**day37\_107856406\_dsdipt\_sudipto\_18september2025**

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### ***Task 01: List all tables in your DynamoDB AWS CLI***

**Aws dynamodb list-tables**

### ***Task 02: What does DynamoDB Limits- error Handling suggest when facing a provisionedthroughputExceededException?***

**Back off and retry with exponential delays, while monitoring consumption via CloudWatch.**

### ***Task 03: When executing a Scan operation from the AWS CLI. which flag controls the number of items returned per API call?***

**–limit**

### ***Task 04: When creating a table in AWS Console what's not required?***

**Specifying IAM role for automatic throughput scaling**

### ***Task 05: What is the purpose of Atomic Counters in DynamoDB when using the AWS SDK?***

**They allow increment or decrement operations on numeric attributes without needing to perform a read-modify-write cycle manually.**

### ***Task 06: In DynamoDB, how does eventual consistency differ from strong consistency when reading data?***

**Eventual consistency reads offer reduced latency but may not reflect the most recent successful write operations to an item.**

### ***Task 07: When reading a paginated result set using the AWS SDK from DynamoDB, what mechanism allows you to retrieve the next set of items?***

**Use the NextToken from the current response and pass it as the StartKey in the subsequent request**

### ***Task 08: How does AWS CLI handle item-level updates in DynamoDB?***

**It allows updating only specific attributes using --update-expression, supporting conditional writes and atomic counters.**

### ***Task 09: Which operation is used in AWS SDK to retrieve only a specific set of attributes from a DynamoDB item?***

**Set the ProjectionExpression to list required attributes during a GetItem or Query request.**

### ***Task 10: What AWS SDK feature helps in retrieving paginated data from a table or index with multiple result pages?***

**Use the LastEvaluatedKey from the response and pass it as ExclusiveStartKey in the next query.**

### ***Task 11: In DynamoDB, what does the Global Secondary Index (GSI) allow you to do that Local Secondary Indexes (LSI) cannot?***

**GSIs allow using an alternate partition key and sort key on the same table without size constraints linked to the base item**

### ***Task 12: Which of the following statements best describes the concept of "Provisioned Capacity" in DynamoDB?***

**It requires predefining read and write throughput capacity, which is reserved and billed regardless of actual usage, and is suitable for predictable workloads.**

### ***Task 13: You want to project only title and views attributes when querying a GSI CategoryIndex on table Articles. Which CLI parameter should be used?***

**--projection-expression "title, views"**

### ***Task 14: Using AWS CLI, how can you delete a table named LogsTable?***

**aws dynamodb delete-table --table-name LogsTable**

### ***Task 15: Which command correctly retrieves an item using AWS CLI and returns only consistent reads?***

**aws dynamodb get-item --table-name Users --key '{"UserID":{"S":"1"}}' --consistent-read true**

### ***Task 16: You want to create a new item using AWS CLI in the Employees table. Which is the correct command syntax?***

**aws dynamodb put-item --table-name Employees --item '{"ID":{"N":"1001"}, "Name":{"S":"John"}, "Role":{"S":"Manager"}}'**

### ***Task 17: How can you create a table with LSI using AWS CLI?***

**aws dynamodb create-table --table-name Products --key-schema ... --local-secondary-indexes '[{...}]' --attribute-definitions ...**

### ***Task 18: Which command in AWS CLI updates email attribute for a user in Users table without overwriting the entire item?***

**aws dynamodb update-item --table-name Users --key '{"UserID":{"S":"u101"}}' --update-expression "SET email = :e" --expression-attribute-values '{":e":{"S":"user@example.com"}}'**

### ***Task 19: How would you use Boto3 to query the Orders table by CustomerID, using a secondary index named CustomerIndex and retrieve only OrderID and Amount attributes?***

**table.query(KeyConditionExpression=Key('CustomerID').eq(customer\_id), ProjectionExpression="OrderID,Amount", IndexName="CustomerIndex"**

### ***Task 20: Which AWS CLI command correctly performs a conditional delete to remove an item only if its status attribute is "inactive"?***

**aws dynamodb delete-item --table-name Users --key '{"UserID":{"S":"123"}}' --condition-expression "status = :s" --expression-attribute-values '{":s":{"S":"inactive"}}'**

### ***Task 21: What is the correct Boto3 code to perform a scan operation with a filter where score > 80 in Students table?***

**table.scan(FilterExpression=Attr('score').gt(80))**

### ***Task 22: Which AWS CLI command correctly updates an item's attribute score by adding 5 in a table named Players?***

