***SQL QUERIES***

***DATABASE: user\_data***

**CREATE DATABASE**

create database user­\_db;

***TABLES***

**CREATE TABLE**

***user\_details***

create table user\_details

(

userid int primary key AUTO\_INCREMENT,

firstname varchar(50),

lastname varchar(50)

);

***country***

create table country

(

cid int primary key AUTO\_INCREMENT,

cname varchar(50)

);

***employee***

create table employee

(

emp\_id int primary key AUTO\_INCREMENT,

emp\_fname varchar(50),

emp\_lname varchar(50),

emp\_dob date,

emp\_contact int(10),

emp\_email varchar(50),

emp\_address text,

emp\_dept varchar(50),

emp\_salary float

);

**ALTER TABLE**

**ADD A NEW COLUMN**

(Columns are created in user\_details table)

(This query will add a new column at the end)

alter table user\_details add photo blob;

alter table user\_details add hobbies varchar(50);

(This query will add a new column after a specific column which is specified in query)

(keyword ***after*** is used to specify a column name after which new column will be added)

alter table user\_details add dob date after lastname;

alter table user\_details add contact int(10) after dob;

alter table user\_details add email varchar(100) after contact;

**DROP COLUMN (DELETE COLUMN)**

alter table user\_info drop column hobbies;

alter table user\_info drop column date\_of\_birth;

**RENAME A COLUMN**

(***change*** keyword is used to rename a column in alter table query)

alter table user\_details change dob date\_of\_birth date;

alter table country change cid country\_id int AUTO\_INCREMENT;

alter table country change cname country\_name varchar(50);

**RENAME TABLE**

rename table user\_details to user\_info;

**INSERT DATA INTO TABLE**

(This method is to add value in specific column)

insert into country(country\_id, country\_name) values(1,"india");

insert into country(country\_name) values("uk"),("srilanka"),("usa");

insert into employee(emp\_id, emp\_fname, emp\_lname, emp\_dob, emp\_contact, emp\_email, emp\_address, emp\_dept, emp\_salary) values(1, "Karishma", "Singh", 04/05/1996, 6542345671, "karishma@gmail.com", "kalavad road, rajkot", "IT", 25000);

(This method is used to add data in all columns without specifying column name)

insert into country values (null, "Canada"), (null, "Australia"), (null, "Srilanka");

insert into employee values(null, "Katha", "Garewal", 12/4/1994, 3456523457, "katha@gmail.com", "Race cource, Rajkot", "Finance", 50000);

insert into employee values(null, "Vraj", "Raghuvanshi", 8/9/1998, 5467354528, "vraj@gmail.com", "Ayodhya chowk, Rajkot", "IT",25000);

insert into employee values(null,

"Santosh", "Sharma", 29/9/1999, 6243125673, "santosh@gmail.com", "150 ft ring road rajkot", "CE", 25000);

insert into employee values(null, "Atharva", "Rana", 30/7/2000, 7564231458, "atharva@gmail.com", "Raiya road, Rajkot", "CE", 25000);

insert into employee values(null, "Aaryansinh", "Rathor", 28/3/1995, 9876543456, "aaryan@gmail.com", "Nanavati chowk, Rajkot", "HR", 60000);

**DELETE DATA FROM TABLE**

(This query will delete all data(rows) from table)

delete from tablename;

(This query will delete specific data or row from the table)

(***where*** cluase is used to apply condition on query)

delete from country where country\_id=3;

(***in*** keyword is used to delete multiple rows from the table)

delete from country where country\_id in(5,6,7);

**UPDATE DATA IN TABLE**

(***set*** keyword is used in update query to change a value in the column)

update country set country\_name="Japan" where country\_id=2;

update employee set emp\_dob="1996/05/04" where emp\_id=1;

update employee set emp\_dob="1994/4/12" where emp\_id=2;

update employee set emp\_dob="1998/9/8" where emp\_id=3;

update employee set emp\_dob="1999/9/29" where emp\_id=4;

update employee set emp\_dob="2000/7/30" where emp\_id=5;

update employee set emp\_dob="1995/3/28" where emp\_id=6;

**RETRIEVE DATA FROM THE TABLE**

(This query will retrieve all the data i.e all rows in all columns from table)

select \* from country;

(This query is to select specific row using where condition)

select \* from country where country\_id=1;

(This query is to select all the rows from one column)

select country\_name from country;

(This query is to select only one row and one column)

select country\_name from country where country\_id=2;

(This query is to select multiple data at the same time)

select \* from country where country\_id in(1, 4);

select \* from country where country\_name in("india", "japan");

