

Working on Tables Structure & various Data Types

Working on Tables Structure & various Data Types

Field	Type	Null	Key	Default	Extra
Name	varchar(100)	YES		NULL	
Age	int	YES		NULL	
Gender	char(1)	YES		NULL	
BirthDate	date	YES		NULL	

```
mysql> SELECT * FROM personalInfo;  
Empty set (0.03 sec)
```

Insert data into Table

Single Insertion

```
Insert into TableName(col1 , col2 , col3 , col4 .....)  
VALUES(arg1 , arg2 , arg3, arg4)
```

```
mysql> INSERT INTO PersonalInfo(Name , Age , Gender , BirthDate)  
-> VALUES("Aman" , 27 , 'M' , "1997-11-23");  
Query OK, 1 row affected (0.02 sec)  
  
mysql> SELECT * FROM PersonalInfo;  
+-----+-----+-----+-----+  
| Name | Age | Gender | BirthDate |  
+-----+-----+-----+-----+  
| Aman | 27 | M | 1997-11-23 |  
+-----+-----+-----+-----+  
1 row in set (0.00 sec)
```

Parameters count should be equal to arguments count.
Order should matter a lot.
Each parameter has its corresponding arguments which can take same data-type

```
mysql> INSERT INTO PersonalInfo(BirthDate , Gender , Age , Name)  
-> VALUES("1997-11-23" , 'F' , 24 , "Ankita");  
Query OK, 1 row affected (0.01 sec)  
  
mysql> SELECT * FROM PersonalInfo;  
+-----+-----+-----+-----+  
| Name | Age | Gender | BirthDate |  
+-----+-----+-----+-----+  
| Aman | 27 | M | 1997-11-23 |  
| Ankita | 24 | F | 1997-11-23 |  
+-----+-----+-----+-----+  
2 rows in set (0.00 sec)
```

```
mysql> DESC personalInfo;  
+-----+-----+-----+-----+  
| Field | Type | Null | Key | Default | Extra |  
+-----+-----+-----+-----+  
| Name | varchar(100) | YES | YES | NULL | |  
| Age | int | YES | YES | NULL | |  
| Gender | char(1) | YES | YES | NULL | |  
| BirthDate | date | YES | YES | NULL | |  
+-----+-----+-----+-----+  
4 rows in set (0.00 sec)  
  
mysql> INSERT INTO personalInfo() VALUES();  
Query OK, 1 row affected (0.01 sec)  
  
mysql> SELECT * FROM personalInfo;  
+-----+-----+-----+-----+  
| Name | Age | Gender | BirthDate |  
+-----+-----+-----+-----+  
| Aman | 27 | M | 1997-11-23 |  
| Ankita | 24 | F | 1997-11-23 |  
| NULL | NULL | NULL | NULL |  
+-----+-----+-----+-----+  
3 rows in set (0.00 sec)
```

While Creating a table , I can manipulate the schema of a table.

```

mysql> INSERT INTO PersonalInfo(Name , Age , Gender , BirthDate)
-> VALUES("Abhishek" , 25 , 'M' , "1996-12-24"),
-> ("Rohit" , 32 , 'M' , "1999-11-21"),
-> ("Manav" , 22 , 'M' , "2000-01-03");
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM personalInfo;
+-----+-----+-----+-----+
| Name | Age | Gender | BirthDate |
+-----+-----+-----+-----+
| Aman | 27 | M | 1997-11-23 |
| Ankita | 24 | F | 1997-11-23 |
| NULL | NULL | NULL | NULL |
| Abhishek | 25 | M | 1996-12-24 |
| Rohit | 32 | M | 1999-11-21 |
| Manav | 22 | M | 2000-01-03 |
+-----+-----+-----+-----+
6 rows in set (0.00 sec)

```

Varchar() VS char()

char is faster than varchar();

1 char - 4 byte of space

char(10)



40 bytes of space

varchar(10)



28 bytes of space

Email Address

$250 * 4 = 1000 \text{ bytes}$

char(250) --- 50 character [done] - 200[are going to waste]

varchar(250)

--- 50 character [done] - 200[are not going to waste as they are not allocated]

"krishnamadan77@gmail.com" - 24 character - $24 * 4 \text{ bytes} = 96 \text{ bytes.}$

When to use Char() - fixed length

Gender - 'M', 'F'

T/F, Y/N

char(1).

