

Data Types:

CHAR	String (0 - 255)
VARCHAR	String (0 - 255)
TINYTEXT	String (0 - 255)
TEXT	String (0 - 65535)
BLOB	String (0 - 65535)
MEDIUMTEXT	String (0 - 16777215)
MEDIUMBLOB	String (0 - 16777215)
LONGTEXT	String (0 - 4294967295)
LOB	String (0 - 4294967295)
TINYINT x	Integer (-128 to 127)
SMALLINT x	Integer (-32768 to 32767)
MEDIUMINT x	Integer (-8388608 to 8388607)
INT x	Integer (-2147483648 to 2147483647)
BIGINT x	Integer([-,+]922337203685477580[8,7])
FLOAT	Decimal (precise to 23 digits)
DOUBLE	Decimal (24 to 53 digits)
DECIMAL	"DOUBLE" stored as string
DATE	YYYY-MM-DD
DATETIME	YYYY-MM-DD HH:MM:SS
TIMESTAMP	YYMMDDHHMMSS
TIME	HH:MM:SS
ENUM	One of preset options
SET	Selection of preset options

Creating & Modifying:

```

CREATE DATABASE db_name;
USE db_name;
SHOW DATABASES;
DESCRIBE tbl;
CREATE TABLE tbl (field1, ...);
INSERT INTO tbl VALUES ("x",...);
DELETE * FROM tbl WHERE condition;
ALTER TABLE tbl ADD COLUMN col;
ALTER TABLE tbl DROP COLUMN col;
ALTER TABLE tbl ADD PRIMARY KEY (col);
... LIMIT = 1;
UPDATE table SET column1 = "val1" WHERE ...
TRUNCATE TABLE tbl;
DROP TABLE tbl;
DROP DATABASE db_name;

```

Matching Data:

```

SELECT * FROM tbl WHERE col LIKE '%value%'
SELECT * FROM tbl WHERE col RLIKE 'reg_expr'

```

Joins:

```

SELECT * FROM tbl1 INNER JOIN tbl2 ON tbl1.id = tbl2.id
INNER JOIN      returns only match in both tables
OUTER JOIN      returns non-matching records from both tables
LEFT JOIN       returns non-matching records from tbl1
RIGHT JOIN      returns non-matching records from tbl2

```

String Functions:

STRCMP("str1", "str2")	compare strings
LOWER("str")	convert to lowercase
UPPER("str")	convert to uppercase
LTRIM("str")	left trim
SUBSTRING("str", "indx1", indx2")	create substring of string
CONCAT("str1", "str2")	concatenate

Calculation Functions:

COUNT(col)	count rows
AVG(col)	Average
MIN(col)	Minimum Value
MAX(col)	Maximum Value
SUM(col)	Sum of Values

Queries:

```

SELECT * FROM tbl;
SELECT col1, col2 FROM tbl
SELECT DISTINCT FROM tbl WHERE condition;
SELECT col FROM tbl AS newname;
SELECT * FROM tbl ORDER BY col [ASC | DESC];
SELECT col1, SUM(col2) FROM tbl GROUP BY col1;

```

Table with Auto-Incrementing Primary Key:

```

CREATE TABLE table_name (
id INT AUTO_INCREMENT,
column VARCHAR(2),
column VARCHAR(32),
PRIMARY KEY (id)
);

```