DBMS SKILL-6
PRELAB

1. How to use Auto Increment in SQL?

DBMS Skill-6 190031187

1. Auto-increment allows a unique number to be generated automatically when a new record is inserted into a table.

often this is the primary key field that we would like to be created automatically every time a new record is inserted

Example:-

```
create table persons ( personid int NOT NULL
AUTO_INCREMENT, lastname varchar(255),
firstname varchar(255), age int,
primary key (personid)) ;
```

My SQL uses AUTO_INCREMENT keyword to perform an Auto-increment feature.
By default, the starting value for AUTO_INCR -EMENT is 1, and it will increment by 1 for each new record.

2. What is embedded and dynamic SQL?

2. Embedded / static SQL

It is those SQL statements that are fixed and can't be changed at runtime in an application. These statements are compiled at the compile-time only

The benefit of using this statement is that you know the path of execution of statements because you have the SQL statements with you, so you can optimize your SQL query and can execute the query in the best and fastest possible way. The way of accessing data is predefined and these static SQL statements are generally used on those databases that are uniformly distributed

Dynamic SQL

These are those SQL statements that are created or executed at run-time. The users can execute their own query in some application These statements are compiled at run-time. These kind of SQL statements are used when there is a non-uniformity in the data stored in the database. It is more flexible as compared to static SQL.

3. What is meant by ALIAS in SQL?

3. Aliases are the temporary name given to table or column for the purpose of a particular SQL query. It is used when name of column or table is used other than their original names, but the modified name is only temporary.

→ Aliases are created to make table or columns names more readable

→ Aliases are useful when table or column names are big or not very reada-ble.

→ These are preferred when there are more than one table involved in a query.

6 Which operator has the highest precedence among the following − AND, NOT, OR?

6. Highest precedence among AND, NOT, OR is "NOT"

4 While executing certain commands Mr.Jack is confused to decide whether View is a logical storage or physical storage. State him an appropriate solution with a valid reason?

[redacted] View is a logical storage:-

4. Views are a special version of tables in SQL. They provide a virtual table environment for various complex operations you can select data from multiple tables, or you can select specific data based on certain criteria in views. It does not hold actual data; it holds only the definition of the view in the data dictionary

It does not use physical memory only the query is stored in the data dictionary, it is computed dynamically wherever the user performs any query on it. changes made at any point in view are reflected in the actual base table

The view has primarily two purposes :-

1) simplify complex SQL queries
2) provides restriction to users from accessing sensitive data

5 How to build authentication to a database?

5. (1) Your database should now be listed on the left with your other database schemas

(2) click Home icon in the top left corner to return to workbench central screen. click on MySQL server instance under the server Administrator section of MySQL workbench to create a new database user and assign privileges to your new database

(3) Click on Users and previleges. Then click on Add account. Enter login name for the new user, type localhost and new password as shown. click apply to create the new user account.

(4) To assign privileges for this user to access a specific database, click on schema privilege tab. click the user account from list of users on the left. click on Add entry button

(5) Select the Selected schema radio button, and your database schema from the list

(6) select appropriate privileges to allow the user access the selected database. Click save changes to complete your new user setup

(7) you can now test your new user logic by using MySQL workbench with your newly created user account.

7 What is DEFAULT?

7. The MySQL DEFAULT keyword is a database constraint or rule that is applied when inserting new records into a table. If the value is not provided to any column while inserting a new row in the table, the default value will be used instead.

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INLAB

Implement SQL Queries on Case Study 8 (**SAINT GOBAIN)**

QUOTATION:

Cust_ID	Cust_Name	Cust_Phone	Glass_ Type	Glass_ thick	Glass_ Measure	Glass_ color	Address	Exp_ Amt	Advance_ Paid
1	Raju	8767895698	Clear glass	4MM	140CM	Black	Hyd	10000	2000
2	Hari	9999887766	Mirror	5MM	150CM	Blue	Delhi	11000	2500
3	Arun	7567896546	Clear glass	6MM	120CM	Black	Mumbai	9000	1000
4	Kiran	6754567890	Mirror	3MM	200CM	Blue	Hyd	20000	5000
5	Chand	7164567897	Mirror	4MM	120CM	Blue	Hyd	15000	6000

BILL:

Bill_ID	Cust_Name	Cust_Phone	Address	Glass_Feature	Mode_Pay
100	Raju	8767895698	Hyd	Good	Cash
101	Hari	9999887766	Delhi	Good	Credit
102	Arun	7567896546	Mumbai	Good	Cash
103	Kiran	6754567890	Hyd	Good	Cash
104	Chand	7164567897	Hyd	Good	Cash

