Broadband Database Management System: MySQL Project:

# Database creation and use and Deletion:

create database internet;

use internet;

show Databases;

Drop database internet;

# Table Creation:

CREATE TABLE customers (

Customer\_Id int,

First\_Name varchar (25),

Last\_Name varchar (25),

Birth\_Date varchar (25),

Join\_Date date,

City varchar (45),

State varchar (25),

Street varchar (40),

Main\_phone\_num varchar (12),

Secondary\_phone\_num varchar (12),

Fax varchar (12),

Monthly discount decimal (4, 2),

Pack\_id int);

# Inserting Data:

INSERT customer values (1,”Venkat”,”Kurra”,”1988-15-07”,”2000-05-12”,”Bangalore”,”Bangalore”,”Bangalore”,”7406401119”,”7406401119”,”XXXXX”,”XXXXXXXX”,CAST (XXXX));

Table 2 Creation:

CREATE TABLE packages (

Pack\_id int,

Speed varchar (10),

Strt\_date date,

Monthly\_payment int,

Sector\_id int);

INSERT packages VALUES (1,”750kbps”, “2012-05-12”, 79, 1);

Table 3 Creation:

CREATE TABLE sectors (

Sector\_Id int,

Sector\_name varchar (20));

INSERT sectors VALUES (1,”Private”);

Table 4 Creation:

CREATE TABLE pack\_grades (

Grade\_Id int,

Grade\_name varchar (25),

Min\_price int,

Max\_price int);

INSERTE pack\_grades VALUES (1, “very\_low”, 0, 10)

########## SELECT STATEMENT###############

Select \* from customers;

Select \* from packages;

Select \* from sectors;

Select \* from pack\_grades;

Show tables;

############### Reverse Engineer concept ##########################

To reverse-engineer a database using a create script - On the home screen, select the model view from the sidebar, click (>) next to Models, and then click Reverse Engineer MySQL Create Script

Select database name it will scheme of EER diagram.

Query 1: create a query to display the customer number, first\_name, last\_name, primary phone number, secondary phone number and package number (customer table).

Select customer number, first\_name, last\_name, primary phone number, secondary phone number, package number from customer;

Query 2: create a query to display first name, last name, join date, monthly discount, monthly discount after an addition of 20% and monthly discount after a reduction of 20%

Select first\_name, last\_name, join\_date, monthly\_discount, monthly\_discount\*0.2 as discount, monthly\_discount -0.2 as reduction from customers;

Query 3: create a query to display the package number, speed, strt\_date (the date when the package become available), monthly payment and monthly payment \* 12, name the last.

Select pack\_id, speed, strt\_date, monthly\_payment, monthly\_payment\*12 as “Yearly Payment” from Packages;

Query 4: create a query to display last name concatenated with the first\_name, separated by space, and main phone number concatenated with the secondary phone number separated by comma and space. Name the column heading FULL\_NAME and CONTACT\_DETAILS respectively. (Customer table).

Select concat (last\_name,” “, first\_name) FULL\_NAME, concat (main\_phone\_num, “, “, secondary\_phone\_num) CONTACT\_DETAILS;

Query 5: create a query to display unique states from the customer table?

Select distinct (state) from customers;

Query 6: create a query to display unique combinations of cities and states from customer table?

Select distinct (concat (city, “ “, state ) as combo from customers;

Query 7: create a query to display the last\_name concatenated with state, separated by space. Name this column CUSTOMER\_AND\_STATF (customer table)?

Select concat (last\_name, “ “ ,state) CUSTOMER\_STATE from customers;

Query 8: create a query to display the first\_name, last\_name, monthly discount and city concatenated with street, separated by space. Name the column headings: FN, LN, DC, and FULL\_ADDRESS?

Select concat (first\_name, “ “, last\_name, “ “, monthly\_discount, “ “, city , “ “ , street ) as FN, LN, DC, and FULL\_ADDRESS from customers;

Query 9: create a query to display unique monthly discounts in customer table?

Select distinct (monthly\_discount) from customers;

Query 10: create a query to display unique packages (package\_id) in customer table?

Select distinct (pack\_id) from customers;

Query 11: Display the first\_name, last\_name and package number for all the customers where last name is king?

Select first\_name, last\_name, pack\_id from customers where lower (last\_name) = “king”;

Query 12: Display all the data from package table for packages where speed is “5 Mbps?

Select \* from packages where lower (speed) = “5Mbps”;

Query 13: Display the first\_name, last\_name, package number and month discount for all customers where monthly discount is less than 30%?

Select \* from customers;

Select first\_name, last\_name, pack\_id, monthly\_discount from customers where monthly\_discount < 30;

Query 14: Display all the data from customer table for all customers who joined the company before “2020 – 01-10”?

