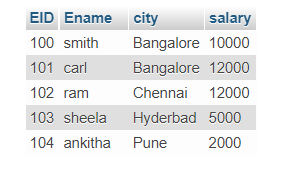
SQL

DAY1

Table1: employee



1. GOLDEN RULE:

SELECT

FROM

WHERE

GROUP BY

HAVING

ORDERBY

* This the way we have to write SQL queries,
  + Ex: SELECT \* from employee ORDER BY Ename;(accepted).
  + Ex: SELECT Ename from employee WHERE Ename ORDER BY Ename asc;(accepted).
  + Ex: SELECT \* from employee HAVING Ename =” Vikram” WHERE Eid=20;(not accepted it will give error.)

1. WHERE:

* Default way:
  + Ex: read the employee name whose salary is > or equal to 10000?

Ans- SELECT Ename from employee WHERE salary >=10000;

* IN (special case, that is used when we are passing more than one value):
  + Ex: give me employee id whose name is smith and carl?

Ans- SELECT Eid from employee WHERE Ename IN (“carl”,”smith”);

//here name which we give is case sensitive

* SORTING IN ASCENDING AND DESCENDING ORDER:
  + Ex: give me the employee ids sorted in descending order?

Ans- SELECT Eid from employee ORDER BY asc;

//default it is asc so even if we don’t pass asc it will sort in asc order.

* Special Case: (using HAVING)
  + Ex: filter the recording using HAVING command & give me employee id whose name is Vikram?

Ans- SELECT Eid from employee HAVING Ename=”Vikram”;

// name is case sensitive.

1. BUILT IN METHODS OR FUNCTIONS:

* MAX():
  + Ex: give me the max salary from the table?

Ans- SELECT MAX(salary) from employee;

* MIN():
  + Ex: give me the min salary from the table?

Ans- SELECT MIN(salary) from employee;

* AVG():
  + Ex: give me the average of all the salary?

Ans- SELECT AVG(salary) from employee;

* SUM():
  + Ex: give me the sum of all the salaries?

Ans- SELECT SUM(salary) from employee;

* COUNT(), GROUP BY:
  + Ex: count number of employee city wise?

Ans- SELECT COUNT(Eid) from employee GROUP BY city;

* + \*\*EX: group the employee based on city & then count citywise & print the count in ascending order?

Ans- SELECT COUNT(Eid) from employee GROUP BY city ORDER BY COUNT(Eid) asc;

* + \*\*Ex: group the city after counting where the city name is bangalore?

Ans- SELECT COUNT(City) from employee GROUP BY city HAVING city = “Bangalore”;

* UCASE():
  + Ex: convert all the employee names in UPPERCASE?

Ans- SELECT UCASE(Ename) from employee;

* LCASE():
  + Ex: convert al the employee names in lowercase?

Ans- SELECT LCASE(Ename) from employee;

DAY 2:

1. LIMIT(selecting either top or bottom members in numbers):

* Ex: give me the top 2 records stored in sql?

Ans- SELECT \* from employee ORDER BY Eid asc LIMIT 2;

//here 2 is number of records we want to accept.

* Ex: give the bottom 2 records stored in sql?

Ans- SELECT \* from employee ORDER BY Eid desc LIMIT 2;

1. BREAK ANYTHING BASED ON LETTERS:

* Ex: break the city name into 3 words?

Ans- SELECT MID(city,1,3) from employee;

1. MORE ON BUILT IN METHODS OR FUNCTIONS:

* MID():
  + Ex: break the city name into 3 words?

Ans- SELECT MID(city,1,3) from employee;

* NOW():
  + Ex: print the current time using sql?

Ans- SELECT NOW() ;

// here table will be named as now() to change the table name we use below command

\*\*SELECT NOW() AS Time;

* AS:
  + EX: in the output change the column name Ename to name & then print names of employee in asc order?

Ans- SELECT Ename AS Name from employee ORDER BY Ename asc;

* WILDCARD:(like & %): it is used to searching name based on input like shown below-
  + Ex: give me the name of the members whose name ends with “m”?

Ans- SELECT Ename from employee WHERE Ename LIKE”%m”;

Note:

“%m”- ends with letter m.

“%m%” – anywhere m maybe present.

“m%” – starts with a word m.

* + \*\*Ex: give me the name of employee whose letter consists of 3 letters and ends with m?

Ans- SELECT Ename from employee WHERE Ename LIKE “\_\_m”

// here 2 undersquare and letter ending we write , if question asks 5 words put 5 undersquare in the “”.

1. DELETE:(delete from employee ………………)

* Ex: delete the record from employee table where employee id =101?

Ans- DELETE from employee WHERE Eid = 101;

* \*\*Ex: delete the record from employee table where employee id is 101 & 102?

Ans- DELETE from employee WHERE Eid IN (101,102);

// always use in when there are more than 1 things.

* \*\*Ex: delete the record from employee table where employee name is smith?

Ans- DELETE from employee WHERE Ename= “smith”;

1. DROP:(DROP TABLE)

* Ex: Drop the table employee?

Ans- DROP table employee;

1. DISTINCT:(unique/distinct)

* Ex: give me the distinct/ unique salary from employee table?

Ans- SELECT DISTINCT salary from employee;

1. CONCAT:

* EX: separate employee name & salary with an “\_” & then concat/add the content of these columns?

Ans- SELECT CONCAT(Ename,”\_”,salary) from employee;

* EX: Concat ename and salary and print the output in desc order?

Ans- SELECT CONCAT(Ename, salary) from employee ORDER BY CONCAT(Ename, salary) desc;

1. LTRIM():

* Ex: remove the white spaces from the left side of the employee name and then print name?

