Reporting Tables Analysis

Sprint 5: Magazines, Newspapers and Markets Analysis

Overview

This report explains the structure and relationships between the tables Magazines, Markets, Newspapers stored procedures. It describes what each table stores, the indexes they use, stored procedures and what issues were found, and how to improve them.

Magazines

The Magazines table keeps information about each magazine, name of the magazine, link of the magazine and records of where the magazine is published. It is a master list of all the magazines.

Column Name	Data Type	Description
ID	INT	A unique ID.
URL	VARACHAR(1000)	Link of the magazine.
MagazineName	VARCHAR(150)	The name of the magazine.
Country	VARCHAR(150)	Country in which the magazine is published
City	VARCHAR(150)	City in which the magazine is published
StateProvince	VARCHAR(100)	State in which the magazine is published

Indexes

Index Name	Type	Purpose
PRIMARY	PRIMARY, BTree on ID	The main index automatically created on the ID column. The ID is unique and is searchable.
MagazineName_UNIQUE	BTree	Adds a uniqueness to the MagazineName column. Makes the name of the magazines searchable.

Stored Procedures

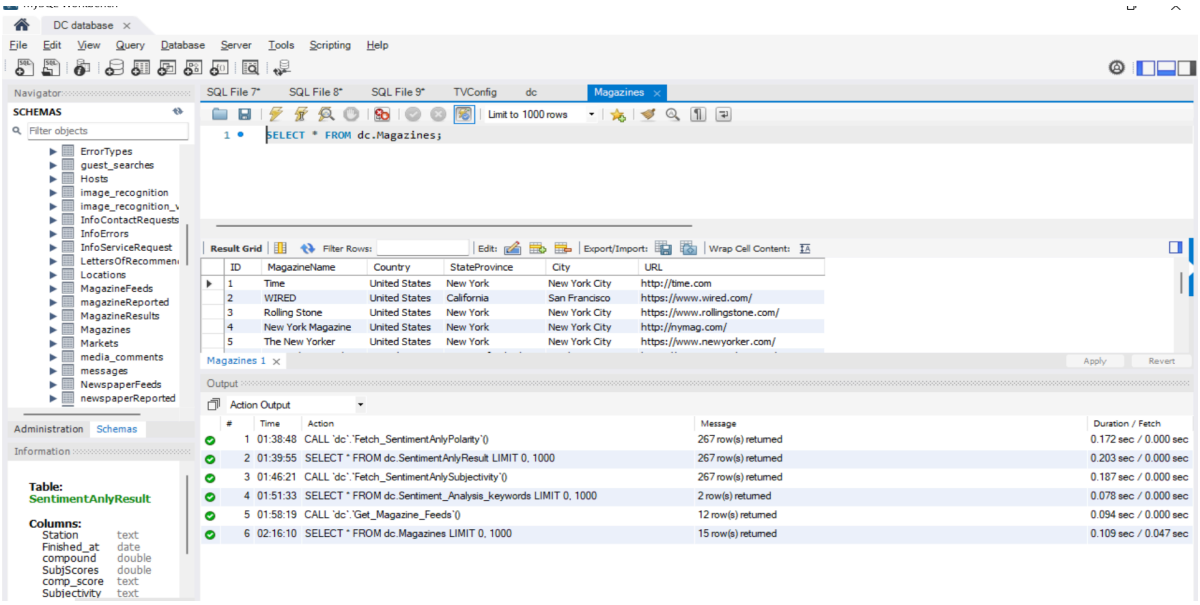
Name	Purpose
Get_Magazines	Returns the names of magazines from the magazines table
Magazine_Search_Emailalerts	Searches the email alerts sent using location
Magazine_Cleanup	Cleans out MagazineResults table using number of days
Insert_Magazine	Inserts a new row in the magazines table.

Observations / Issues

1. **No Validation on URL Quality**
   URL is stored as VARCHAR(1000) with no format validation.
   The table may accumulate invalid or malformed URLs.
2. **Potential Duplicate Geographic Data**
   Country, StateProvince, and City are stored as free-text, increasing risk of inconsistencies (e.g., “USA”, “U.S.A.”, “United States”).

