MCQ TEST – SQL

Q1. When you have a subquery inside of the main query, which query is executed first?

- The subquery is never executed. Only the main query is executed.
- They are executed at the same time
- the main query
- the subquery

Q2. You need to export the entire database, including the database objects, in addition to the data. Which command-line tool do you use?

- mysqlexport
- mysqladmin
- mysqldump
- mysqld

Q3. You must ensure the accuracy and reliability of the data in your database. You assign some constraints to limit the type of data that can go into a table. What type of constraints are you assigning?

- [ ] row level
- [ ] database level
- [x] column level

- [ ] function level

Q4. Which option of most MySQL command-line programs can be used to get a description of the program's different options?

- [ ] --options
- [ ] ?
- [x] --help
- [ ] –h

Q5. MySQL uses environment variables in some of the programs and command-line operations. Which variable is used by the shell to find MySQL programs?

- [ ] DIR
- [ ] HOME
- [x] PATH
- [ ] MYSQL_HOME

How can you create a stored procedure in MySQL?

A 1 CREATE PROCEDURE P () AS

2 BEGIN

3 END;

B1 CREATE PROCEDURE P ()

2 BEGIN

3 END

C 1 CREATE PROCP

2 BEGIN

3 END;

D 1 CREATE PROC P AS O

2 BEGIN

3 END;

Q7. If you were building a table schema to store student grades as a letter (A, B, C, D, or F) which column type would be the best choice?

- ENUM
- OTEXT
- VARCHAR
- LONGTEXT

Q8Management has requested that you build an employee database. You start with the employee table. What is the correct syntax?

A

```
CREATE TABLE employee (
employeeID char(10),
firstName varchar(50),
lastName varchar(50),
phone varchar(20),
address varchar(50),
PRIMARY KEY ON employeeID
);
```

B

```
CREATE TABLE employee (
employeeID char(10),
firstName varchar(50),
lastName varchar(50),
phone varchar(20),
address varchar(50),
PRIMARY KEY employeeID
);
```

C

```
CREATE TABLE IF EXISTS employee (
employeeID char(10),
```

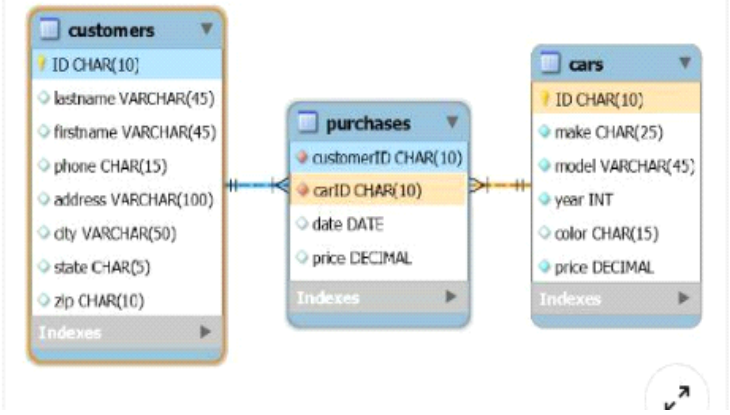
```
firstName varchar(50),
lastName varchar(50),
phone varchar(20),
address varchar(50),
PRIMARY KEY (employeeID)
);
```

D

```
CREATE TABLE IF NOT EXISTS employee (
employeeID char(10),
firstName varchar(50),
lastName varchar(50),
phone varchar(20),
address varchar(50),
PRIMARY KEY (employeeID)
);
```

Q9. You are working with the tables as shown in this diagram. You need to generate the list of customers who purchased certain car models. Which SQL clause do you use?

You are working with the tables as shown in this diagram. You need to generate the list of customers who purchased a car last year. Which clause would you use to define the data range?



- LIKE
- IN
- BETWEEN
- HAVING

Q10. Which query would NOT be used to administer a MySQL server?

- USE db
- SELECT column FROM tbl
- SHOW COLUMNS FROM tbl
- SHOW TABLES

Q11 MySQL server can operate in different SQL modes, depending on the value of the sql_mode system variable. Which mode changes syntax and behavior to conform more closely to standard SQL?

