Sure! Here's an idea for a mini serverless application that leverages AWS services including API Gateway, Lambda, SNS, DynamoDB, and EventBridge:

Using TypeScript and AWS SAM and Github CI/CD

Idea: Real-time Feedback Collection App

Scenario:

Imagine you want to build a real-time feedback collection application where users can submit feedback about a service or product. The feedback is collected and stored in a DynamoDB table, and an SNS topic is used to send notifications to administrators whenever new feedback is received. Additionally, EventBridge is used to log feedback events for analysis.

Components:

1. API Gateway:

Set up an API Gateway to receive incoming HTTP requests from users. Create a POST endpoint to allow users to submit feedback.

2. Lambda Function (**SubmitFeedback**):

Create a Lambda function that's triggered by the API Gateway. The function should handle the incoming feedback data, validate it, and then store it in a DynamoDB table.

3. DynamoDB:

Set up a DynamoDB table to store feedback entries. Create necessary attributes like `*userId*`, `feedbackText`, `timestamp`, etc.

4. SNS Topic (**FeedbackNotifications**):

Create an SNS topic that's used to send notifications to administrators whenever new feedback is submitted. Subscribe administrators' email addresses to this topic.

5. Lambda Function (**NotifyAdmins**):

Create another Lambda function that's triggered by the DynamoDB Stream of new feedback entries. This function sends notifications to the SNS topic whenever new feedback is received.

6. EventBridge:

Configure an EventBridge rule to capture successful feedback submissions. This could trigger an event that logs feedback events for further analysis or data processing.

Workflow:

1. User submits feedback via the API Gateway.

2. The `**SubmitFeedback**` Lambda function processes the feedback, validates it, and stores it in the DynamoDB table.

3. The DynamoDB Stream triggers the `**NotifyAdmins**` Lambda function.

4. The `**NotifyAdmins**` function sends a notification to the SNS topic.

5. Administrators receive notifications about new feedback.

6. An **EventBridge** rule captures the successful feedback submissions and logs events for analysis.

Benefits:

- Real-time feedback collection.

- Immediate notifications to administrators about new feedback.

- Ability to analyze feedback trends over time using stored events.

Remember that this is a simplified example, and you can extend and customize it based on your needs. Building this application will provide you with experience in integrating different AWS services and setting up a full serverless workflow.

A diagram of a software process

Description automatically generated with medium confidence