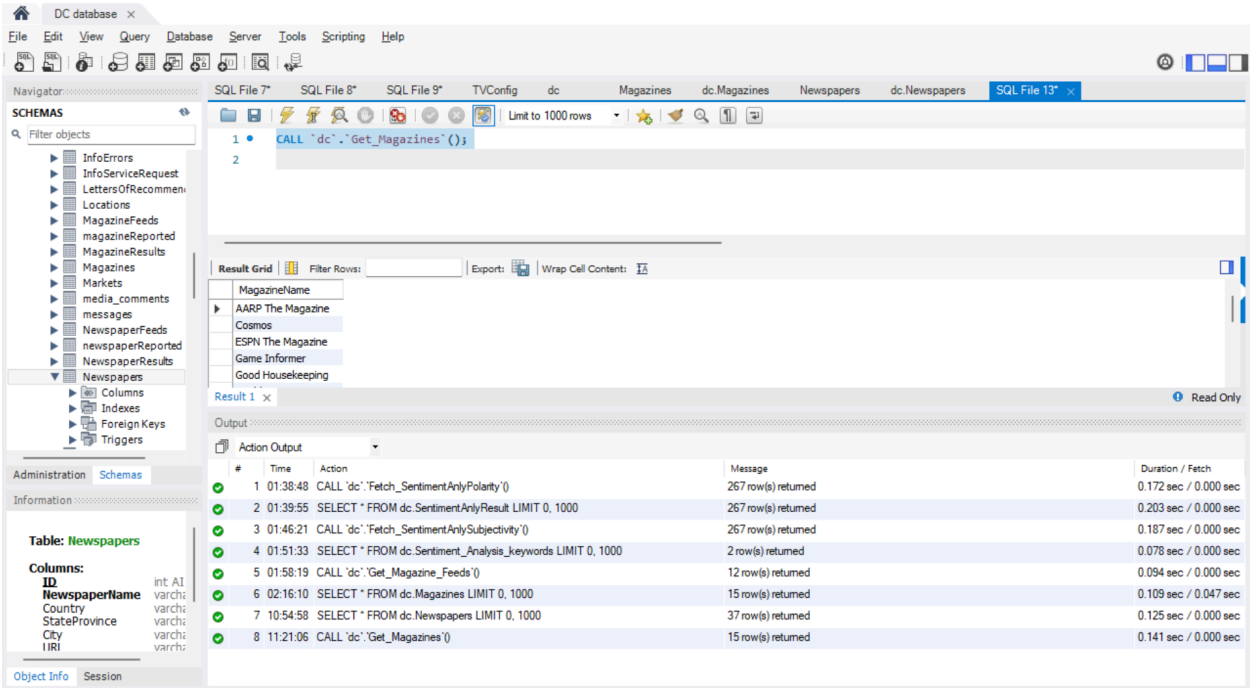
3. **No foreign keys. The table is not connected to anything.**
   It is very hard to get information about this table and no other tables can access this table neither for receiving or storing data. The data is isolated.

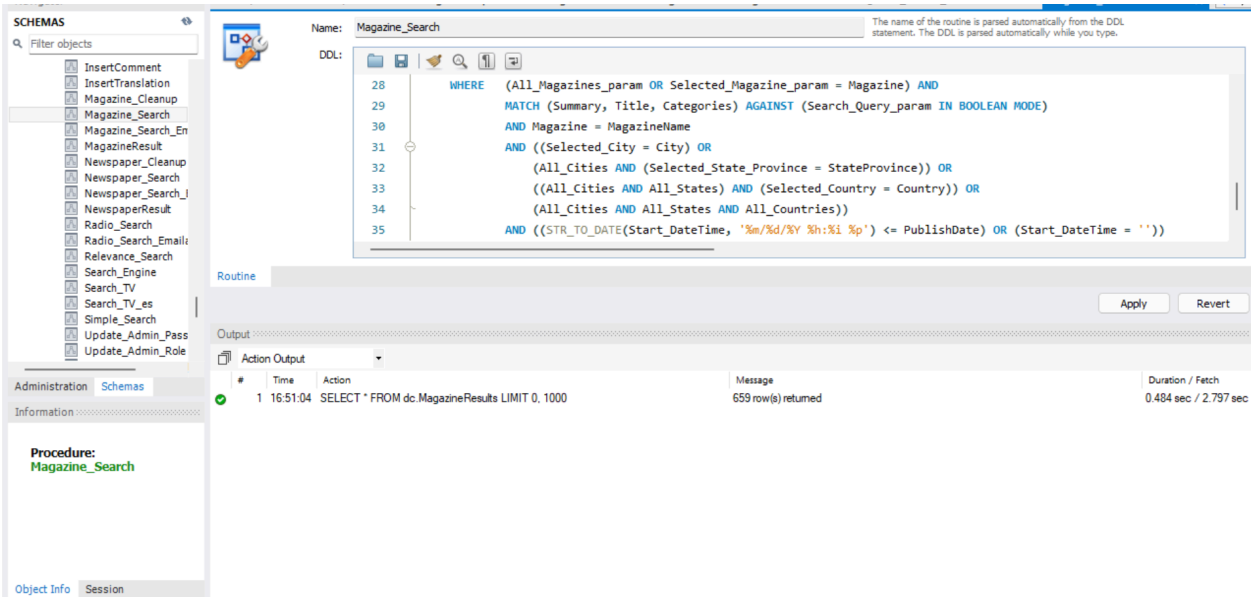
Data query:

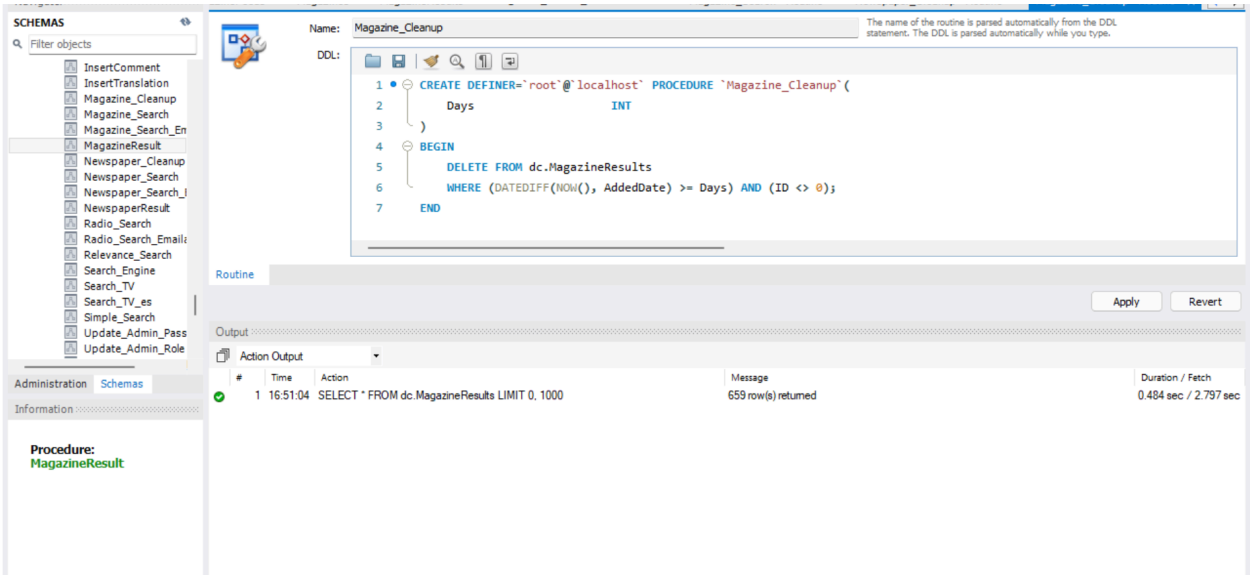


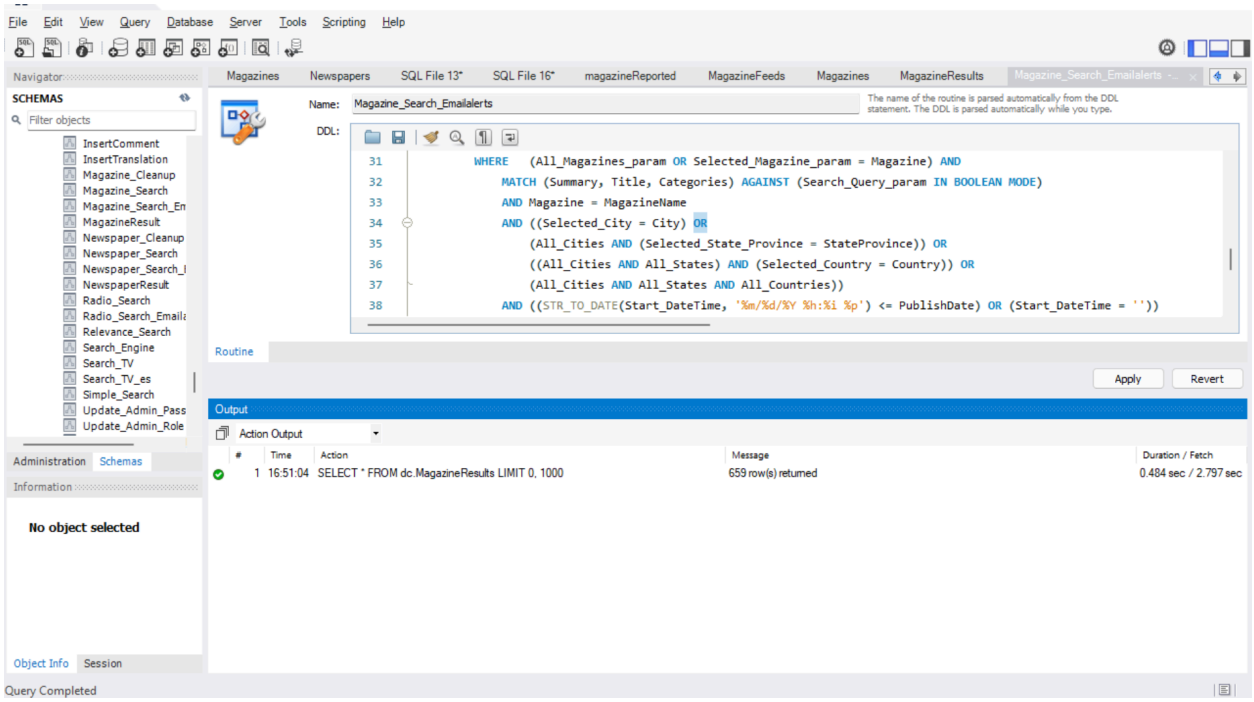
Data Query Speed: Returned 15 rows in 0.109 seconds