**aws dynamodb update-item --table-name Players --key '{"PlayerId":{"S":"101"}}' --update-expression "ADD score :val" --expression-attribute-values '{":val":{"N":"5"}}'**

### ***Task 23: In AWS CLI, how would you retrieve only the name and email fields of an item with primary key UserID = 123?***

**aws dynamodb get-item --table-name Users --key '{"UserID":{"S":"123"}}' --projection-expression "name,email"**

### ***Task 24: What does DynamoDB Limits – Error Handling suggest when facing a ProvisionedThroughputExceededException?***

**Back off and retry with exponential delays, while monitoring consumption via CloudWatch.**

### ***Task 25: What is a key advantage of using AWS SDK for interacting with DynamoDB over AWS CLI or Console?***

**SDK allows embedding retry logic, pagination handling, and structured data models into application logic.**

### ***Task 26: Which AWS SDK technique helps ensure that a write only occurs if the item doesn't already exist?***

**Apply ConditionExpression to check attribute absence using attribute\_not\_exists().**

### ***Task 27: When interacting with DynamoDB using AWS Console, how can a user filter data in a table view without writing queries?***

**Apply client-side filters using attribute filters under the “Explore Table Items” tab.**

### ***Task 28: What does the DynamoDB Architecture primarily rely on to achieve high availability and fault tolerance?***

**Distributed design with synchronous replication across at least three availability zones.**

### ***Task 29: What is the result of enabling On-Demand Capacity Mode in DynamoDB?***

**You are billed based only on actual reads and writes, with no need to provision capacity units.**

### ***Task 30: In DynamoDB, which factor triggers the creation of new partitions automatically?***

**When the storage in an existing partition exceeds 10 GB or throughput requirements surpass limits.**

### ***Task 31: Which statement is true about write operations using AWS SDK in DynamoDB?***

**You can use UpdateItem with expressions to modify specific attributes without affecting the rest.**

### ***Task 32: In the AWS SDK, which method would you use to increase an existing numeric attribute without retrieving its current value?***

**Use UpdateItem with ADD operation on the attribute.**

### ***Task 33: When using the AWS CLI to delete a DynamoDB table, what precaution must be taken?***

**Deleting a table is immediate, but recovery is not possible unless point-in-time recovery is enabled.**

### ***Task 34: In the AWS Console, what happens if you try to create a table with a duplicate name in the same region?***

**Table creation will fail with a validation error indicating name conflict.**

### ***Task 35: What is a key characteristic of DynamoDB partitions that influences table performance?***

**Each partition can contain up to 100 GB of data and supports up to 3,000 read and 1,000 write capacity units.**

### ***Task 36: Which of the following best describes DynamoDB design pattern***

**A collection of predefined schema blueprints that support common access scenarios such as adjacency lists and time-series data.**

### ***Task 37: In DynamoDB data modeling, what does the multi-value sort key pattern allow you to do?***

**Emulate a relational schema by allowing sort keys to represent hierarchical relationships like time ranges or event types.**

### ***Task 38: What is a recommended method to lower DynamoDB costs while maintaining access performance?***

**Optimize access patterns using compound keys and avoid unnecessary indexes or scans.**

### ***Task 39: How can hot partitions be avoided in a high-volume DynamoDB design?***

**Adopt a key sharding strategy where the partition key is prefixed or suffixed with a hashed or random number.**

### ***Task 40: How do Local Secondary Indexes (LSIs) affect storage limits per partition key in DynamoDB?***

*The total size of all items with the same partition key (including all versions across LSIs) must not exceed 10 GB.*

### ***Task 41: How does the AWS CLI handle table creation in DynamoDB, and what is required when setting provisioned throughput?***

**The CLI requires explicit specification of read and write capacity units during table creation, with optional auto-scaling flags.**

### ***Task 42: When using the AWS Console to add an item to a DynamoDB table, which of the following best reflects the behavior of attribute typing?***

**Attributes can be added dynamically, with their type inferred at the time of input without enforcing a strict schema.**

### ***Task 43: How are partition keys critical to DynamoDB's scalability model?***

**They are used to map table items to partitions which in turn directly influence the system’s horizontal scalability and access latency.**

### ***Task 44: Primary functional difference between a Local Secondary Index (LSI) and a Global Secondary Index (GSI)***