1) Create tables with the required constraints for the given case study

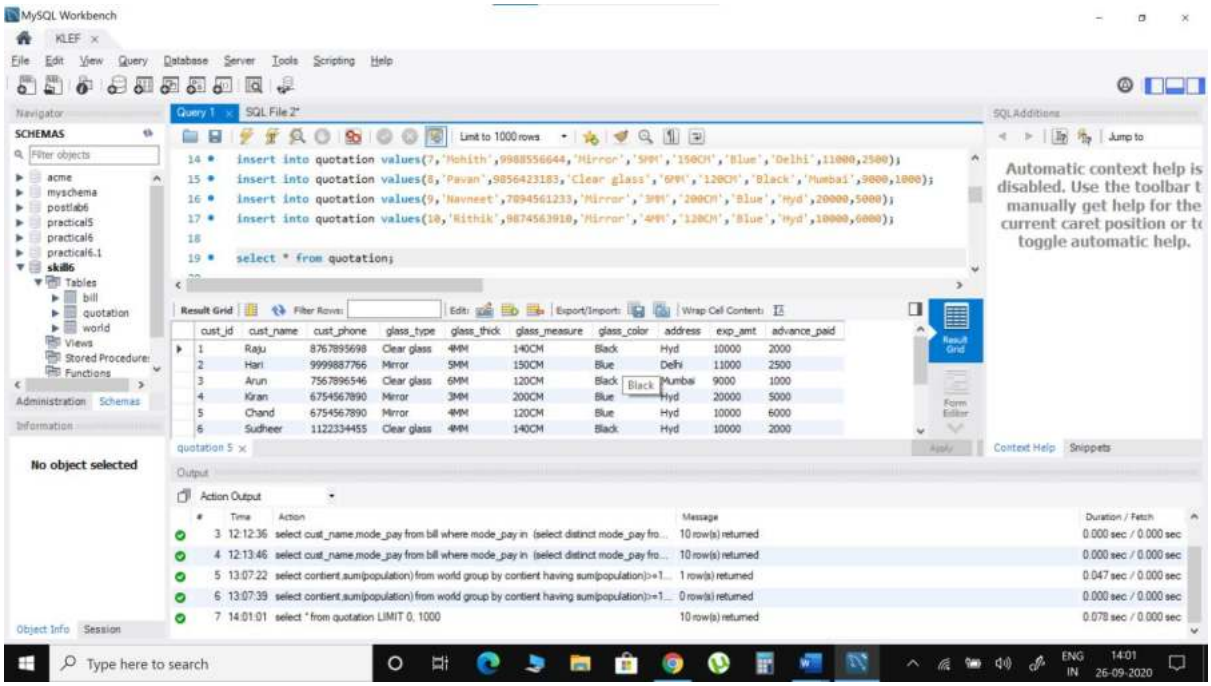
QUOTATION

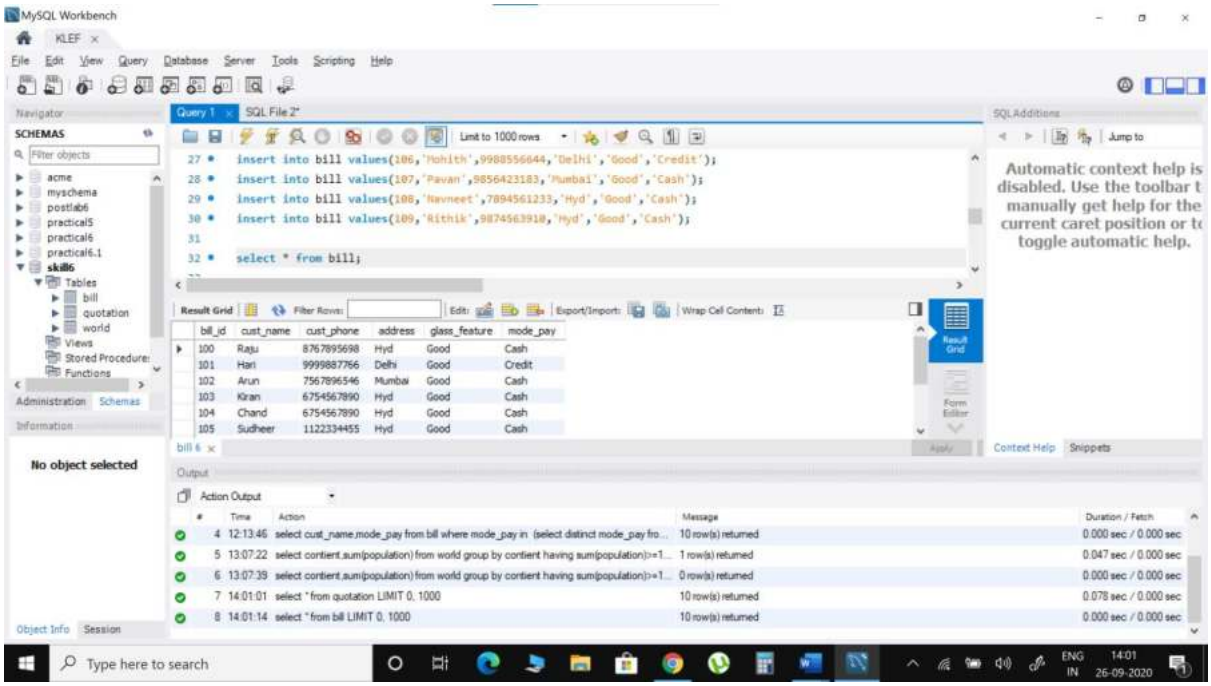
```
create table quotation(cust_id int primary key,cust_name varchar(30),cust_phone
bigint,glass_type varchar(30),glass_thick varchar(10),glass_measure varchar(10),glass_color
varchar(10),address varchar(50),exp_amt int,advance_paid int);
```

BILL

```
create table bill(bill_id int primary key,cust_name varchar(30),cust_phone bigint,
address varchar(50),glass_feature varchar(20),mode_pay varchar(20));
```

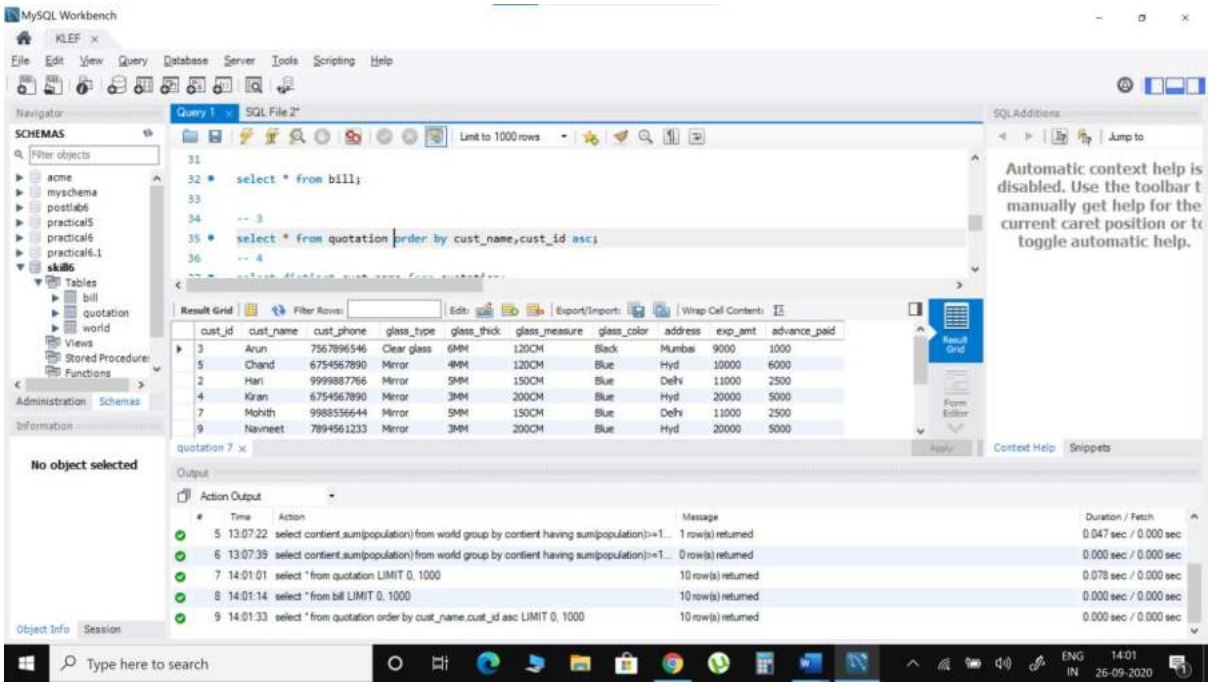
2) Insert 10 records into the created tables





