

As a developer, I want to set up a DynamoDB test table so we can start testing CRUD operations.

Implementation

To support testing, a DynamoDB test table named AMW has been documented and designed. The table follows a single-table design with a Partition Key (PK) and Sort Key (SK), allowing related data such as Users, Stories, Chapters, and Media to be grouped efficiently.

Table Definition (AWS CLI example):

```
aws dynamodb create-table \  
  --table-name AMW \  
  --attribute-definitions \  
    AttributeName=PK,AttributeType=S \  
    AttributeName=SK,AttributeType=S \  
  --key-schema \  
    AttributeName=PK,KeyType=HASH \  
    AttributeName=SK,KeyType=RANGE \  
  --billing-mode PAY_PER_REQUEST
```

This creates the base table required for storing AMW data. Additional Global Secondary Indexes (GSIs) can later be added to support queries such as:

- Users by email (login)
- Stories by user (dashboard view)
- Stories by title prefix (search)
- Media by story or chapter (gallery)

CRUD Testing Examples

Once the table is available, test CRUD operations can be performed.

Create (Put Item – Add a Story):

```
aws dynamodb put-item --table-name AMW --item '{
  "PK": {"S": "STORY#s_001"},
  "SK": {"S": "METADATA"},
  "type": {"S": "STORY"},
  "storyId": {"S": "s_001"},
  "userId": {"S": "u_123"},
  "title": {"S": "A Moment With Nana"},
  "summary": {"S": "Our Sunday rituals."},
  "createdAt": {"S": "2025-09-12T06:10:00Z"}
}'
```

Read (Query – List Chapters for a Story):

```
aws dynamodb query \
  --table-name AMW \
  --key-condition-expression "PK = :pk AND begins_with(SK, :prefix)" \
  --expression-attribute-values '{"pk":{"S":"STORY#s_001"}, "prefix":{"S":"CHAPTER#"}}'
```

Update (Modify Story Summary):

```
aws dynamodb update-item \
  --table-name AMW \
  --key '{"PK":{"S":"STORY#s_001"}, "SK":{"S":"METADATA"}}' \
  --update-expression "SET summary = :s" \
  --expression-attribute-values '{"s":{"S":"Updated family traditions."}}'
```

Delete (Remove a Chapter):

```
aws dynamodb delete-item \
```

```
--table-name AMW \
```

```
--key '{"PK":{"S":"STORY#s_001"},"SK":{"S":"CHAPTER#001#c_aaa"}}'
```

Outcome

- Documentation of the DynamoDB test table setup.
- Example AWS CLI commands to create the table.
- CRUD operation samples that show how items can be created, read, updated, and deleted.

This ensures that the project is ready to proceed with actual testing in Sprint 3.