- TRADITIONAL
- ANSI
- MSSQL
- STRICT

Q12 Which MySQL command shows the structure of a table?

- INFO table;
- SHOW table;
- STRUCTURE table;
- DESCRIBE table;

Q13 . How do you select every row in a given table named "inventory"?

- SELECT all FROM inventory;
- FROM inventory SELECT all;
- FROM inventory SELECT *;
- SELECT * FROM inventory;

Q14 .

MySQL option files provide a way to specify commonly used options so that they need not be entered on the command line each time you run

a program. What is another name for the option files?

- variable settings
- configuration files
- help files
- default settings

Q15. You need to export the data in the customers table into a CSV file, with columns headers in the first row. Which clause do you add to your MySQL command?

- JOIN
- WITH HEADERS
- UNION
- WITH COLUMNS

Q16. . What is the requirement for using a subquery in the SELECT clause?

- the subquery must use an aggregate function.
- the subquery must refer to the same table as the main query.
- the subquery must return a single value.
- the subquery must return at least one value.

Q17

What mysql statement is used to check which accounts have specific privileges?

- show grants (displays the privileges and roles that are assigned to a MySQL user account or role)
- show privileges (shows the list of system privileges that the MySQL server supports)
- show access
- show user permissions

Q18 Which is the correct syntax of an extended insert statement?

- insert into cars (make, model, year) values ('Ford', 'Mustang', 2002) ('Mercedes', 'C', 2003)
- insert into cars (make, model, year) values ('Ford', 'Mustang', 2002) values ('Mercedes', 'C', 2003)
- insert into cars (make, model, year) extended ('Ford', 'Mustang', 2002), ('Mercedes', 'C', 2003)
- insert into cars (make, model, year) values ('Ford', 'Mustang', 2002), ('Mercedes', 'C', 2003)

Q19. You manage a database with a table "customers". You created a temporary table also called "customers" with which you are working for the duration of your session. You need to recreate the temporary table with different specs. Which command do you need to run first?

- CREATE TEMPORARY TABLE customers;
- DROP TEMP TABLE customers;
- DROP TABLE customers;
- DROP TEMPORARY TABLE customers;

Q20.

Management has requested that you build an employee database. You need to include each employee's current position and salary, as well as all prior positions and salaries with the company. You decide to use a one-to-many structure: an employee table with the main information such as name and address, and an employment table with position and salary history. You can use the employeeID field to connect them. What is employment.employeeID an example of?

- primary key;
- secondary key;
- foreign key;
- alternate key;

Query Writing:

- You are working with the table in this diagram. You want to use full-text search to find the customers who live on a street or a drive. What is the command to do that?