**SELECT DATA USING BETWEEN**

(***between*** keyword is used to find data in between given values)

(it will consider the start and end value)

(if we given a value 1 and 10 it will consider the 1 and 100 and retrieve all the data between 1 to 10 including 1 and 10)

select \* from employee where emp\_id between 1 and 5;

select \* from country where country\_id between 1 and 10;

**SELECT DATA USING LIMIT**

(***limit*** keyword is used to select a range of the data from given limit)

(it will not consider the start and and value of the limit)

(if we given a limit of 1,10 it will not consider the 1 and 10 and retrieve the data from 2 to 9)

select \* from country where country\_id limit 1,10;

select emp\_fname, emp\_lname from employee where emp\_id limit 1,10;

select country\_name from country where country\_id limit 1, 5;

**ALIAS (NICK NAME) NAME OF COLUMN NAME**

select emp\_fname as "First Name", emp\_lname as "Last Name" from employee;

select country\_name as "Country Name" from country;

**ORDER BY**

(order by is used to select data in ascending or descending order or to sort data)

(if we doesn’t specify order by default it will sort in ascending order)

select \* from employee order by emp\_fname;

select \* from employee order by emp\_lname desc;

select \* from employee order by emp\_id asc;

select \* from employee order by emp\_id desc;

**GROUP BY**

(group by is used to make group of data in particular column and filter data)

select emp\_dept as Department, sum(emp\_salary) as Salary from employee group by(emp\_dept);

select emp\_fname as "First Name", emp\_lname as "Last Name" from employee group by emp\_id;

**LIKE OPERATOR**

(like operator is used to search data in table)

(like operator used to search data with wild card character and its keyword)

* **Search name starts with alphabet a**

select \* from employee where emp\_fname like "a%";

* **Search name starts with alphabet k**

select \* from employee where emp\_fname like "k%";

* **Find name having alphabet a anywhere from start to end**

select \* from employee where emp\_fname like "%a%";

* **Find department, first name and last name of employee who’s name start with v and ends with j**

select emp\_fname, emp\_lname, emp\_dept from employee where emp\_fname like "v%j";

**SQL FUNCTIONS**

**AGGREGATE FUNCTIONS**

1. ***max()***

(used to find the maximum value from column applies only on the columns having numeric data)

* **find the maximum salary from employee table**

select max(emp\_salary) from employee;

1. ***min()***

(used to find the minimum value from column applies only on the columns having numeric data)

* **find the minimum salary from employee table**

select min(emp\_salary) from employee;

1. ***avg()***

(used to find average value from column applies only on the columns having numeric data)

* **find the average of the salary from employee table**

select avg(emp\_salary) from employee;

1. ***count()***

(used to count value from column applies on both numeric as well as nonnumeric data)

* **count the no. of employees in employee table**

select count(emp\_id) from employee;

select count(emp\_fname) from employee;

1. ***sum()***

(used to find sum values from column applies only on the columns having numeric data)

* **find the sum of salary from employee table**

select sum(emp\_salary) from employee;

**SCALAR FUNCTIONS**

1. ***first()***

(used to find the first row of the table)

1. ***last()***

(used to find last row of the table)

1. ***ucase()***

(used to convert the data into uppercase applies only on alphabet data)

select ucase(emp\_fname) from employee;

1. ***lcase()***

(used to convert the data into lowercase applies only on alphabet data)

select lcase(emp\_fname) from employee;

**PRIMARY KEY**

(primary key is a column which has unique data and never returns null value and it is auto incremented ex. userid, emp\_id, country\_id, category\_id, product\_id )

(Primary key is used to uniquely identify data in the table)

(primary can be defined only once in the table)

***category***

create table category

(

category\_id int primary key AUTO\_INCREMENT,

category\_name varchar(50)

);

**FOREIGN KEY**

(Foreign key provides relationship between one table to another table)

(we can provide more than one foreign key in one table)

***subcategory***

create table subcategory

(

subcategory\_id int primary key AUTO\_INCREMENT,

category\_id int references category(category\_id),

subcategory\_name varchar(50)

);

(after creating sql query for reference (foreign key) go to

Structure => Relation view =>

write constraint name => add column in current table =>

database is selected already if not select the database =>

add reference table name => add reference column name)

(Constraint name should be uniqe each time you create the foreign key otherwise it will give an error like this: Error creating foreign key on subcategory\_id (check data types))

***Product***

create table product

(

product\_id int primary key AUTO\_INCREMENT,

subcategory\_id int references subcategory(subcatagory\_id),

category\_id int references category(category\_id),

product\_name varchar(50),

product\_image blob,

quantity int,

old\_price int,

offer\_price int,

description text

);