Stored Procedures Analysis




SCHEMAS
Filter objects
InsertComment
InsertTranslation
Magazine_Cleanup
Magazine_Search
Magazine_Search_En
MagazineResult
Newspaper_Cleanup
Newspaper_Search
Newspaper_Search_I
NewspaperResult
Radio_Search
Radio_Search_Email
Relevance_Search
Search_Engine
Search_TV
Search_TV_es
Simple_Search
Update_Admin_Pass
Update_Admin_Role
Administration
Schemas
Information
Procedure:
Magazine_Search
Object Info
Session
Name:
Magazine_Search
The name of the routine is parsed automatically from the DDL statement. The DDL is parsed automatically while you type.
DDL:
28 WHERE (All_Magazines_param OR Selected_Magazine_param = Magazine) AND
29 MATCH (Summary, Title, Categories) AGAINST (Search_Query_param IN BOOLEAN MODE)
30 AND Magazine = MagazineName
31 AND ((Selected_City = City) OR
32 (All_Cities AND (Selected_State_Province = StateProvince)) OR
33 ((All_Cities AND All_States) AND (Selected_Country = Country)) OR
34 (All_Cities AND All_States AND All_Countries))
35 AND ((STR_TO_DATE(Start_DateTime, '%m/%d/%Y %h:%i %p') <= PublishDate) OR (Start_DateTime = ''))
Routine
Apply
Revert
Output
Action Output
Time Action Message Duration / Fetch
1 16:51:04 SELECT * FROM dc.MagazineResults LIMIT 0, 1000 659 row(s) returned 0.484 sec / 2.797 sec


SCHEMAS
Filter objects
InsertComment
InsertTranslation
Magazine_Cleanup
Magazine_Search
Magazine_Search_En
MagazineResult
Newspaper_Cleanup
Newspaper_Search
Newspaper_Search_I
NewspaperResult
Radio_Search
Radio_Search_Email
Relevance_Search
Search_Engine
Search_TV
Search_TV_es
Simple_Search
Update_Admin_Pass
Update_Admin_Role
Administration
Schemas
Information
Procedure:
MagazineResult
Name:
Magazine_Cleanup
The name of the routine is parsed automatically from the DDL statement. The DDL is parsed automatically while you type.
DDL:
1 CREATE DEFINER=`root`@`localhost` PROCEDURE `Magazine_Cleanup`(
2 Days INT
3)
4 BEGIN
5 DELETE FROM dc.MagazineResults
6 WHERE (DATEDIFF(NOW(), AddedDate) >= Days) AND (ID <> 0);
7 END
Routine
Apply
Revert
Output
Action Output
Time Action Message Duration / Fetch
1 16:51:04 SELECT * FROM dc.MagazineResults LIMIT 0, 1000 659 row(s) returned 0.484 sec / 2.797 sec



- The country/state are not normalized

Recommendations

- Add NOT NULL + basic data quality constraints. Mark MagazineName, URL, Country, and City as NOT NULL. Enforce minimum length or non-empty checks.
- Add a CHECK constraint or enforce format validation inside Insert_Magazine.
- Move Country, StateProvince, and City to reference tables with foreign keys.

Newspapers

The Newspapers table keeps information about each newspapers, name of the newspapers, link of the newspaper and records of where the newspaper is published. It is a master list of all the newspapers.

Column Name	Data Type	Description
ID	INT	A unique ID.
URL	VARACHAR(1000)	Link of the newspaper.

NewspaperName	VARCHAR(150)	The name of the newspaper.
Country	VARCHAR(150)	Country in which the newspaper is published
City	VARCHAR(150)	City in which the newspaper is published
StateProvince	VARCHAR(100)	State in which the newspaper is published

Indexes

Index Name	Type	Purpose
PRIMARY	PRIMARY, BTree on ID	The main index automatically created on the ID column. The ID is unique and is searchable.
NewspaperName_UNIQUE	BTree	Adds a uniqueness to the NewspaperName column. Makes the name of the newspapers searchable.