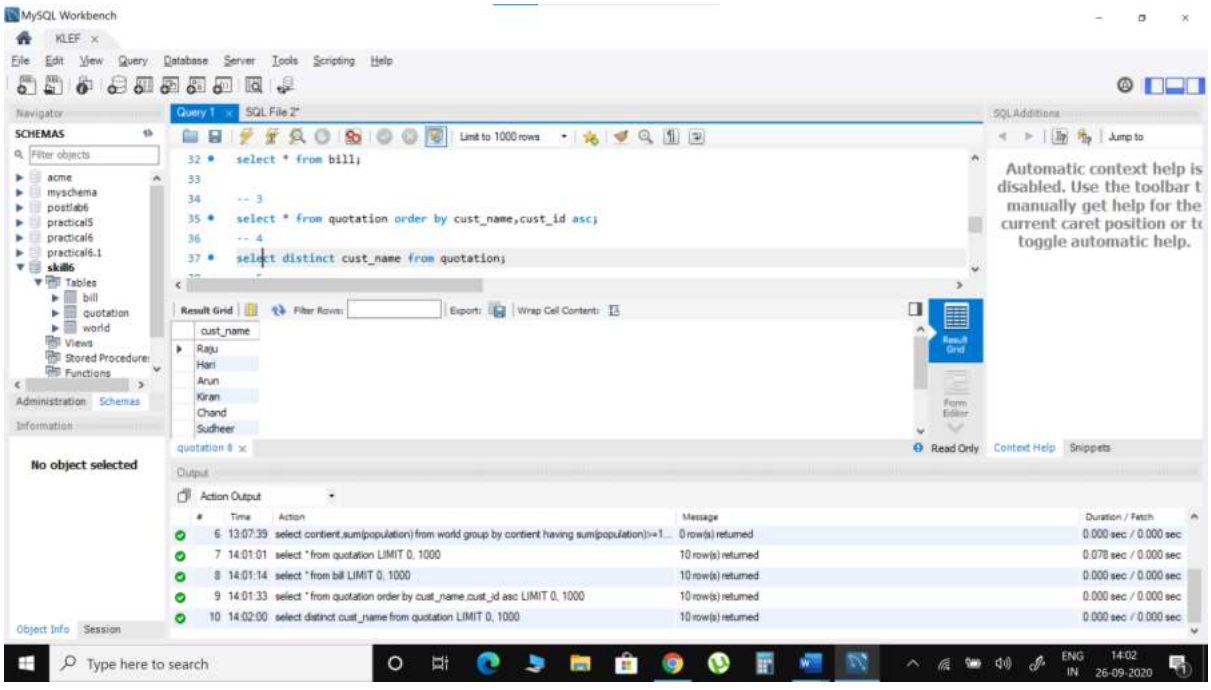
3) Write a SQL query to find out Customer ID and Customer Name in ascending order.

```
select * from quotation order by cust_name,cust_id asc;
```



4) Find unique Customer Name in the Quotation table.

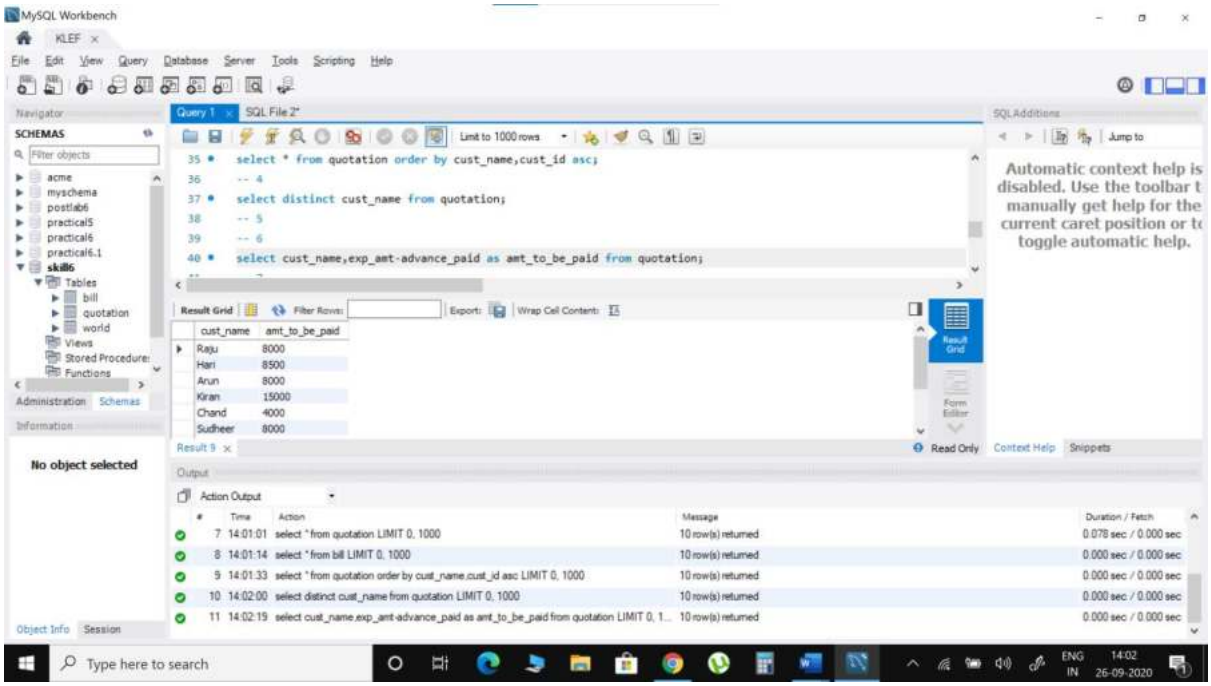
```
select distinct cust_name from quotation;
```



5) SQL query to find the Glass Thickness where number of Customer of highest thickness.

