

DATA TYPES : SQL SESSION - 7

08 July 2024 10:50

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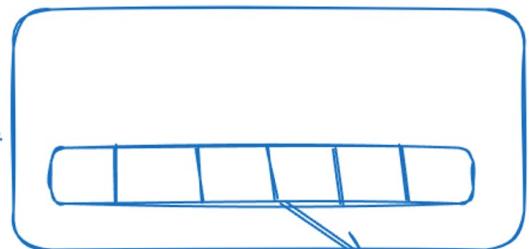
Numeric Types	String Types	Date Types
<ul style="list-style-type: none">• INT• SMALLINT• TINYINT• MEDIUMINT• BIGINT• DECIMAL• NUMERIC• FLOAT• DOUBLE• BIT	<ul style="list-style-type: none">• CHAR• VARCHAR• BINARY• VARBINARY• BLOB• TINYBLOB• MEDIUMBLOB• LONGBLOB• TEXT• TINYTEXT• MEDIUMTEXT• LONGTEXT• ENUM	<ul style="list-style-type: none">• DATE• DATETIME• TIMESTAMP• TIME• YEAR

Varchar() VS Char()



NAME

varchar(50)
char(50)



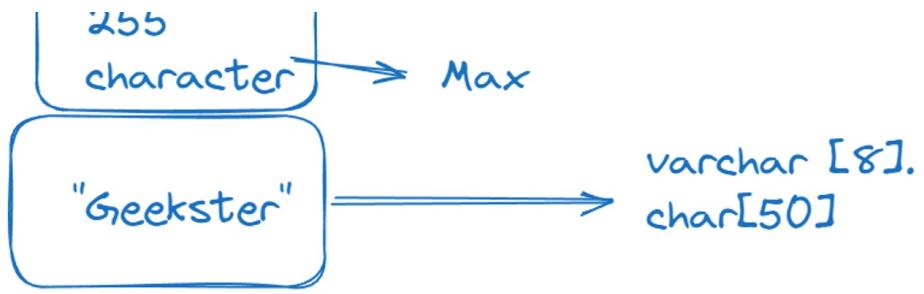
50 bytes

char will allocate 50 bytes of space at the time of initialization.

255

character

Max



CHAR is used majority of the time when we have fixed Length

1. State Abbreviation
2. Gender
3. Boolean
4. PIN CODE

DECIMAL

DECIMAL(13, 2)

DECIMAL(5,2) - 999.99

Data Type	Memory Needed	Precision Issues
FLOAT	4 Bytes	~7 digits
DOUBLE	8 Bytes	~15 digits

DATE , TIME , DATETIME :

```
mysql> CREATE TABLE people(
->   name varchar(50),
->   birthdate date,
->   birthtime time,
```

```
-> name varchar(50),
-> birthdate date,
-> birthtime time,
-> birthdt datetime
-> );
Query OK, 0 rows affected (0.03 sec)
```

```
mysql> DESC people;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| name  | varchar(50) | YES |   | NULL    |       |
| birthdate | date | YES |   | NULL    |       |
| birthtime | time | YES |   | NULL    |       |
| birthdt  | datetime | YES |   | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)
```

DATETIME

Values With a Date AND Time

'YYYY-MM-DD HH:MM:SS' Format

```
mysql> SELECT curdate();
+-----+
| curdate() |
+-----+
| 2024-07-08 |
+-----+
1 row in set (0.01 sec)

mysql> SELECT curtime();
+-----+
| curtime() |
+-----+
| 09:34:36 |
+-----+
1 row in set (0.00 sec)

mysql> SELECT now();
+-----+
| now() |
+-----+
| 2024-07-08 09:34:45 |
+-----+
```

```
mysql> CREATE TABLE people3(
```

```

mysql> CREATE TABLE people3(
    ->   name varchar(50),
    ->   birthdate date default (CURDATE()),
    ->   birthtime time default (CURTIME()),
    ->   birthdt datetime default NOW()
    -> );
Query OK, 0 rows affected (0.05 sec)

mysql> DESC people3;
+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default          | Extra           |
+-----+-----+-----+-----+-----+
| name  | varchar(50) | YES  |     | NULL            |                 |
| birthdate | date       | YES  |     | curdate()       | DEFAULT_GENERATED |
| birthtime | time       | YES  |     | curtime()       | DEFAULT_GENERATED |
| birthdt  | datetime   | YES  |     | CURRENT_TIMESTAMP | DEFAULT_GENERATED |
+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)

