**1. Remove Duplicate Rows**

sql

Copy code

DELETE FROM table\_name

WHERE id NOT IN (

SELECT MIN(id)

FROM table\_name

GROUP BY column1, column2, column3

);

**2. Trim Whitespace from String Columns**

sql

Copy code

UPDATE table\_name

SET column\_name = TRIM(column\_name);

**3. Replace NULL Values with Default Values**

sql

Copy code

UPDATE table\_name

SET column\_name = 'Default Value'

WHERE column\_name IS NULL;

**4. Standardize Case in String Columns**

Convert all text to uppercase:

sql

Copy code

UPDATE table\_name

SET column\_name = UPPER(column\_name);

Convert all text to lowercase:

sql

Copy code

UPDATE table\_name

SET column\_name = LOWER(column\_name);

**5. Remove Non-Numeric Characters from a Column**

If the column contains mixed characters but should only have numbers:

sql

Copy code

UPDATE table\_name

SET column\_name = REGEXP\_REPLACE(column\_name, '[^0-9]', '');

(*Note: REGEXP\_REPLACE syntax may vary depending on your database system.*)

**6. Correct Common Typos**

sql

Copy code

UPDATE table\_name

SET column\_name = REPLACE(column\_name, 'teh', 'the')

WHERE column\_name LIKE '%teh%';

**7. Identify and Remove Outliers**

For example, if the age column should only contain values between 0 and 120:

sql

Copy code

DELETE FROM table\_name

WHERE age < 0 OR age > 120;

**8. Fix Date Formatting Issues**

Convert date strings to a standard format (e.g., YYYY-MM-DD):

sql

Copy code

UPDATE table\_name

SET date\_column = TO\_DATE(date\_column, 'MM/DD/YYYY');

**9. Find and Remove Rows with Non-ASCII Characters**

sql

Copy code

DELETE FROM table\_name

WHERE column\_name NOT LIKE '%[ -~]%';

(*Note: Adjust syntax for your database's pattern matching.*)

**10. Combine and Normalize Data from Multiple Columns**

Concatenate first name and last name:

sql

Copy code

UPDATE table\_name

SET full\_name = CONCAT(first\_name, ' ', last\_name);

**11. Remove Rows with Missing Key Data**

sql

Copy code

DELETE FROM table\_name

WHERE key\_column IS NULL OR key\_column = '';

**12. Normalize Phone Numbers**

Format all phone numbers to (XXX) XXX-XXXX:

sql

Copy code

UPDATE table\_name

SET phone\_number = REGEXP\_REPLACE(phone\_number, '(\d{3})(\d{3})(\d{4})', '(\1) \2-\3');

**13. Split a Column into Multiple Columns**

Split a full name into first and last name:

sql

Copy code

UPDATE table\_name

SET first\_name = SUBSTRING\_INDEX(full\_name, ' ', 1),

last\_name = SUBSTRING\_INDEX(full\_name, ' ', -1);

**14. Remove Rows with Duplicate Column Pairs**

sql

Copy code

DELETE FROM table\_name

WHERE (column1, column2) IN (

SELECT column1, column2

FROM table\_name

GROUP BY column1, column2

HAVING COUNT(\*) > 1

);

**15. Standardize Date Formats Across Rows**

Ensure all dates follow the YYYY-MM-DD format:

sql

Copy code

UPDATE table\_name

SET date\_column = DATE\_FORMAT(date\_column, '%Y-%m-%d');

**16. Fix Inconsistent Casing in a Column**

Capitalize the first letter of each word:

sql

Copy code

UPDATE table\_name

SET column\_name = INITCAP(column\_name);

(*Note: INITCAP may vary or require equivalent functions depending on your database.*)

**17. Identify Missing Data**

Find rows with NULL or empty values:

sql

Copy code

SELECT \*

FROM table\_name

WHERE column\_name IS NULL OR column\_name = '';

**18. Replace Specific Values in a Column**

sql

Copy code

UPDATE table\_name

SET column\_name = 'Correct Value'

WHERE column\_name = 'Incorrect Value';

**19. Remove Special Characters from a Column**

sql

Copy code

UPDATE table\_name

SET column\_name = REGEXP\_REPLACE(column\_name, '[^a-zA-Z0-9 ]', '');

**20. Flag Rows with Inconsistent Data**

Add a flag for rows that don't meet criteria:

sql

Copy code

UPDATE table\_name

SET flag = 'Invalid'

WHERE column\_name IS NULL OR column\_name NOT LIKE 'ExpectedPattern%';

These SQL snippets can be adapted for most database systems, such as MySQL, PostgreSQL, Oracle, or SQL Server.