State Abbreviation - "DL", "HR", "TN", "KA",
"MP", "UP", "CH", "KL", "HY", etc....

If it's a fixed length we choose char();

Float Vs Double

They both are useful for storing values having decimal places.
Double is taking much more space compared to float.
Double(8 bytes) > Float(4 bytes).
~16 digit after decimal > ~ 8 digits. after decimal

When to use float Vs Double

If you can't compromise the precision/ accuracy you go with
Double -- "Scientific Values....." [1.312434334234234235] →
we can't think about.

Float - When you don't have a decimal value which won't effect
the result if its round off : 199.23343434

DROP TABLE <tableName>

It drops the table along with its structure.

Delete with delete command will remove records
from a table.

Delete FROM <tableName> WHERE clause [To remove specific part].
DELETE FROM <TableName> without where clause will remove all the data.

```
mysql> DELETE FROM personalInfo where Name is Null;  
Query OK, 1 row affected (0.02 sec)  
  
mysql> SELECT * FROM personalInfo;  
+-----+-----+-----+-----+  
| Name | Age | Gender | BirthDate |  
+-----+-----+-----+-----+  
| Aman | 27 | M | 1997-11-23 |  
| Ankita | 24 | F | 1997-11-23 |  
| Abhishek | 25 | M | 1996-12-24 |  
| Rohit | 32 | M | 1999-11-21 |  
| Manav | 22 | M | 2000-01-03 |  
+-----+-----+-----+-----+  
5 rows in set (0.00 sec)
```

or is not null. "is" command always use with "Null".

```
mysql> SELECT * FROM personalInfo;  
+-----+-----+-----+-----+  
| Name | Age | Gender | BirthDate |  
+-----+-----+-----+-----+  
| Aman | 27 | M | 1997-11-23 |  
| Ankita | 24 | F | 1997-11-23 |  
| Abhishek | 25 | M | 1996-12-24 |  
| Rohit | 32 | M | 1999-11-21 |  
| Manav | 22 | M | 2000-01-03 |  
+-----+-----+-----+-----+  
5 rows in set (0.00 sec)  
  
mysql> DELETE FROM personalInfo where Age = 22;  
Query OK, 1 row affected (0.01 sec)  
  
mysql> SELECT * FROM personalInfo;  
+-----+-----+-----+-----+  
| Name | Age | Gender | BirthDate |  
+-----+-----+-----+-----+  
| Aman | 27 | M | 1997-11-23 |  
| Ankita | 24 | F | 1997-11-23 |  
| Abhishek | 25 | M | 1996-12-24 |  
| Rohit | 32 | M | 1999-11-21 |  
+-----+-----+-----+-----+  
4 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM personalInfo;  
+-----+-----+-----+-----+  
| Name | Age | Gender | BirthDate |  
+-----+-----+-----+-----+  
| Aman | 27 | M | 1997-11-23 |  
| Ankita | 24 | F | 1997-11-23 |  
| Abhishek | 25 | M | 1996-12-24 |  
| Rohit | 32 | M | 1999-11-21 |  
+-----+-----+-----+-----+  
4 rows in set (0.00 sec)  
  
mysql> DELETE FROM personalInfo;  
Query OK, 4 rows affected (0.01 sec)  
  
mysql> SELECT * FROM personalInfo;  
Empty set (0.00 sec)
```

Personal Info Table structure is still alive. And if you use drop command it would delete table with data and its structure.

```
mysql> DESC personalInfo;
+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| Name  | varchar(100) | YES |   | NULL    |       |
| Age   | int      | YES |   | NULL    |       |
| Gender | char(1)  | YES |   | NULL    |       |
| BirthDate | date   | YES |   | NULL    |       |
+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)

mysql> DROP TABLE personalInfo;
Query OK, 0 rows affected (0.08 sec)

mysql> SHOW TABLES;
Empty set (0.01 sec)

mysql> DESC personalInfo;
ERROR 1146 (42S02): Table 'employeedetail.personalinfo' doesn't exist
```