Class 6\_sql

1. String Function(concat,lower,upper,replace, substr, length, char\_length)
2. Math Function(abs, ceil,floor, mod(n,m), round, truncate,exp,pow,sqrt,)
3. Date Function(curdate,now,sysdate,last\_day,date\_format,
4. month,year,day , monthname , datediff, Date Time Function + Extract Clause)
5. Assignment (2/15)

Certainly! Let me explain each section of the SQL code provided:

### String Functions

```sql

SELECT

CONCAT('Hello', ' ', 'World') AS concatenated\_string,

LOWER('HELLO') AS lower\_case,

UPPER('hello') AS upper\_case,

REPLACE('Hello World', 'World', 'Universe') AS replaced\_string,

SUBSTR('Hello World', 7) AS substring\_from\_position,

LENGTH('Hello World') AS length\_of\_string,

CHAR\_LENGTH('Hello World') AS character\_length\_of\_string;

```

- `CONCAT`: Concatenates two or more strings together.

- `LOWER`: Converts a string to lowercase.

- `UPPER`: Converts a string to uppercase.

- `REPLACE`: Replaces occurrences of a substring within a string with another substring.

- `SUBSTR`: Extracts a substring from a string starting from a specified position.

- `LENGTH`: Returns the length of a string in bytes.

- `CHAR\_LENGTH`: Returns the length of a string in characters.

### Math Functions

```sql

SELECT

ABS(-10) AS absolute\_value,

CEIL(4.5) AS ceil\_value,

FLOOR(4.5) AS floor\_value,

MOD(10, 3) AS modulus,

ROUND(4.567, 2) AS rounded\_value,

TRUNCATE(4.567, 2) AS truncated\_value,

EXP(1) AS exponential\_value,

POW(2, 3) AS power\_value,

SQRT(25) AS square\_root\_value;

```

- `ABS`: Returns the absolute value of a number.

- `CEIL`: Returns the smallest integer greater than or equal to a number.

- `FLOOR`: Returns the largest integer less than or equal to a number.

- `MOD`: Returns the remainder of a division operation.

- `ROUND`: Rounds a number to a specified number of decimal places.

- `TRUNCATE`: Truncates a number to a specified number of decimal places.

- `EXP`: Returns the value of e raised to the power of a number.

- `POW`: Returns a number raised to the power of another number.

- `SQRT`: Returns the square root of a number.

### Date Time Functions with Extract Clause

```sql

SELECT

DATE\_ADD(NOW(), INTERVAL 1 HOUR) AS added\_one\_hour,

DATE\_SUB(NOW(), INTERVAL 1 DAY) AS subtracted\_one\_day,

EXTRACT(YEAR FROM NOW()) AS extracted\_year,

EXTRACT(MONTH FROM NOW()) AS extracted\_month,

EXTRACT(DAY FROM NOW()) AS extracted\_day,

EXTRACT(HOUR FROM NOW()) AS extracted\_hour,

EXTRACT(MINUTE FROM NOW()) AS extracted\_minute,

EXTRACT(SECOND FROM NOW()) AS extracted\_second,

DATEDIFF('2024-05-30', '2024-05-21') AS date\_difference;

```

- `DATE\_ADD`: Adds a specified time interval to a date or datetime expression.

- `DATE\_SUB`: Subtracts a specified time interval from a date or datetime expression.

- `EXTRACT`: Extracts a specific component (year, month, day, hour, minute, second) from a date or datetime expression.

- `DATEDIFF`: Returns the difference in days between two dates.

These SQL queries demonstrate the usage of various string, math, date, and date-time functions in MySQL. You can run these queries in your MySQL client to see the results. If you have any further questions, feel free to ask!