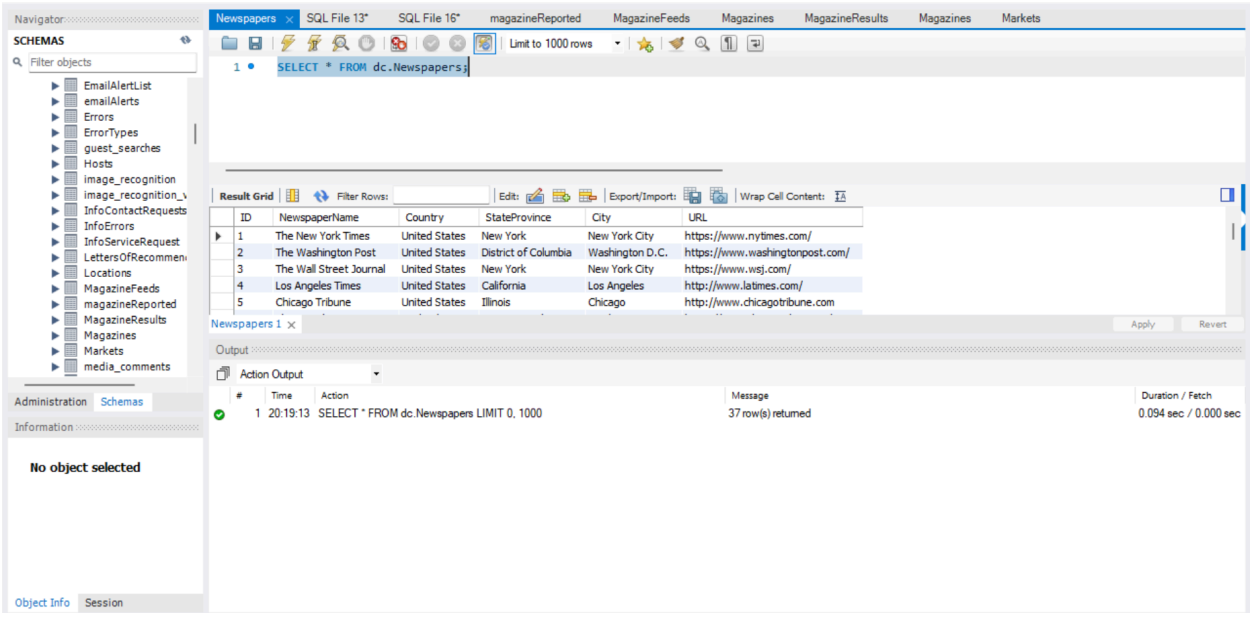
Stored Procedures

Get_Newspapers	Returns the names of newspapers from the magazines table
Newspaper_Search_Emailalerts	Searches the email alerts sent using location
Newspaper_Cleanup	Cleans out NewspaperResults table using number of days
Insert_Newspaper	Inserts a new row in the Newspaper table.

Observations / Issues

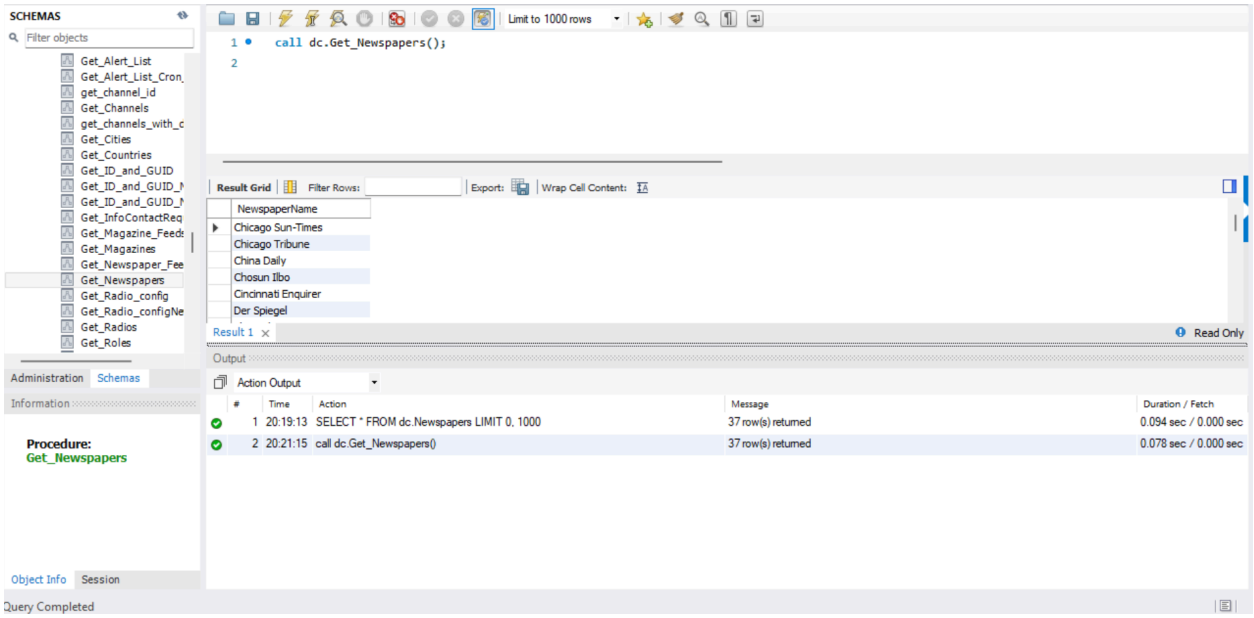
1. **No Validation on URL Quality**
   URL is stored as VARCHAR(1000) with no format validation.
   The table may accumulate invalid or malformed URLs.
2. **Potential Duplicate Geographic Data**
   Country, StateProvince, and City are stored as free-text, increasing risk of inconsistencies (e.g., “USA”, “U.S.A.”, “United States”).
3. **No foreign keys. The table is not connected to anything.**
   It is very hard to get information about this table and no other tables can access this table neither for receiving or storing data. The data is isolated.