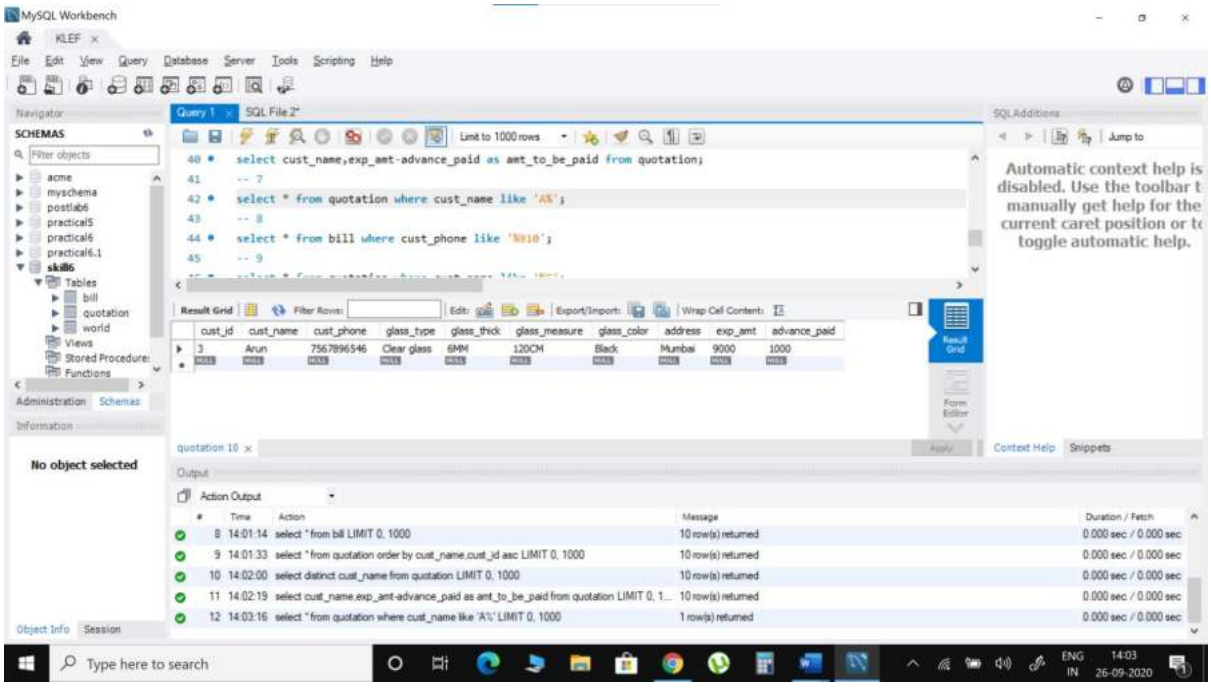
6) Write a SQL query to find out the amount has to paid by the customer in Quotation Table.

```
select cust_name,exp_amt-advance_paid as amt_to_be_paid from quotation;
```



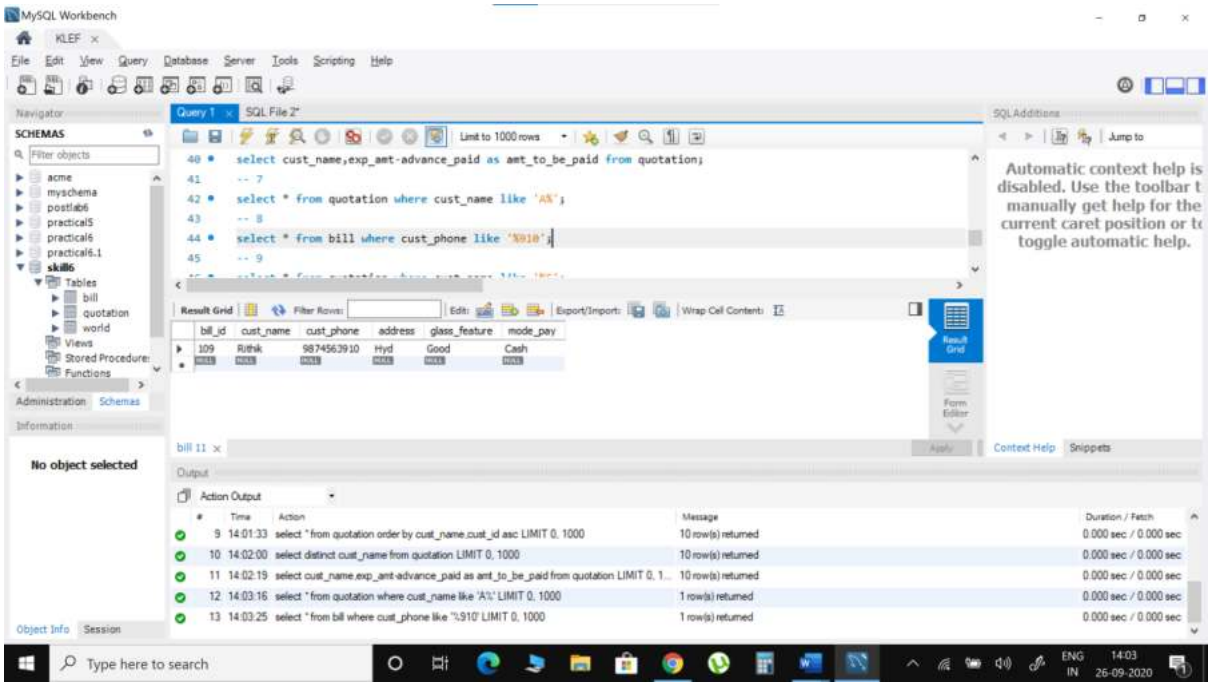
7) Write a SQL query to list the name of those whose name starts with ‘A’ in Quotation Table.

```
select * from quotation where cust_name like 'A%';
```



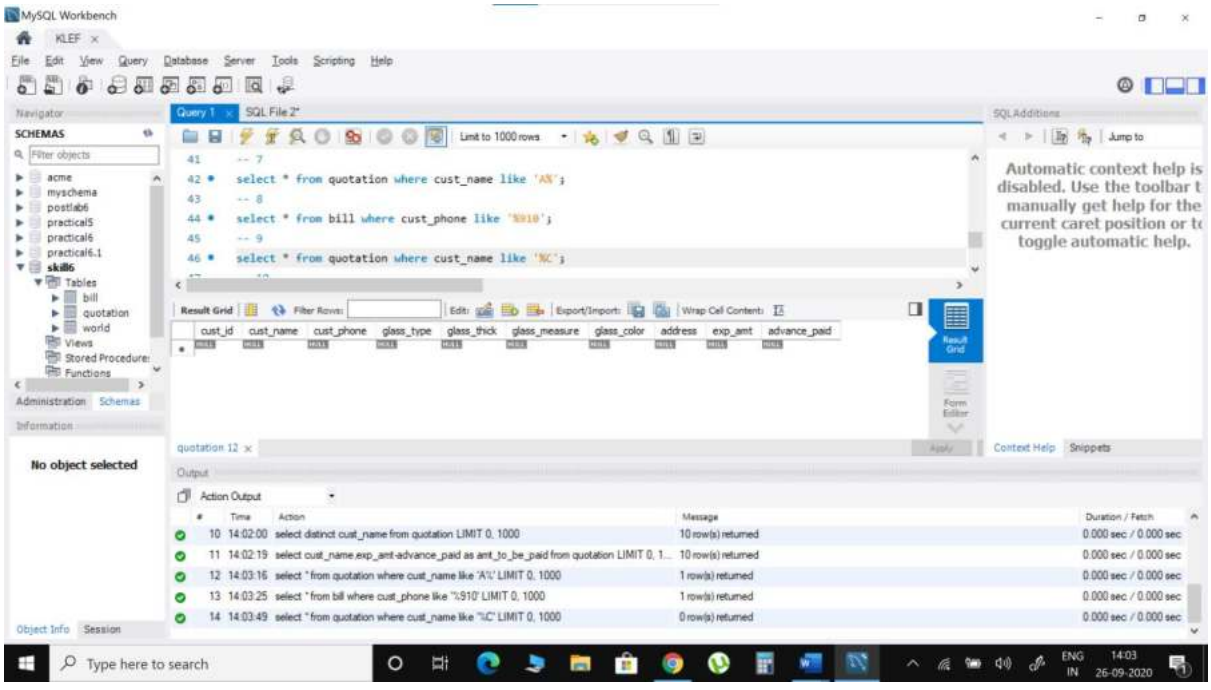
8) Write a SQL query to list the Phone no. that ends with “910” in the Bill table.

```
select * from bill where cust_phone like '%910';
```



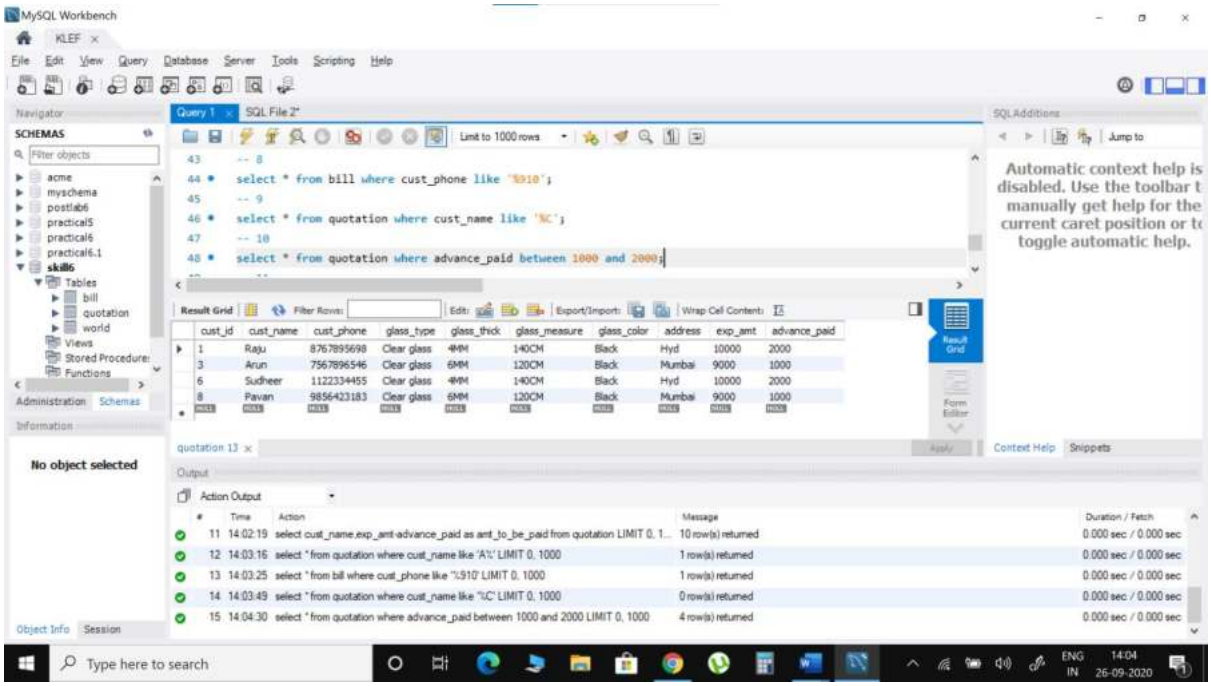
9) Write an SQL query to print details of the Customer whose Name ends with 'C'

```
select * from quotation where cust_name like '%C';
```



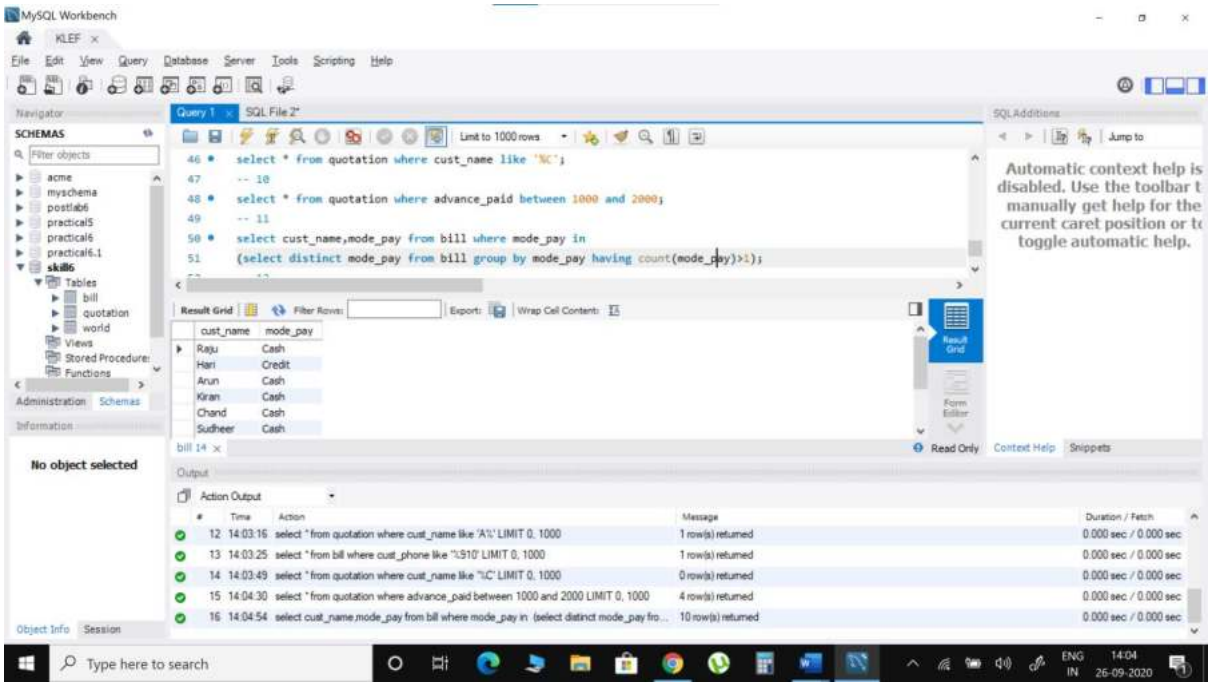
10) Write an SQL query to print details of the customers whose advance paid lies between 1000 and 2000.

```
select * from quotation where advance_paid between 1000 and 2000;
```