```

```

mysql> INSERT INTO people3(name)
    -> VALUES('Rahul'),('Karan'),('Sahil'),('Ankit'),('Aman');
Query OK, 5 rows affected (0.01 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM people3;
+-----+-----+-----+-----+
| name | birthdate | birthtime | birthdt        |
+-----+-----+-----+-----+
| Rahul | 2024-07-08 | 09:56:16 | 2024-07-08 09:56:16 |
| Karan | 2024-07-08 | 09:56:16 | 2024-07-08 09:56:16 |
| Sahil | 2024-07-08 | 09:56:16 | 2024-07-08 09:56:16 |
| Ankit | 2024-07-08 | 09:56:16 | 2024-07-08 09:56:16 |
| Aman  | 2024-07-08 | 09:56:16 | 2024-07-08 09:56:16 |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)

```

DATE_ADD:

```

mysql> SELECT DATE_ADD('2008-01-02', INTERVAL 31 DAY);
+-----+
| DATE_ADD('2008-01-02', INTERVAL 31 DAY) |
+-----+
| 2008-02-02                                |
+-----+
1 row in set (0.00 sec)

mysql> SELECT DATE_ADD(CURDATE(), INTERVAL 31 DAY);
+-----+
| DATE_ADD(CURDATE(), INTERVAL 31 DAY) |
+-----+
| 2024-08-08                                |
+-----+
1 row in set (0.00 sec)

mysql> SELECT DATE_ADD(CURDATE(), INTERVAL 12 MONTH);
+-----+
| DATE_ADD(CURDATE(), INTERVAL 12 MONTH) |
+-----+
| 2025-07-08                                |
+-----+
1 row in set (0.00 sec)

mysql> SELECT CURDATE() + INTERVAL 12 MONTH;
+-----+
| CURDATE() + INTERVAL 12 MONTH |
+-----+

```

```

mysql> SELECT TIMESTAMP(NOW());
+-----+
| TIMESTAMP(NOW()) |
+-----+
| 2024-07-08 10:09:30 |
+-----+
1 row in set (0.00 sec)

mysql> SELECT DAYNAME(NOW());
+-----+
| DAYNAME(NOW()) |
+-----+
| Monday          |
+-----+
1 row in set (0.01 sec)

mysql> SELECT MONTHNAME(NOW());
+-----+
| MONTHNAME(NOW()) |
+-----+
| July             |
+-----+

```

```
1 row in set (0.00 sec)

mysql> SELECT CURDATE() + INTERVAL 12 MONTH;
+-----+
| CURDATE() + INTERVAL 12 MONTH |
+-----+
| 2025-07-08 |
+-----+
1 row in set (0.00 sec)
```

```
+-----+
| July |
+-----+
1 row in set (0.01 sec)

mysql> SELECT DAYOFMONTH(NOW());
+-----+
| DAYOFMONTH(NOW()) |
+-----+
| 8 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> SELECT DAYOFWEEK(NOW());
+-----+
| DAYOFWEEK(NOW()) |
+-----+
| 2 |
+-----+
1 row in set (0.00 sec)
```

QUICK CHALLENGE :

Print Out The Current Day Of The Week

(The Number)

```
mysql> SELECT DAYOFWEEK(NOW());
+-----+
| DAYOFWEEK(NOW()) |
+-----+
| 2 |
+-----+
1 row in set (0.00 sec)
```

Print Out The Current Day Of The Week

(The Day Name)

```
mysql> SELECT DAYNAME(NOW()) as CURRENT_DAY;
+-----+
| CURRENT_DAY |
+-----+
| Monday      |
+-----+
1 row in set (0.00 sec)
```

Print out the current

day name.

Print out the current day and time using this format:

mm/dd/yyyy

```
mysql> SELECT DATE_FORMAT(CURDATE(), '%m/%d/%Y') as cur_date;
+-----+
| cur_date |
+-----+
| 07/08/2024 |
+-----+
1 row in set (0.00 sec)
```

Print out the current day and time using this format:

January 2nd at 3:15

April 1st at 10:18

```
mysql> SELECT DATE_FORMAT(NOW() , '%M %D at %k:%i') as format;
+-----+
| format |
+-----+
| July 8th at 10:47 |
+-----+
1 row in set (0.00 sec)

mysql>
```

Create a tweets table that stores:

- The Tweet content

- The Tweet content
- A Username
- Time it was created