

Certification Assignment of SQL part

Course Name: Become a Data Analyst

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SQL Part :

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Create Table on MySQL or PostgreSQL database Follow the SQL_Table.jpeg file -, then write query :::

- i) "select count(*) from users", Write an optimized query against this.
- ii) View all users and employers who get maximum salary from each group?
- iii) You want to delete everything of Users, write a query.
- iv) Get the second highest salary from the Users table and which users get them.
- v) How to get distinct records from the Names from users table without using distinct keyword.
- vi) How to find the count of duplicate rows from a table?
- vii) Remove duplicates from users but keep one

Create Table on MySQL or PostgreSQL database Follow the SQL_Table.jpeg file :

```
1 • create table Users(  
2     id int not null,  
3     name varchar(50),  
4     phone varchar(50),  
5     role varchar(50),  
6     Salary bigint,  
7     Employers_id int not null,  
8     foreign key(Employers_id) references Employers(id)  
9 );  
10  
11 • create table Employers(  
12     id int not null,  
13     name varchar(50),  
14     Role varchar(50),  
15     Salary bigint,  
16     primary key(id)  
17 );  
18 • insert into Users(id,name,phone,role,Salary,Employers_id)  
19     values(7856,"Mr Abul","02255666777","BR",25000,5588),  
20     (7654,"Mr Babul","01177555666","Supervisor",27500,6677)  
21     ,(8768,"Miss Jorina","02299000111","BR",40000,5588),  
22     (5748,"Mrs Morjina","01155886644","BR",38000,5588),  
23     (5748,"Mrs Morjina","01155886644","BR",38000,5588);  
24  
25 • insert into Employers(id,name,Role,Salary)  
26     values(5588,"Mr Rahim","Area Coordinator",50000),  
27     (6677,"Mr Karim","Regional Coordinator",50000);
```

i) “select count(*) from users”, Write an optimized query against this.

```
35 • select sql_calc_found_rows * from Users;
36 • select found_rows();
```

ii) View all users and employers who get maximum salary from each group?

```
40 • with view as (
41     select id, name, role, max(salary) as maximum_salary
42     from users u
43     group by role
44     union
45     select id, name, role, max(salary) as maximum_salary
46     from employers e
47     group by role
48 )
49 select * from view;
--
```

iii) You want to delete everything of Users, write a query.

```
54 • truncate table users;
```

iv) Get the second highest salary from the Users table and which users get them.

```
59 • select id, name, role, max(salary) as second_highest_salary
60     from users u
61     group by id, name, role
62     having max(salary) not in(select max(salary) from users)
63     order by max(salary) desc
64     limit 1;
```

v) How to get distinct records from the Names from users table without using distinct keyword.

```
88 • select id, name ,role, salary, employers_id
89     from users
90     group by id, name ,role;
```

vi) How to find the count of duplicate rows from a table?

```
102 • with cte as(
103     select *, count(id) duplicate_count
104     from users
105     group by id,name,role
106     having(count(id)>1)
107 )
108 select count(*)
109 from cte;
```

vii) Remove duplicates from users but keep one

```
118 • create table new_table_users as
119     select *
120     from users
121     group by id,name,phone,role;
122 • select * from new_table_users;
123
124 • drop table users;
125
126 • alter table new_table_users
127     rename to users;
```

Data Analytics and Visualization part :

=====

Download the data from the given named Financial Report. And build a dashboard using Data studio/ Tableau/ Power BI (Or any other platform of your choice). Preprocess data if necessary.

- a) Add necessary Filter/ Control in Dashboard (i.e.: date range, Country, Segment, Products etc.)
- b) Show Monthly Sales Trend
- c) Show month-to-month Growth %
- d) Show the sales and profit in different carts (i.e., by Country, products, segment etc.)
- e) Show discount induced Growth % (i.e., Did Discount result in better sales?)

Answer:

e) After Analyzing the data it seems sales growth doesn't depend on Discounts appropriately. They are independent of each other. So, it can't be said surely that discount results in better sales.

Power BI Dashboard

