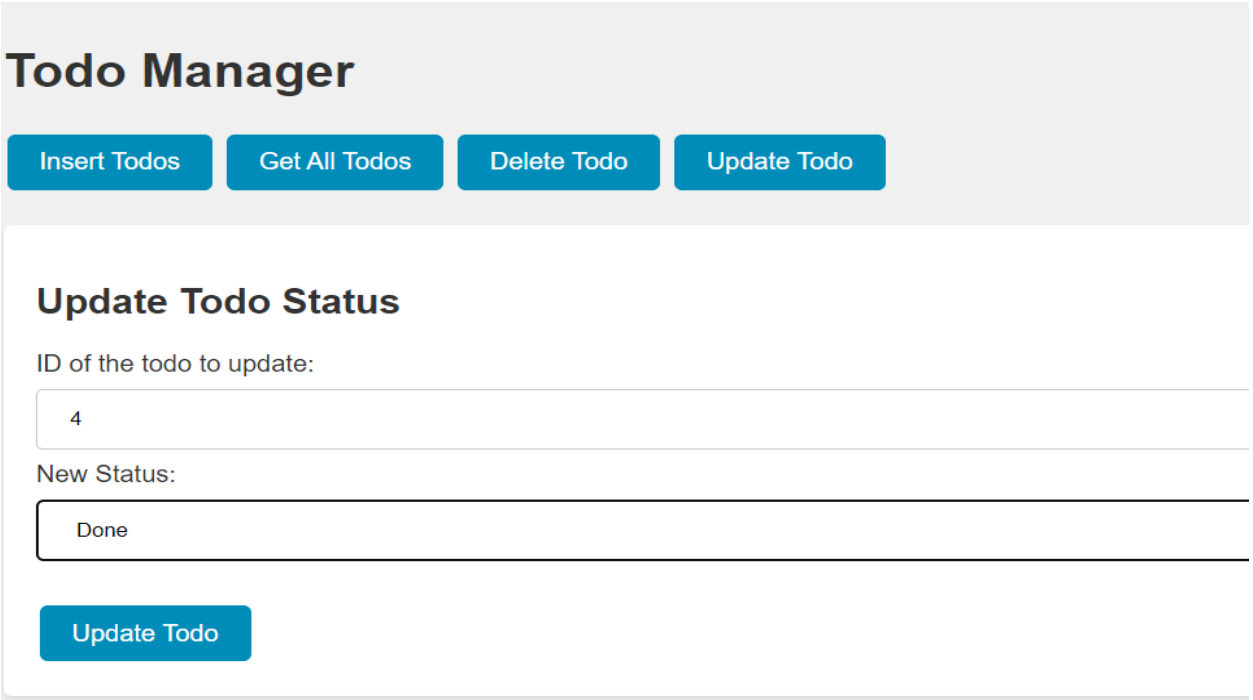




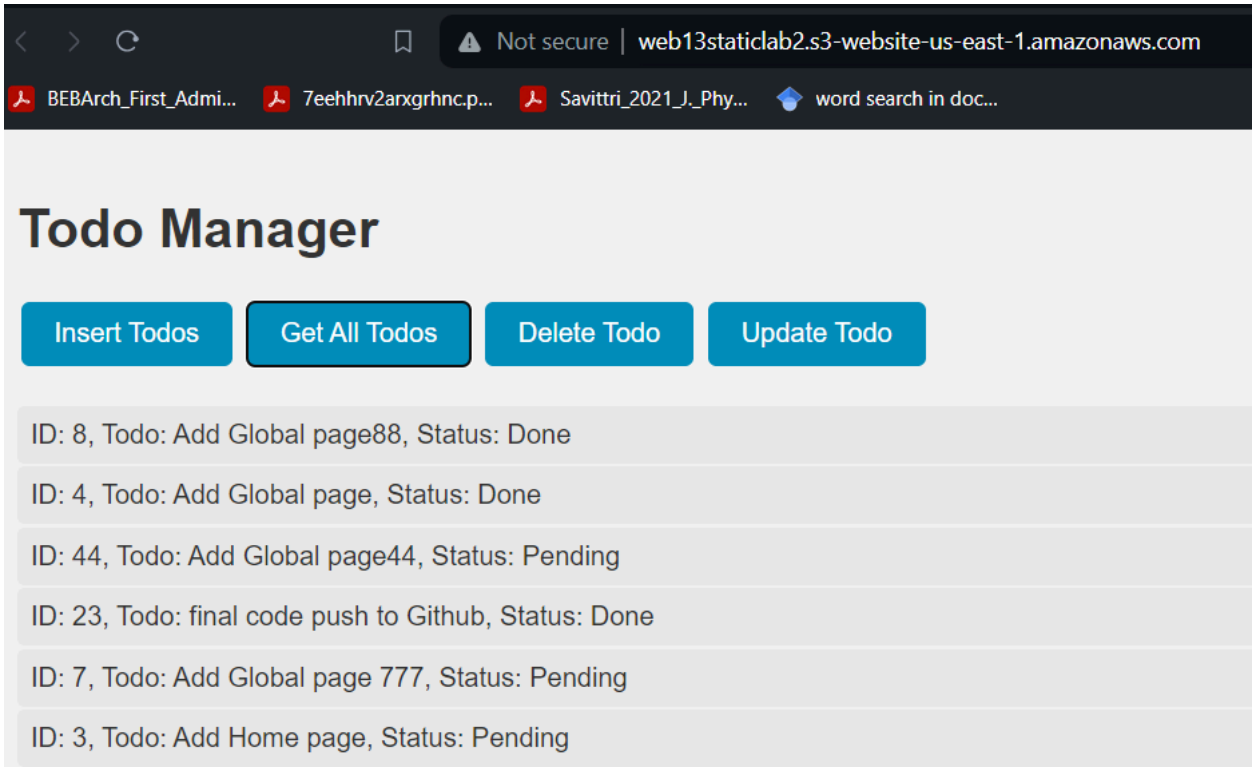
All todos after deleting todo with id=1:



Update functionality:



After update:



This concludes the serverless lab 1 where we create lambda function for backend, dynamodb for database, api integration for api interaction and S3 static website hosting.