11) Write an SQL query to fetch the list of customers with the same Mode of payment.

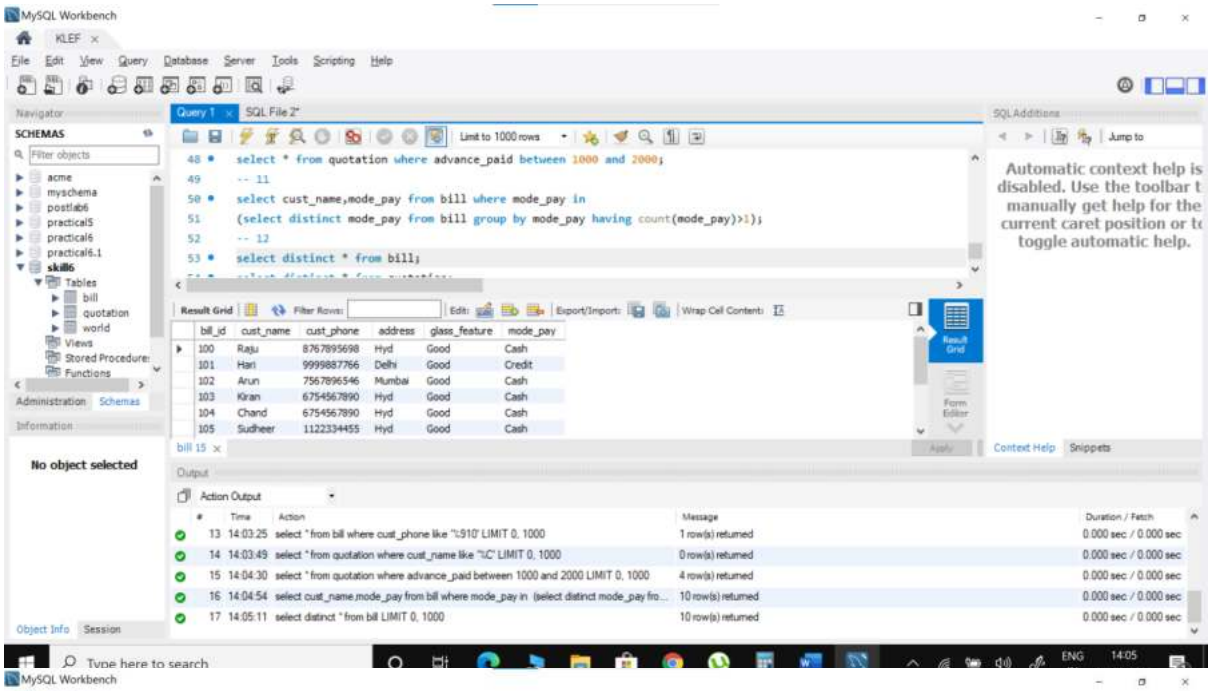
```
select cust_name,mode_pay from bill where mode_pay in
(select distinct mode_pay from bill group by mode_pay having count(mode_pay)>1);
```

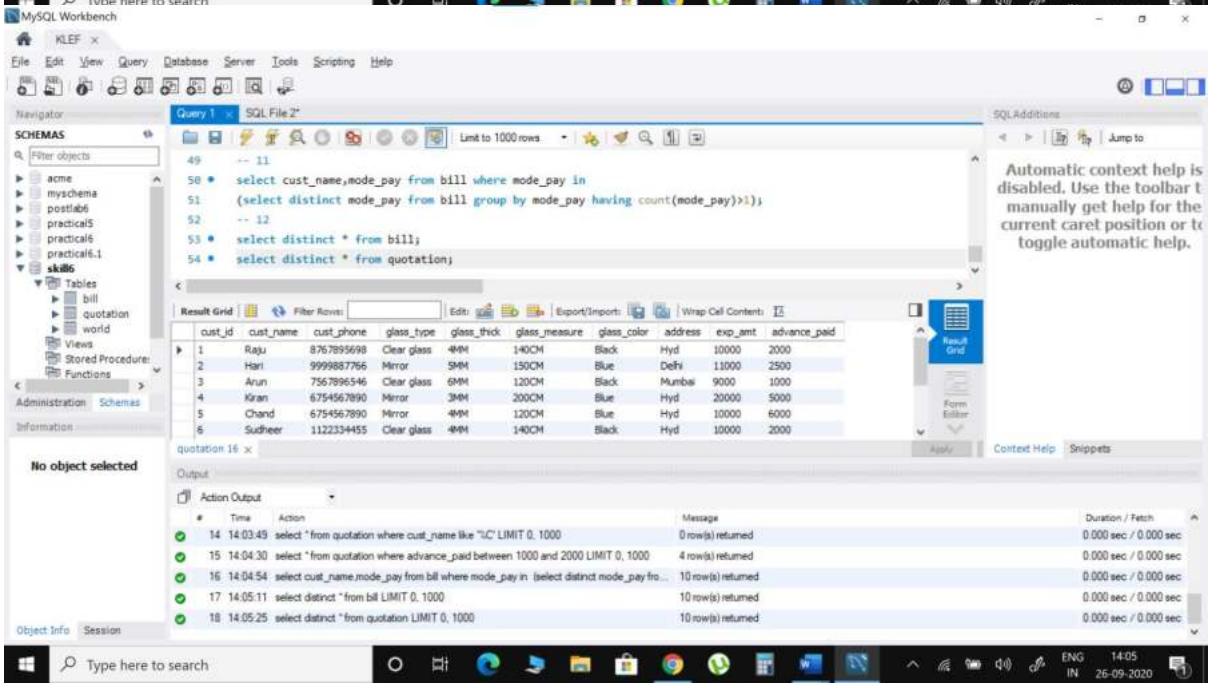


12) Write an SQL query to fetch the Unique records in Quotation and Bill Table

```
select distinct * from bill;
```

```
select distinct * from quotation;
```


MySQL Workbench
KLEF
File Edit View Query Database Server Tools Scripting Help
SCHEMAS
acme
myschema
postlab6
practical5
practical6
practical6.1
skill6
Tables
bill
quotation
world
Views
Stored Procedures
Functions
48 • select * from quotation where advance_paid between 1000 and 2000;
49 -- 11
50 • select cust_name,mode_pay from bill where mode_pay in
51 (select distinct mode_pay from bill group by mode_pay having count(mode_pay)>1);
52 -- 12
53 • select distinct * from bill;
bill_id cust_name cust_phone address glass_feature mode_pay
100 Raju 8767895698 Hyd Good Cash
101 Hari 9999887766 Delhi Good Credit
102 Arun 7567896546 Mumbai Good Cash
103 Kiran 6754567890 Hyd Good Cash
104 Chand 6754567890 Hyd Good Cash
105 Sudheer 1122334455 Hyd Good Cash
No object selected
Automatic context help is disabled. Use the toolbar t manually get help for the current caret position or t toggle automatic help.
13 14:03:25 select * from bill where cust_phone like '%910' LIMIT 0, 1000 1 row(s) returned
14 14:03:49 select * from quotation where cust_name like '%C' LIMIT 0, 1000 0 row(s) returned
15 14:04:30 select * from quotation where advance_paid between 1000 and 2000 LIMIT 0, 1000 4 row(s) returned
16 14:04:54 select cust_name,mode_pay from bill where mode_pay in (select distinct mode_pay fro... 10 row(s) returned
17 14:05:11 select distinct * from bill LIMIT 0, 1000 10 row(s) returned


MySQL Workbench
KLEF
File Edit View Query Database Server Tools Scripting Help
SCHEMAS
49 -- 11
50 • select cust_name,mode_pay from bill where mode_pay in
51 (select distinct mode_pay from bill group by mode_pay having count(mode_pay)>1);
52 -- 12
53 • select distinct * from bill;
54 • select distinct * from quotation;
cust_id cust_name cust_phone glass_type glass_thick glass_measure glass_color address exp_amt advance_paid
1 Raju 8767895698 Clear glass 4MM 140CM Black Hyd 10000 2000
2 Hari 9999887766 Mirror 5MM 150CM Blue Delhi 11000 2500
3 Arun 7567896546 Clear glass 6MM 120CM Black Mumbai 9000 1000
4 Kiran 6754567890 Mirror 3MM 200CM Blue Hyd 20000 5000
5 Chand 6754567890 Mirror 4MM 120CM Blue Hyd 10000 6000
6 Sudheer 1122334455 Clear glass 4MM 140CM Black Hyd 10000 2000
No object selected
Automatic context help is disabled. Use the toolbar t manually get help for the current caret position or t toggle automatic help.
14 14:03:49 select * from quotation where cust_name like '%C' LIMIT 0, 1000 0 row(s) returned
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16 14:04:54 select cust_name,mode_pay from bill where mode_pay in (select distinct mode_pay fro... 10 row(s) returned
17 14:05:11 select distinct * from bill LIMIT 0, 1000 10 row(s) returned
18 14:05:25 select distinct * from quotation LIMIT 0, 1000 10 row(s) returned
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POSTLAB

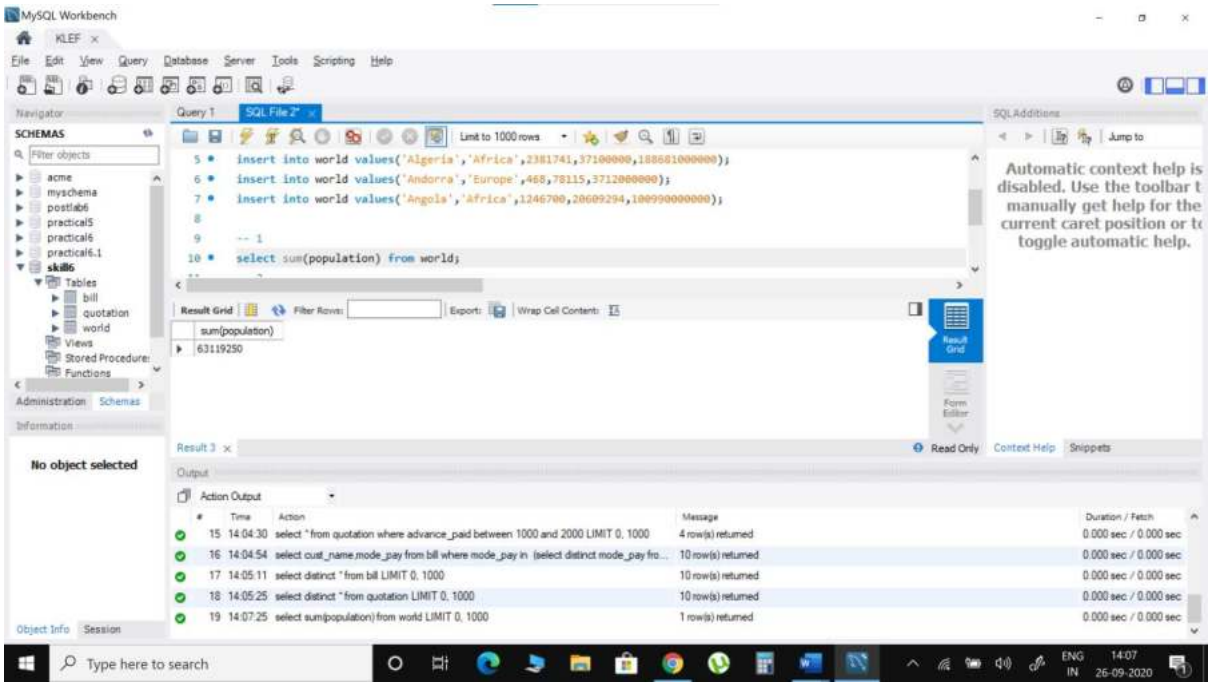
name	continent	area	population	gdp
Afghanistan	Asia	652230	25500100	20343000000
Albania	Europe	28748	2831741	12960000000
Algeria	Africa	2381741	37100000	188681000000
Andorra	Europe	468	78115	3712000000
Angola	Africa	1246700	20609294	100990000000

create table world (name varchar(50),contient varchar(50),area int,population bigint,gdp bigint);

insert into world values('Afghanistan','Asia',652230,2500100,20343000000);
insert into world values('Albania','Europe',28748,2831741,12960000000);
insert into world values('Algeria','Africa',2381741,37100000,188681000000);
insert into world values('Andorra','Europe',468,78115,3712000000);
insert into world values('Angola','Africa',1246700,20609294,100990000000);

