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String Functions - LOWER()

- Use: Converts all characters in a string to lowercase.

- Application: Standardizing usernames for login purposes.

- SQL Syntax:

```sql
SELECT LOWER(column_name) AS formatted_data
FROM your_table;
```

String Functions - UPPER()

- **Use:** Converts all characters in a string to uppercase.
- **Application:** Converting product names to uppercase for a catalog.
- **SQL Syntax:**

```sql
SELECT UPPER(column_name) AS formatted_data
FROM your_table;
```

Numeric Functions - FLOOR()

Use: Rounds a number down to the nearest whole number.

Application: Calculating whole items needed based on fractional quantities.

SQL Syntax:

```sql
SELECT FLOOR(numeric_column) AS rounded_down_value
FROM your_table;
```

Numeric Functions - ROUND()

Use: Rounds a number to a specified number of decimal places.

Application: Rounding currency values to two decimal places.

SQL Syntax:

```
SELECT ROUND(numeric_column, decimal_places) AS rounded
FROM your_table;
```

Note: Syntax may vary across SQL platforms.

Datetime Functions

- **DAY()**
  - **Use:** Extracts the day of the month from a date.
  - **Application:** Retrieves day as an integer (1-31).
  - **Example:** If date is 2024-09-16, DAY() returns 16.

- **TIME()**
  - **Use:** Extracts the time part from a datetime value.
  - **Application:** Returns time in HH:MM:SS format.
  - **Example:** If datetime is 2024-09-16 14:30:45, TIME() returns 14:30:45.

Datetime Functions

- **MONTH()**
  - **Use:** Extracts the month from a date.
  - **Application:** Retrieves month as an integer (1-12).
  - **Example:** If date is 2024-09-16, MONTH() returns 9.

- **YEAR()**
  - **Use:** Extracts the year from a date.
  - **Application:** Retrieves year as a four-digit integer.
  - **Example:** If date is 2024-09-16, YEAR() returns 2024.

Datetime Functions

- **TIMESTAMP()**
  - **Use:** Represents a specific point in time (date and time combined).
  - **Application:** Stores current or specific datetime values.
  - **Example:** If current datetime is 2024-09-16 14:30:45, TIMESTAMP() returns 2024-09-16 14:30:45.

- **DATE()**
  - **Use:** Extracts the date part from a datetime value.
  - **Application:** Returns date in YYYY-MM-DD format.
  - **Example:** If datetime is 2024-09-16 14:30:45, DATE() returns 2024-09-16.

Recap and Next Steps

Key Takeaways:

- SQL functions are powerful tools for manipulating string, numeric, and datetime values.

- String Functions: LOWER(), UPPER()

- Numeric Functions: FLOOR(), ROUND()

- Datetime Functions: TIME(), DAY(), MONTH(), YEAR(), TIMESTAMP(), DATE()

- Next Steps:
  - Complete Week 13 Quiz