Select \* from customers where join\_date = “2020 – 01-10”;

Query 15: Display the customer number, first\_name, last\_name, state, and city and package number for all customer where package number in 21, 28, and 14?

Select customer\_id, first\_name, last\_name, state, city, pack\_id from customers where pack\_id in (21, 18, 14);

Query 16: Display the customer number, first\_name, last\_name, state, and city and package number for all customer where package number not in 21, 28, and 14?

Select customer\_id, first\_name, last\_name, state, city, pack\_id from customers where pack\_id not in (21, 18, 14);

Query 17: Display the last\_name, main phone number, monthly discount and package number for all customer where customer number equals to 701,314 and 514?

Select customer\_id, first\_name, last\_name, state, city, pack\_id from customers where customer\_id in (701, 314, 514);

Query 18: Display the first\_name and monthly discount for all customers where first name ends with e?

Select first\_name, monthly discount from customer where first\_name like ‘%e’;

Query 19: Display the last\_name, package number for all customers where second letter of their last\_name is d?

Select last\_name, pack\_id from customers where last\_name like “\_d%”;

Query 20: Display all the data from customer table for all customers who have the letters I, j or h in their last name, order the query in descending order by monthly discount (customer table)?

Select \* from customers where lower (last\_name) like “% l %” or “% j %” or “% h %” order by monthly discount desc;

Query 21: Display the first\_name, join date, monthly discount and package number for all customers who don’t have the letter a in their last name. Order the query?

Select first\_name, join\_date, monthly\_discount, pack\_id from customer where lower (last\_name) not like “% a % “

Query 22: Display all the data from customer table for all customers without a package number

Select \* from customers where pack\_id is null;

Query 23: create a query to display unique monthly discount in customer table?

Select distinct (monthly\_discount) from customers;

Query 24: Display first name concatenated with the last name (separated by space) and monthly discount for all customer where monthly discount not between 20 and 30 order by Full\_name?

Select concat (first\_name, ‘ ‘, last\_name) as ‘Full\_name’, monthly discount from customers where monthly\_discount not between 20 and 30 order by Full\_name;

Query 25: Display the first name concatenated with the last name (separated by space) the main phone number concatenated with street (separated by space) and monthly discount is in the range between 11 and 27. Name the column headings FULL\_NAME, CONTACTS and DC respectively?

Select concat ( first\_name , “ “ , last\_name ) Full\_name , concat ( main\_phone\_num , “ “ , street ) contacts , monthly\_discount DC from customers where monthly\_discount between 11 and 27 ;

Query 26: Display all data from customer table for:

All customers who live in New York and whose monthly\_discount is in the range between 30 and 40?

Select \* from customers where lower (city) = “new York” and monthly\_discount between 30 and 40;

Query 27: display the package number, speed, and sector number for all packages whose sector number equals 1

Select pack\_id, speed, sector\_id from packages where sector\_id =1;

Query 28: Display the package number, speed and sector number for all packages with internet speed of “5Mbps” or “10Mbps”?

Select pack\_id, speed, sector\_id from packages where lower (speed) = “5Mbps” or lower (speed) = “10Mbps”;

Query 29: Display the last name and monthly\_discount for all customers live in Orlando?

Select last\_name, monthly\_discount from customers where lower (city) = “Orlando”;

Query 30: Display the last\_name and package number for all customers where package number equals to 9 or 18. Perform the exercise once using in operator, once using or?

Select last\_name, pack\_id from customers where pack\_id in (9, 18);

Query 31: Display the first\_name, main phone number and secondary phone number for all the customers without a second phone number is null?

Select first\_name, main\_phone\_num, secondary phone\_num from customers where secondary\_phone\_num is null;

Query 32: Display the first\_name, monthly\_discount and package id for all customers without any monthly\_discount is null?

Use internet;

Select first\_name, monthly\_discount, pack\_id from customers where monthly discount is null;

############ String Functions ###################

1. Display the customer number, first name in lower case and last name in upper case for all customer whose customer id between 80 and 150 ;

Select customer\_id, lower (first\_name), upper (last\_name) from customers where customer\_id between 80 and 150;

1. Generating Email addresses

For all customers – display the last\_name , first\_name and email address, the email address will be composed from the first letter first name concatenated with three first letters of last name concatenated with the string “@mymail.com” ( for example Ram Kedam ? [RKED@mymail.com](mailto:RKED@mymail.com))

Select first\_name, last\_name, concat(substr(upper(first\_name),1,1),substr(upper(last\_name),1,3), “@mymail.com”) from customers;

1. Display the last name and length of the last name for all customer where last names length is greater than 9?

Select last\_name, length (last\_name) from customers where length (last\_name) > 9;