Ans- SELECT LTRIM(Ename) from employee;

1. RTRIM():

* Ex: remove the white spaces from the right side of the employee name and then print name?

Ans- SELECT RTRIM(Ename) from employee;

1. TRIM():

* Ex: remove the white spaces from both side of the employee name and then print name?

Ans- SELECT TRIM(Ename) from employee;

1. TRIM & CONCAT together SPECIAL CASE:

* Ex: remove the white spaces from name and salary from both sides and then concat/add them separated with \_ ?

Ans- SELECT CONCAT(TRIM(Ename),”\_”,TRIM(salary)) from employee;

1. UPDATE:(UPDATE employee SET …….)

* Ex: Update the employee name smith to abc where employee id is 101?

Ans- UPDATE employee SET Ename=”abc” WHERE Ename=”smith”;

* Ex: replace the city name bangalore to bangaluru in table?

Ans- UPDATE employee SET city = bangaluru WHERE city =Bangalore;

* Ex: update everyones salary by 400?

Ans- UPDATE employee SET salary = salary +400;

1. ALTER:(ALTER TABLE employee ADD ……………)

* Ex: add the coloum email at the beginning of table?

Ans- ALTER TABLE employee ADD email varchar(20) FIRST;

// for creating table at last, remove first keyword from above code.

// for creating table after another table, remove first keyword from above code And Insert “AFTER” with which column we have to choose-> ALTER TABLE employee ADD email varchar(20) AFTER Ename;

* Ex: delete column email from the table?

Ans-ALTER TABLE employee DROP ”email”;

1. LENGTH():(to find the length of full column or just a string as shown below)

* Ex: Find the length of each and every name in the table?

Ans- SELECT LENGTH(Ename) from employee;

* \*\*Ex: find the length of the string “I will kill you”?

Ans- SELECT LENGTH(“I will kill you”);

DAY3

Tables:

Table1: incentive

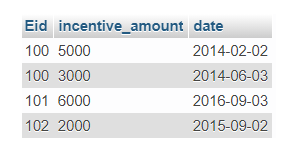


Table2: status

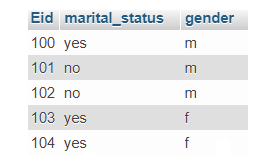
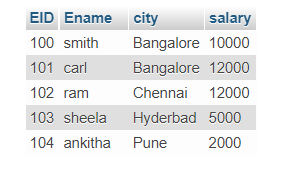


Table3: employee



1. SUB\_QUERY: query within query, what we write in paranthesis will execute first.

* Ex: give me second max salary?

Ans: SELECT MAX(salary) from employee WHERE salary <(SELECT MAX(salary from employee);

* Ex: give me Third max salary?

Ans- SELECT MAX(salary) from employee WHERE salary <(SELECT MAX(salary) from employee WHERE salary< (SELECT MAX(salary) from employee));

* + NOTE: sub-query can be created between 2 tables if 2 tables have same column and only one column of one table is printed.
* Ex: give an employee name who got incentive? (Table1&Table3)

Ans- SELECT DISTINCT Ename from employee WHERE Eid IN (SELECT Eid from incentive\_table);

* Ex: Give me the employee names of only female’s candidates and also their salary? (Table 1&3)

Ans- SELECT Ename, salary from employee WHERE IN (SELECT Eid from status WHERE gender=” f”);

* \*\*EX: give me the employee’s name who is married and has got incentives? (Table1&2&3)?

Ans- SELECT Ename from employee WHERE Eid in (SELECT Eid from incentive WHERE Eid IN (SELECT Eid from status WHERE marital\_status=” yes”));

* \*\*V-IMP\*\*Ex: give me the name of the employee who is married and male? (Table 1&3) (use AND operator)?

Ans- SELECT Ename from employee WHERE Eid IN (SELECT Eid from status WHERE gender=”m” AND marital\_status=” yes”);

DAY4

1. DATA- TYPES:

* Numbers:(desc -> asc)
  + TINNY INT -> 128 to -128
  + SMALL INT
  + MEDIUM INT
  + INT (most of time we use this)
* String:(desc -> asc)
  + CHAR-> Char (4) -> fixed value- bad memory management.
  + VarChar-> dynamic good memory management.
  + BLOB -> for huge paragraphs we use this.
* Special CASES:
  + FLOAT
  + DOUBLE
  + ENUM(‘F’,’M’);
  + DATE // YYYY-MM-DD (Note: always write in “”)
  + TIME // HH:MM: SS.
  + TIMESTAMP // YYYY\_MM\_DD :: HH:MM:SS (Note: always write now () to store timestamp.)
  + YEAR// YYYY.

1. CREATING TABLE

* Step 1: CREATING NEW TABLE
  + Create Table Pet (Name varchar (20) , owner varchar(20), BirthDate Date,

Gender Enum(‘F’,’M’), Pid INT (5));

* Step 2: TO ANALYZE TABLE
  + Describe Pet;
* Step 3: INSERTING VALUE IN TABLE
  + Insert into pet values (‘Rinky’, ‘Pinky’, “2015-2-23”, ‘F’, 100);
* Step 4: SEE CONTENT
  + Select \* from pet;
* Step 5: CREATING NEW TABLE 2
  + Create Table Registration (First\_Name varchar (20), LAST\_Name varchar (20), DOB Date, Reg\_Time TimeStamp, Location VarChar (20), Rid Int (5));
* Step 6: TO ANALYZE TABLE
  + Describe Registration;
* Step 7: INSERTING VALUE IN TABLE
  + Insert into Registration values (‘Lilly’, ‘silly’, “2016-2-23”, now (), ‘BA’, 100);
* Step 8: SEE CONTENT
  + Select \* from Registration;

DAY 5

1. DATA- TYPES: