### ****Title: Generic ETL Test Cases Document****

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### ****Section 1: Data Extraction Test Cases****

#### ****TC001: Verify Source Data Connectivity****

* Ensure the ETL tool can successfully connect to the source system (e.g., databases, flat files, APIs).

#### ****TC002: Verify Data Volume****

* Validate that the number of rows and columns extracted from the source matches the expected count.

#### ****TC003: Verify Data Completeness****

* Ensure no data is missed during extraction, and all records from the source are extracted.

#### ****TC004: Verify Supported File Formats****

* Test if the ETL process supports and correctly handles various file formats (e.g., CSV, JSON, XML).

### ****Section 2: Data Transformation Test Cases****

#### ****TC005: Verify Transformation Logic****

* Ensure all transformation rules (e.g., calculations, mappings, lookups) are implemented correctly.

#### ****TC006: Verify Data Type Transformation****

* Check that data types are transformed correctly (e.g., string to date, integer to decimal).

#### ****TC007: Verify Business Rules Implementation****

* Validate that all business rules (e.g., filtering, merging, aggregating) are applied as per requirements.

#### ****TC008: Verify Null and Default Values****

* Ensure null values are handled appropriately (e.g., replaced with default values or flagged).

#### ****TC009: Verify Data Integrity****

* Confirm relationships and constraints (e.g., primary keys, foreign keys) are maintained during transformation.

#### ****TC010: Verify Duplicate Handling****

* Test if duplicates are removed, flagged, or managed as per requirements.

### ****Section 3: Data Loading Test Cases****

#### ****TC011: Verify Target Data Connectivity****

* Check if the ETL tool can connect and load data into the target system.

#### ****TC012: Verify Data Consistency****

* Validate that the data in the target system matches the transformed data.

#### ****TC013: Verify Data Volume****

* Ensure the number of records loaded into the target matches the expected count.

#### ****TC014: Verify Data Partitioning****

* Check that data is partitioned or stored in the target system as required.

#### ****TC015: Verify Load Performance****

* Measure the time taken to load data into the target system and confirm it meets performance criteria.

#### ****TC016: Verify Error Logging****

* Ensure errors during the loading process are logged for troubleshooting.

### ****Section 4: End-to-End Data Quality Test Cases****

#### ****TC017: Verify Data Accuracy****

* Ensure the data in the target system is accurate and matches the source values after transformation.

#### ****TC018: Verify Data Completeness****

* Validate that no data is lost during the ETL process.

#### ****TC019: Verify Data Duplication****

* Confirm that duplicate records do not exist in the target system unless specified.

#### ****TC020: Verify Data Validation Rules****

* Ensure data validation rules (e.g., value ranges, mandatory fields) are enforced in the target system.

### ****Section 5: Negative Test Cases****

#### ****TC021: Invalid Source Data****

* Simulate invalid or corrupted data in the source system and check how the ETL process handles it.

#### ****TC022: Missing Source Data****

* Test the ETL process when source data is missing to verify proper error handling.

#### ****TC023: Incorrect File Format****

* Run the ETL job with an incorrect file format and validate if it handles the issue gracefully.

#### ****TC024: Network Failure****

* Simulate network failures during extraction, transformation, or loading and test system recovery.

### ****Section 6: Performance and Scalability Test Cases****

#### ****TC025: High Volume Data Test****

* Test the ETL process with a large volume of data to ensure performance is acceptable.

#### ****TC026: Concurrent User Load****

* Validate how the ETL system behaves under concurrent user loads or multiple ETL job executions.

#### ****TC027: Incremental Load Test****

* Check if incremental data loads work as expected without overwriting existing data.

#### ****TC028: ETL Job Scheduling****

* Verify if ETL jobs run as per the defined schedule and complete within the expected timeframe.

### ****Section 7: Security Test Cases****

#### ****TC029: Verify Access Control****

* Ensure only authorized users can execute, modify, or monitor ETL jobs.

#### ****TC030: Data Encryption****

* Validate that sensitive data is encrypted during extraction, transformation, and loading.

#### ****TC031: Audit and Logging****

* Ensure audit logs capture all ETL activities, including who accessed or modified data.