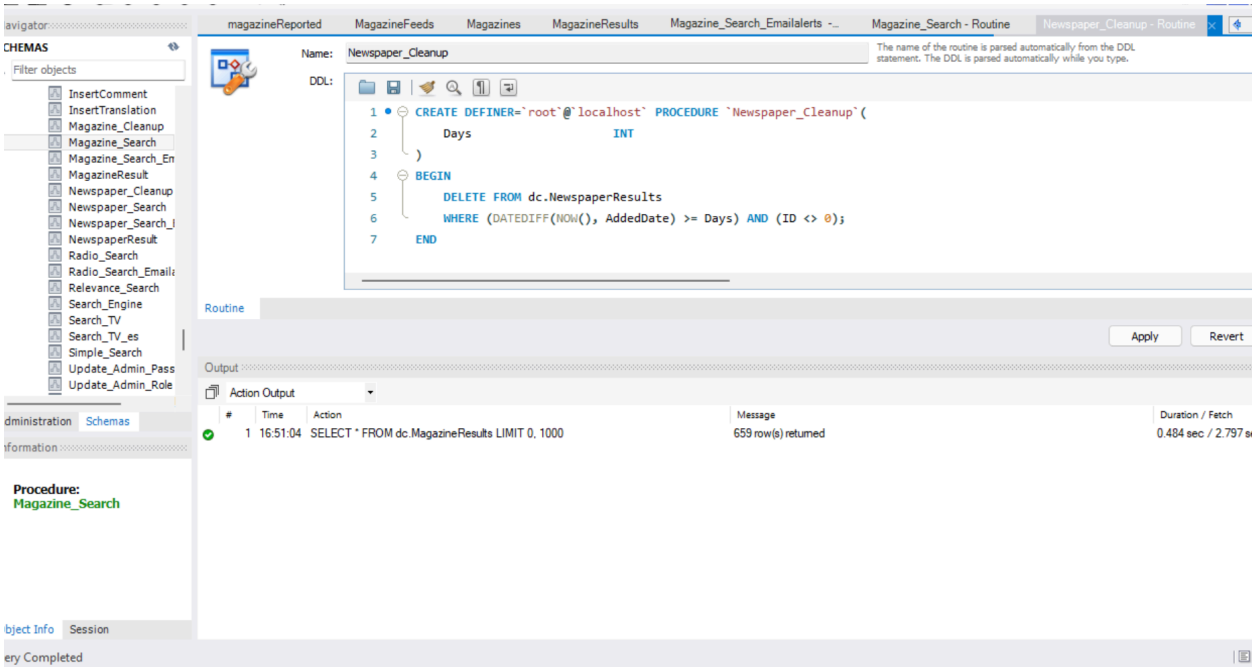
Data query:

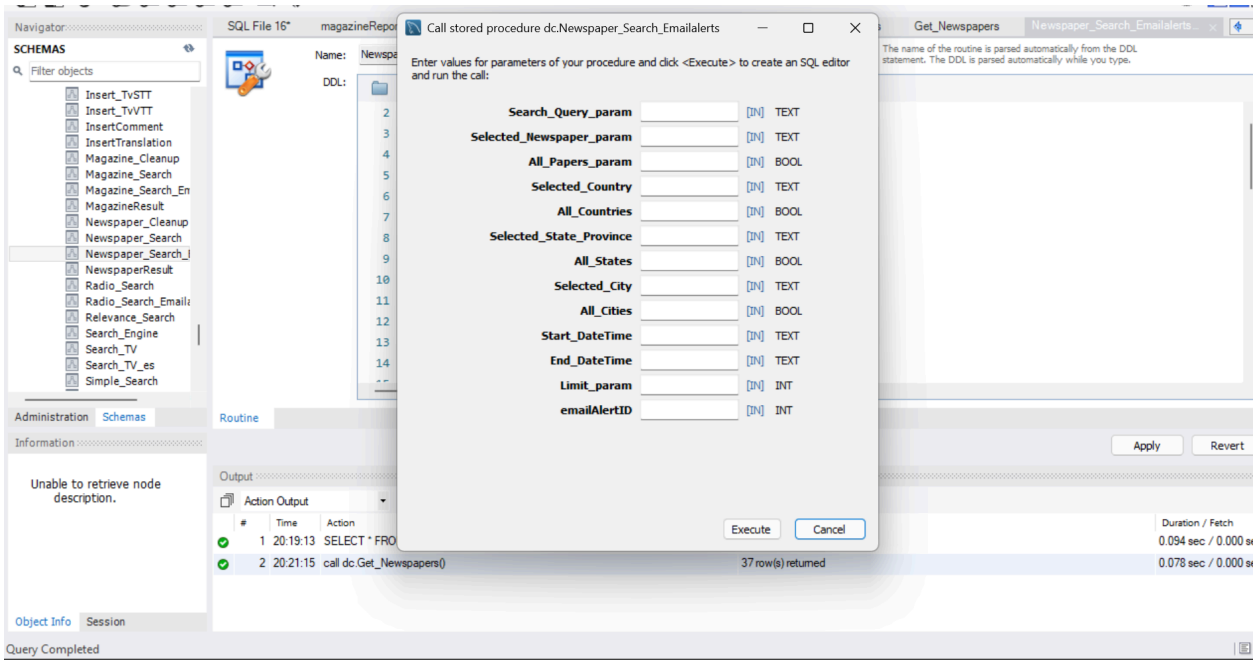


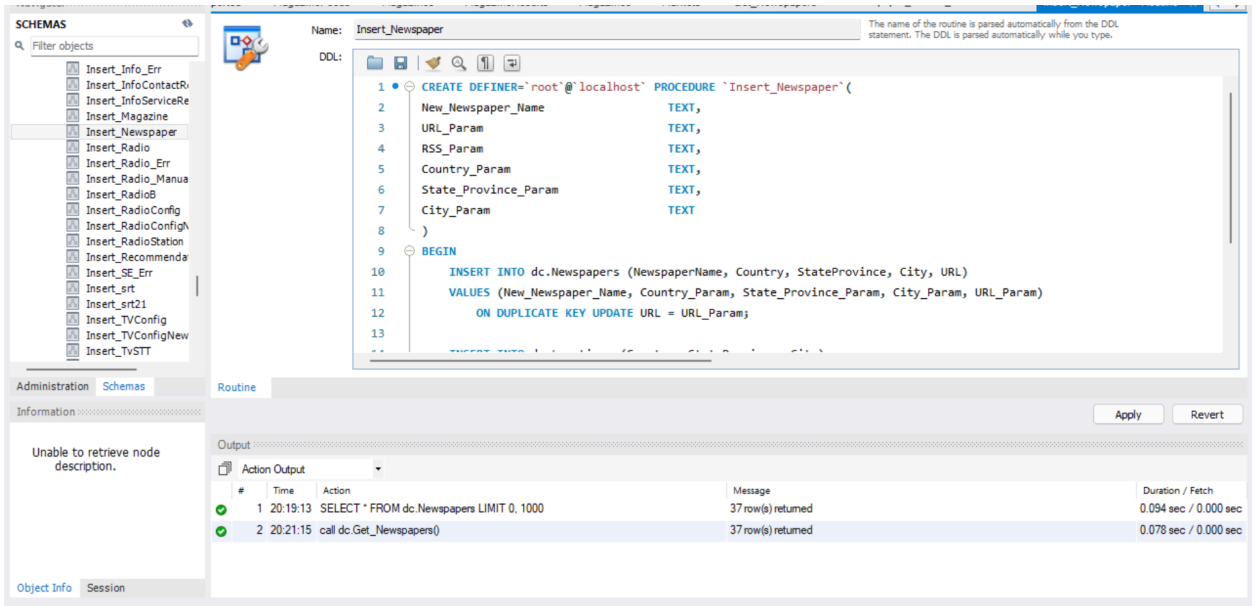
Observation: The query worked and returned 37 rows in 0.094

Stored Procedures:


SCHEMAS
Filter objects
Get_Alert_List
Get_Alert_List_Cron
get_channel_id
Get_Channels
get_channels_with_c
Get_Cities
Get_Countries
Get_ID_and_GUID
Get_ID_and_GUID_N
Get_ID_and_GUID_N
Get_InfoContactReq
Get_Magazine_Feeds
Get_Magazines
Get_Newspaper_Fee
Get_Newspapers
Get_Radio_config
Get_Radio_configNe
Get_Radios
Get_Roles
Administration
Schemas
Information
Procedure:
Get_Newspapers
Object Info
Session
Limit to 1000 rows
1 call dc.Get_Newspapers();
2
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
NewspaperName
Chicago Sun-Times
Chicago Tribune
China Daily
Chosun Ilbo
Cincinnati Enquirer
Der Spiegel
Result 1
Read Only
Output
Action Output
Time Action Message Duration / Fetch
1 20:19:13 SELECT * FROM dc.Newspapers LIMIT 0, 1000 37 row(s) returned 0.094 sec / 0.000 sec
2 20:21:15 call dc.Get_Newspapers() 37 row(s) returned 0.078 sec / 0.000 sec
Query Completed


magazineReported
MagazineFeeds
Magazines
MagazineResults
Magazine_Search_Emailalerts -...
Magazine_Search - Routine
Newspaper_Cleanup - Routine
CHEMAS
Filter objects
InsertComment
InsertTranslation
Magazine_Cleanup
Magazine_Search
MagazineResult
Newspaper_Cleanup
Newspaper_Search
NewspaperResult
Radio_Search
Relevance_Search
Search_Engine
Search_TV
Search_TV_es
Simple_Search
Update_Admin_Pass
Update_Admin_Role
Schemas
Procedure:
Magazine_Search
Session
Name:
Newspaper_Cleanup
The name of the routine is parsed automatically from the DDL statement. The DDL is parsed automatically while you type.
DDL:
1 CREATE DEFINER=`root`@`localhost` PROCEDURE `Newspaper_Cleanup`(
2 Days INT
3)
4 BEGIN
5 DELETE FROM dc.NewspaperResults
6 WHERE (DATEDIFF(NOW(), AddedDate) >= Days) AND (ID <> 0);
7 END
Routine
Apply
Revert
Output
Action Output
Time Action Message Duration / Fetch
1 16:51:04 SELECT * FROM dc.MagazineResults LIMIT 0, 1000 659 row(s) returned 0.484 sec / 2.797





Recommendations

- Add NOT NULL + Basic Data Quality Constraints. Mark NewspaperName, URL, Country, and City as NOT NULL. Enforce minimum length or non-empty checks.
- Add a CHECK constraint or enforce format validation inside Insert_Newspaper.
- Move Country, StateProvince, and City to reference tables with foreign keys.

