

(*) MySQL course
Data \Rightarrow simple word data which are related to some object
 \rightarrow Data collectively represent object

Database \Rightarrow Systematic coll'n of data
 \Rightarrow support storage + manipulation
 \Rightarrow Data ~~make~~ management is easy with database

(#) SQL Server (DBMS) Database management system
 \rightarrow Relational database

DBMS enables \Rightarrow access, manipulate, export, represent database

SQL \Rightarrow Structured Query language (we can create query over database in SQL)

\rightarrow setup SQL Ubuntu

Command & use... . Sql is not case sensitive

[FS \Rightarrow to execute]

[Create database grs;] \rightarrow create new database

\rightarrow Database folder will contain newly created database

Drop database name; Drop used to delete a database

/* */ \Rightarrow used to comment

-- also used to comment

\rightarrow Drop is irreversible so use with understand what one you claim

* Creating table in SQL

SQL is relational database \rightarrow it has rows & columns

\Rightarrow for each row you have some data points & in rows we have data stored in

\Rightarrow there are many datatype exists in SQL.

\Rightarrow [text, number, date etc]

\Rightarrow Each Row or key should be uniquely identifiable using primary key

\Rightarrow each database can have multiple table

\Rightarrow one folder / ipo can have multiple database so we have choose primary database

`USE grs;` → to select main database

Create table nameoftable (

Code here;

) ;

name datatype ;

If we want to make it primary

Each table has
primary key

name datatype primary key;

name column

is primary
key

not null

If you want to make field compulsory use

at end

⇒ If we want to assign id by count

identity(startwith, nCount)

so

)

name datatype primary key not null identity(1,1);

attribute of primary

⇒ attribute should be separated by comma

Create table grs (

namee varchar(50),

id int primary key not null,

lname varchar(50),

3

→ such like that you
can create a table

nvarchar, → string

varchar(50) → string of 50 size

① lets also add date
(date datatype used)

date is datatype sql in sql
⇒ you can also able to use GUI to do all stuff
→ can do it (ctrl+s) to execute in GUI

Insert database in sql database

⇒ first select database
use grs; ↓ this is place to insert data

insert into tableName (data placed here) ;

Ex insert into tablename (lastname, firstname, dob) mention attribute
T(not null means here) ⇒ if all cols are not null so
each time you have enter full data)

Value (place value here):

insert into grs (id, fname, lname) values

(1, 'ghanshami', 'salunkhe')

order should sum (single quotes to insert varata)

⇒ date format in SQL ⇒ yyyy-mm-dd

Keep that in mind

order matters

⇒ you have to provide date in quotes

easy just
remember it

⇒ Syntax ~~insert~~

⇒ multiple insertion

insert into tablename (order) value

(value 1),

(value 2),

→ by comma separation you can
fill multiple value at one

also you can

use GUI
to place
data

easy

④ Select & manipulate data
use `grs;` → * => all columns

`Select columnName from tableName;`

→ `Select * from student;` → select mean showing data (view data)

You can save output table in CSV format

→ `Select fname, lname from student;` → only two cols as output

You can change name also using `as` alias

→ `Select fname (as "First Name") from student;`
(also can use)

→ ⑤ Advanced Select Queries

order by
→ sorting

with where keyword we can filter out result

order ~~arrange~~ by used to do arrangement of data in table

* Ex

`Select * from tablename
where lname = "Salunkhe"`

~~arrange~~ by id;
order

⇒ This uses
filtering &
sorting both

You can use GUI to view table & filter it also

→ Comparison should be done to same datatype in ~~for~~
in where.

in where we can give some pattern

where lastname `like '%i%'`

like keyword
used to do

so i should be present & if

print it will return

⑥ wild card can be used to get pattern from database
start with a \Rightarrow like lastname like 'a%'

\Rightarrow merge col as one

Select firstname + ' ' + lastname as 'Student Name' from student;

\Rightarrow ⑦ Update data in SQL script

You can update using
~~GUI also~~

\Rightarrow Case 1 update all data in row

update tableName set (fields to update) \Rightarrow all modification
 \Rightarrow all changes

update tableName set branch = "comp"
where branch = "mech"; \Rightarrow specific modification

\Rightarrow Update where block is useful and you can use primary key to modify selected one

delete entries from table

\Rightarrow a whole row will be deleted with this

delete from tablename
where condition

\Rightarrow this is simple &
used to delete entry in table

\Rightarrow You can delete specific or all using this command

④ Relationships & foreign keys

- ⇒ In this case SQL table can connect to each other & that called Relation
- ⇒ Relational database can connect each to each other

⑤ Foreign key

- this is used to identify entity - in Relational database
- foreign key is primary key of some another table
- primary key uniquely identifies a entity in table
- ⇒ foreign key represents specific entry from table to as entry to another table (unique reference point)

Normalisation ⇒ looking repeating data with reducing it

↳ atomic elemt which can stay on their own

- ① Inserting in Reln dataset
so just put id

insert into enrollment (courseid, studentid, teachid)
value (1, 11190303, 1)

Correct that is it & and then will make

You have to use joins in order to extract data

⇒ Joins play important in Reln database

⇒ the enrollment mostly contains many

- ⑥ Search for joins

Select * from enrollment;
inner join teacher on teacher

(inner, left
right outer
join)