**LSIs require the same partition key as the base table, whereas GSIs can have a different partition key.**

### ***Task 45: NOT required when creating a table using the AWS Console***

**Specifying an IAM role for automatic throughput scaling**.

### ***Task 46: What is the role of an ExpressionAttributeValues parameter when using the AWS SDK to perform conditional writes?***

**It is used to reference literal values safely in expressions, avoiding reserved word conflicts.**

### ***Task 47: Which CLI command can be used to enable Point-in-Time Recovery (PITR) on a table?***

**aws dynamodb update-continuous-backups --table-name Customers --point-in-time-recovery-specification PointInTimeRecoveryEnabled=true**

### ***Task 48: Which key metric should you monitor in CloudWatch to detect hot partitions in a DynamoDB table?***

**ThrottledRequests with partition key dimension**

### ***Task 49: What is the difference in capacity planning between a base table and a GSI in DynamoDB?***

**GSIs can be configured with separate provisioned or on-demand capacity settings from the base table.**

### ***Task 50: true regarding Global Secondary Indexes (GSI) write behavior***

**Write operations to the base table automatically update GSIs asynchronously, which may introduce temporary inconsistencies.**

### ***Task 51: In the AWS CLI, what does the --key-condition-expression parameter do in a Query operation?***

**It sets up primary key constraints to filter results on the partition and optional sort key.**

### ***Task 52: "What does this AWS SDK paginated read pattern accomplish? while 'LastEvaluatedKey' in response: response = table.scan(ExclusiveStartKey=response['LastEvaluatedKey'])"***

**paginates through all the items in the table by using the last key from the previous scan.**

### ***Task 53: A valid best practice when designing a high-throughput DynamoDB table for variable workload access patterns***

**Use composite keys that include highly variable timestamp-based components to create uniform partition distribution.**

### ***Task 54: Which CLI command can be used to enable Point-in-Time Recovery (PITR) on a table?***

**aws dynamodb update-continuous-backups --table-name Customers --point-in-time-recovery-specification PointInTimeRecoveryEnabled=true**

### ***Task 55: What is a key characteristic of DynamoDB’s eventual consistency model for read operations?***

**It may return stale data immediately after a write, but will eventually return the latest version.**

### ***Task 56: Which feature in the DynamoDB Console allows you to monitor read/write throughput over time?***

**Metrics tab that integrates with Amazon CloudWatch for real-time performance charts.**

### ***Task 57: Why is a good partition key design critical in DynamoDB?***

**Poorly chosen partition keys can lead to uneven data distribution, causing hot partitions and throttled**

### ***Task 58: What does the DynamoDB Architecture primarily rely on to achieve high availability and fault tolerance?***

**Distributed design with synchronous replication across at least three availability zones.**

### ***Task 59: The command that retrieves all items from a DynamoDB table while handling pagination using AWS CLI.***

aws dynamodb scan --table-name Products and check for LastEvaluatedKey in response for further scans

### *Task 60: In Boto3, how would you read an item from Books table with a key {"ISBN": "123-456-789"}****?***

table.get\_item(Key={"ISBN": "123-456-789"})

### ***Task 61: How would you create a table using AWS CLI with on-demand billing mode?***

**aws dynamodb create-table --table-name Inventory --key-schema ... --billing-mode PAY\_PER\_REQUEST**

### ***Task 62: You want to create a new item using AWS CLI in the Employees table. Which is the correct command syntax?***

**aws dynamodb put-item --table-name Employees --item '{"ID":{"N":"1001"}, "Name":{"S":"John"}, "Role":{"S":"Manager"}}'**

### ***Task 63: What is the correct way to use an AWS CLI scan operation with a filter to get all items where status = "active"?***

aws dynamodb scan --table-name Accounts --scan-filter '{"status":{"AttributeValueList":[{"S":"active"}],"ComparisonOperator":"EQ"}}'

### ***Task 64: How many types of primary keys does DynamoDB use?***

**2**

### ***Task 65: \_\_\_\_ indexes enable you to query table data using a different key***

Secondary

### ***Task 66: DynamoDB uses how many types of secondary indexes?***

**2**

### ***Task 67: Eventually Consistent readings always return current data?***

**False**

### ***Task 68: Which of the following data-reading action in DynamoDB receives a primary key and returns the corresponding item's attributes?***

**GetItem**

### ***Task 69: DynamoDB often ensures consistency across all copies in less than a second.***

**True**

### ***Task 70: All local secondary indexes retain partition and sort keys from parent tables by default?***

**False**

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