Markets

Purpose

The **Markets** table was a temporary table to store location of alerts that were sent.

Column Name	Data Type	Description
id	INT	Name or identifier of the location from where media is taken.
Country	VARCHAR(20)	Country of origin
State	VARCHAR(2)	State/ province of origin
City	VARCHAR(40)	City of origin

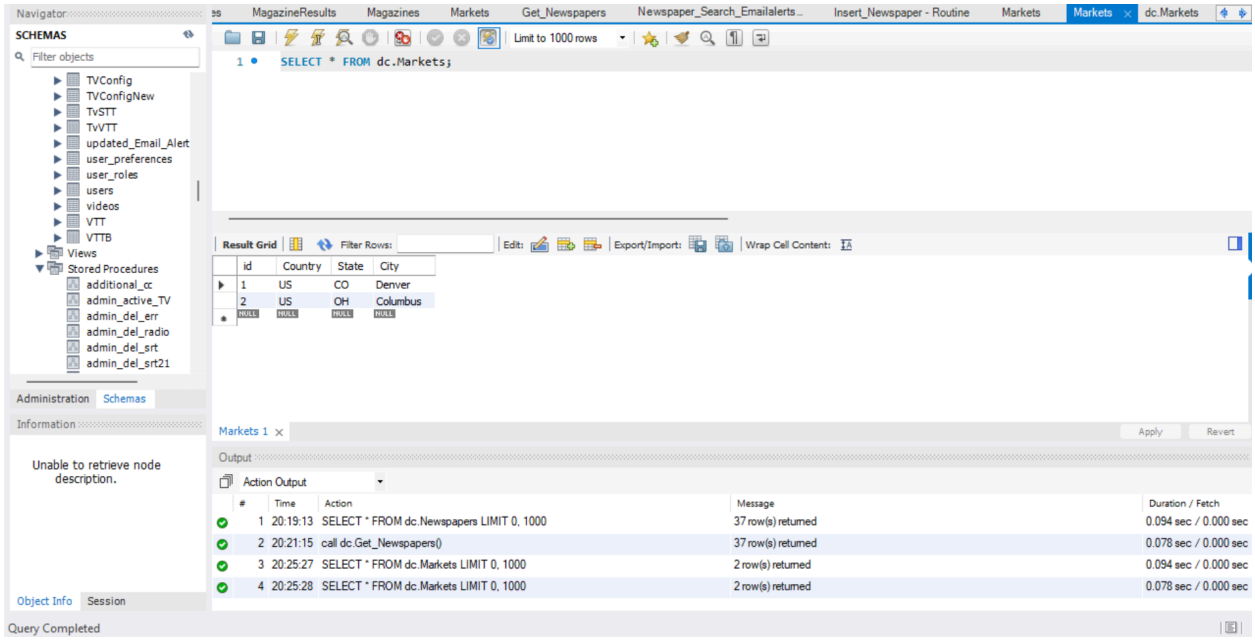
Indexes:

Index Name	Type	Purpose
PRIMARY	PRIMARY, BTree on Country, State, City	The main index created on these columns is unique
id	BTree	Is a auto generated unique id

Stored Procedures: No stored procedures

Observations / Issues

1. **Purpose Is Unclear and is redundant to Locations tables**
   The table is described as temporary, yet it exists as a normal table with indexes. Unclear whether it should still exist or has already been replaced.
2. **PRIMARY KEY Is Incorrectly Defined**
   The PRIMARY KEY is on (Country, State, City) instead of on id.



No other tests can be run on this data.

Recommendations

- Clarify whether the table should still exist. If obsolete it can be dropped.
- Fix the primary key make sure it is only on id
- Add basic metadata columns like date and time of creation and updates.

Recommended Structure

- Standardize locations across ALL tables**.** The tables all store Country, StateProvince/State, and City as free-text fields with inconsistent lengths. A unified structure improves data quality, querying, and joins.
- Add a URL format CHECK constraint or validate in Insert_Magazine and Insert_Newspaper.
- Mark Name columns as NOT NULL
- Add foreign keys for Magazines and Newspapers to connect Feeds table

Recommendations Summary

1. Standardize and normalize all geographic fields.
2. Implement NOT NULL constraints for core fields.
3. Improve URL validation.
4. Add foreign keys to reference tables when possible.
5. Improve stored procedures to enforce data quality.

Magazines / Newspapers

1. Fix isolated data problem by linking location fields to normalized tables.
2. Improve constraints to reduce duplicates.
3. Add indexing for location-based queries.

Markets

1. Clarify whether the table is still needed.
2. Correct the primary key.
3. Add metadata fields (CreatedAt, UpdatedAt).
4. Drop table if obsolete or merged with Locations.

Conclusion

The Magazines, Newspapers, and Markets tables provide essential media source and location data, but the current structure allows inconsistencies, duplicated geographic values, outdated entries, and limited connectivity to other parts of the database. By standardizing the location fields, improving data types and constraints, correcting indexes, and enhancing stored procedures, the database becomes more reliable and easier to maintain.