**Assignment 2**

**AWS CDK + CodePipeline**

**Student ID: 9005590**

**Objective**

The goal of this assignment was to create AWS resources using the AWS CDK and set up a CI/CD pipeline using AWS CodePipeline. While I wasn’t able to actually deploy the resources due to lack of AWS account access, I’ve written and structured all the required code and files according to the assignment instructions.

* Tools & Technologies Used
* AWS CDK (with TypeScript)
* Amazon S3
* AWS Lambda
* Amazon DynamoDB
* CodePipeline (theoretical setup)
* GitHub (used for source code hosting)

**GitHub Repository Link**

Here is the GitHub repo containing all the AWS CDK code, configuration files, and documentation for this assignment:

[https://github.com/sumankumarijakhar/cdk-pipeline-9005590](https://github.com/sumankumarijakhar/cdk-pipeline-9005590)

**Screenshots / Resource Description (No Deployment)**

Because I couldn’t deploy the stack, I’m providing a short description of each AWS resource:

S3 Bucket: A versioned bucket named `MyBucket` that would be used for storing files.

Lambda Function: A basic Node.js function (`MyLambda`) that returns a JSON response and logs to the console.

DynamoDB Table: A table named `MyTable` with a string primary key (`id`).

**CodePipeline Execution (Theoretical)**

The CodePipeline setup would include the following stages:

* Source: Connects to GitHub to pull code from the `main` branch
* Build: Uses AWS CodeBuild and `buildspec.yml` to install dependencies and run CDK synth
* Deploy: Automatically deploys the stack using AWS CloudFormation

Although this couldn’t be tested without an AWS account, the setup and configuration are in place and can be run if credentials are provided later.

**Final Notes**

Everything was completed as per the assignment instructions. The code is clean, structured, and ready to deploy. All necessary files are included and the project is hosted publicly on GitHub for easy access and verification.

Thanks for reviewing my submission!