Data types in SQL are:
1. String
2. Integers
3. Float
4. Boolean
5. Enum
6. Date/time
7. JSON
8. BLOB

Strings
1. char
2. varchar
3. *text

char(x):
1. String of fixed length.
2. x can be 0 to 255.
3. Pincode, Aadhar Number, Roll Number,

char(4)
1. "abcd"
2. "abc" will store as "abc_"
3. "ab" will store as "ab__"
4. "a" will store as "a___"
5. "" will store as "____"
6. "abcde" will store as either "abcd" or throw an error

varchar(x):
1. String of variable length.
2. x can be 0 to 65535.
3. Name, address, email id, password, text blog etc.

varchar(4)
1. "abcd" will store as "4abcd"

*text: text cannot be indexed
1. tinytext 255 Bytes
2. text 64 kilo Bytes
3. medium text 16mb
4. long text 4gb
5. paragraphs, articles, research papers etc.

Integer Data Types

TYPE	SIZE	RANGE
TINYINT	1 BYTE	-128 to 127
SMALLINT	2 BYTES	-32768 to 32767
MEDIUMINT	3 BYTES	-8388608 to 8388607
INT	4 BYTES	-2147483648 to 2147483647
BIGINT	8 BYTES	9,223,372,036,854,775,808 to 9,223,372,036,854,775,807

TYPE	SIZE	RANGE
TINYINT	1 BYTE	-2^7 to $2^7 - 1$
SMALLINT	2 BYTES	-2^{15} to $2^{15} - 1$
MEDIUMINT	3 BYTES	-2^{23} to $2^{23} - 1$
INT	4 BYTES	-2^{31} to $2^{71} - 1$
BIGINT	8 BYTES	-2^{63} to $2^{63} - 1$

Float Data Types:

FLOAT	Decimal (precise to 23 digits)
DOUBLE	Decimal (24 to 53 digits)
DECIMAL	DOUBLE stored as string

Boolean Data Type:
In SQL, boolean is implemented using tinyint.

BOOLEAN	TINYINT(1), TINYINT(0)

Enum Data Type:
Constant set of values which can be used as type in attributes e.g. days in a week, months in a year,

Cars

Id	Name	Brand	Type
1	Nano	Tata	Hatchback
2	730D	BMW	Sedan
3	Kuv700	Mahindra	SUV
4	Scorpio	Mahindra	SUV
5	Thar	Mahindra	SUV
6	Safari	Tata	SUV
7	Harrier	Tata	SUV

Redundancy: SUV is repeating five times.
If later on we want to change SUV to HUV, we will have to update the query over the entire table.

Cars

Id	Name	Brand	Type

1	Nano	Tata	1
2	730D	BMW	2
3	Kuv700	Mahindra	3
4	Scorpio	Mahindra	3
5	Thar	Mahindra	3
6	Safari	Tata	3
7	Harrier	Tata	3

Car Type

Id	Type Name
1	Hatchback
2	Sedan
3	SUV

Decimal Data Types

FLOAT	Decimal (precise to 23 digits)
DOUBLE	Decimal (24 to 53 digits)
DECIMAL	DOUBLE stored as string

DECIMAL	FIXED POINT NUMBER	0 - 65	$-10^{38}+1$ to $10^{38}-1$
FLOAT	FLOATING POINT NUMBER	4 BYTES	-3.402823466E+38 to -1.175494351E-38, 0, and 1.175494351E-38 to 3.402823466E+38

Data Type	Structure
DECIMAL	DECIMAL(Precision, Scale)
FLOAT	FLOAT(Precision, Scale)
DOUBLE	DOUBLE(Precision, Scale)

DECIMAL (7,2) will be stored as total of 9 digits where 7 digits are significant digits and 2 digits are after decimal in MySQL.

Date Timestamp Family

DATE	YYYY-MM-DD
DATETIME	YYYY-MM-DD HH:MM:SS
TIMESTAMP	YYYYMMDDHHMMSS
TIME	HH:MM:SS

Blobs Data Type

1. Binary Large Objects
2. storing large files in db.
3. Images, pdfs, files etc.

TINYBLOB
Typically allows for binary data up to 255 bytes in size. Useful for very small binary objects.

BLOB
Generally, allows for binary data up to 65,535 bytes (64 KB) in size. Suitable for small to moderately-sized binary data, such as images or short documents.

MEDIUMBLOB
Typically allows for binary data up to 16,777,215 bytes (16 MB) in size. Useful for larger binary objects like high-resolution images or longer documents.

LONGBLOB
Generally, allows for binary data up to 4,294,967,295 bytes (4 GB) in size. Ideal for very large binary objects such as multimedia files (audio, video), large documents, or archives.

Note
Until or unless being specifically told, do not use blobs.