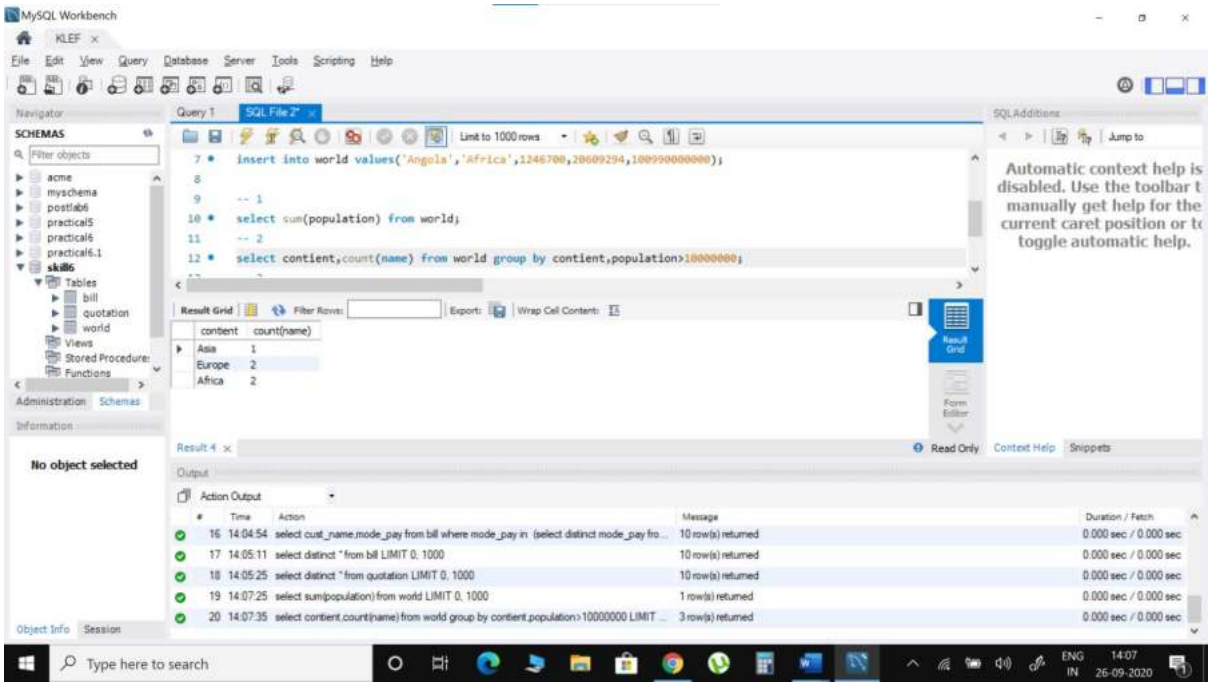
1) Show the total population of the world. World (name, continent, area, population, gdp)

select sum(population) from world;



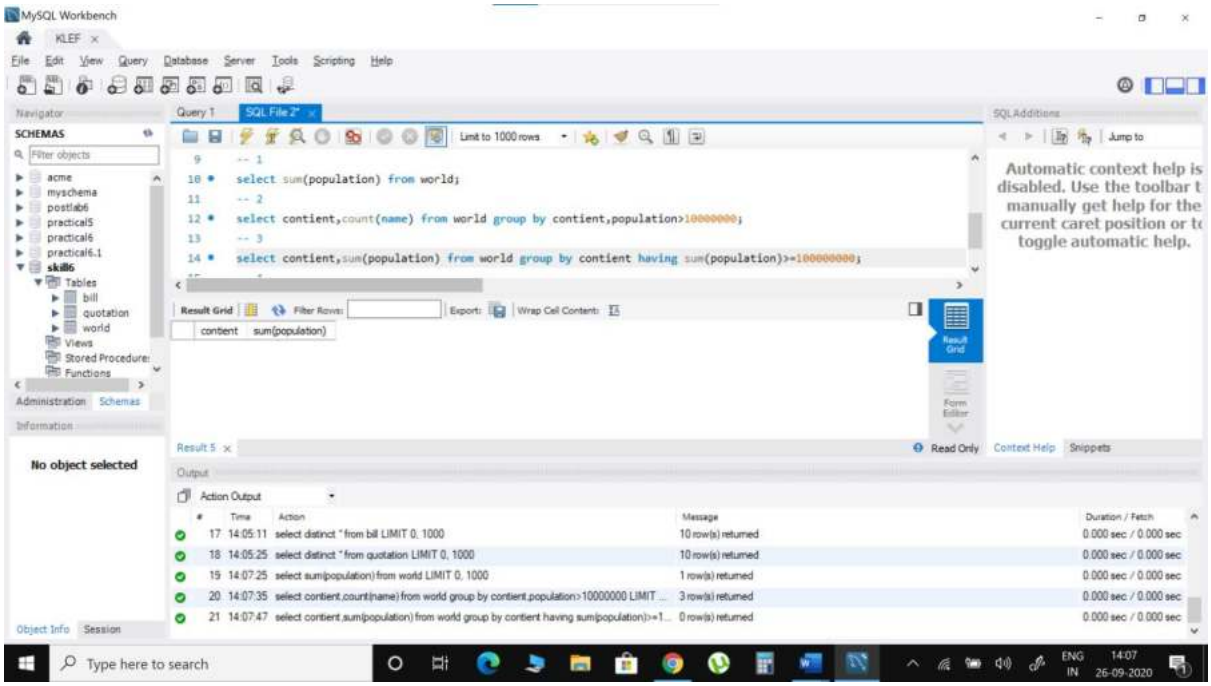
2) For each continent show the continent and number of countries with populations of at least 10 million.

select contient,count(name) from world group by contient,population>10000000;



3) List the continents that have a total population of at least 100 million.

```
select contient,sum(population) from world group by contient having
sum(population)>=100000000;
```



4) Display the list of continents in the world

```
select distinct contient from world;
```

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