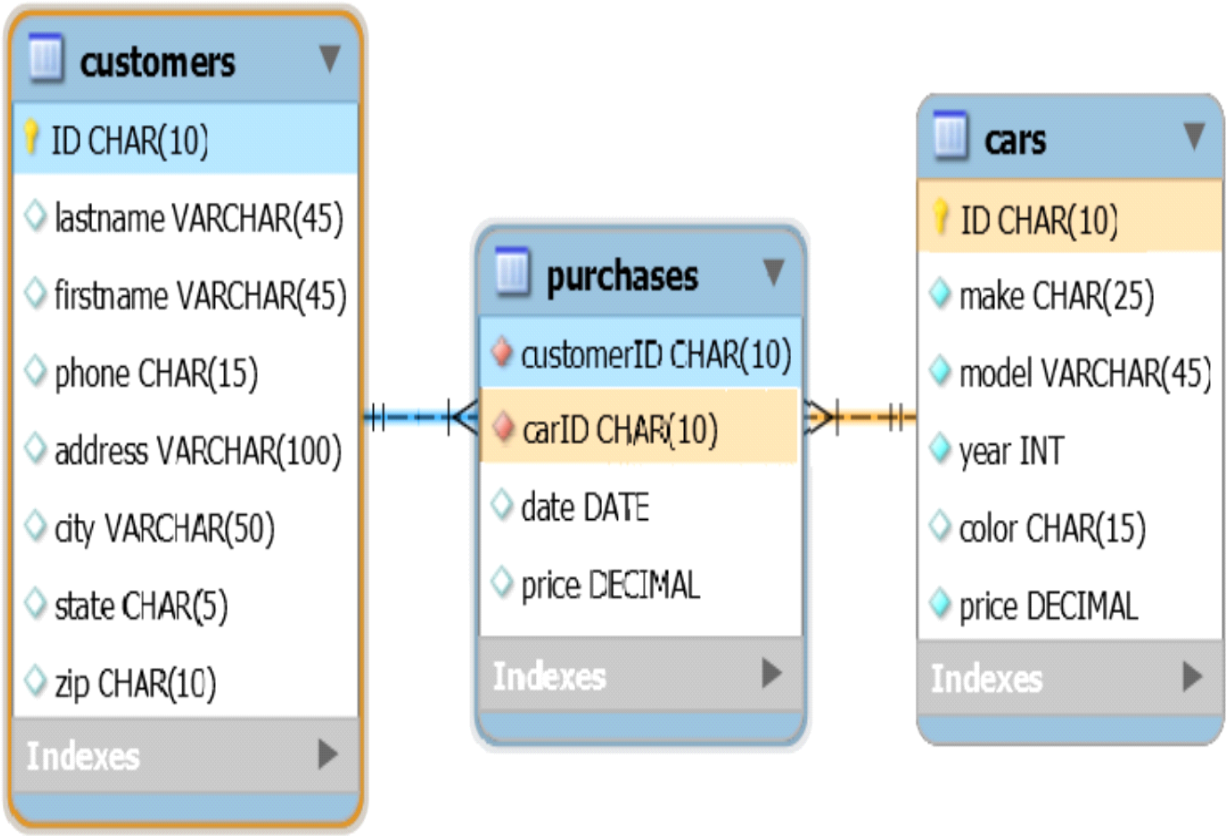
ID	lastname	firstname	phone	address	city	state	zip
A001	Smith	Bob	212-555-1212	1001 1st Street	New York	NY	10001
A002	Chang	John	213-555-5678	888 Rodeo Drive	Los Angeles	CA	90210
A003	Smith	Mary	999-999-9999	123 Main Street	Anytown	VA	12345
A004	Johnson	Jack	312-312-3120	1111 Chicago Avenue	Chicago	IL	60606
A005	Lopez	Linda	737-777-3333	123 Main Street	Austin	TX	73344

```
mysql> select * from clients where address like '%Street' or address like '%drive';
+------+----------+-----------+-------------+----------------+------------+-------+-------+
| ID   | lastname | firstname | phone       | address        | city       | state | zip   |
+------+----------+-----------+-------------+----------------+------------+-------+-------+
| A001 | Smith    | Bob       | 215-555-1212 | 1001 1st Street | New York   | NY    | 10001 |
| A002 | Chang    | John      | 213-555-5678 | 888 Rodeo Drive | Los Angeles | CA    | 90210 |
| A003 | Smith    | Mary      | 999-999-9999 | 123 Main Street | Anytown    | VA    | 12345 |
| A005 | Lopez    | Linda     | 737-777-3333 | 123 Main Street | Austin     | TX    | 73344 |
+------+----------+-----------+-------------+----------------+------------+-------+-------+
4 rows in set (0.00 sec)
```

- What is the valid way to create a database view in MySQL?

  CREATE VIEW v1 AS SELECT * FROM t1;

- You are working with the tables shown below. You need to generate the list of all cars, whether or not they had been sold. Which statement accomplishes that?



SELECT cars.*, purchases.date FROM cars LEFT JOIN purchases ON cars.ID = purchases.carID;

- What steps do you need to take to normalize the table from this

diagram?

Table name: superheroes

name	alias	power1	power2	power3
Superman	Clark Kent	Flight	X-Ray Vision	Super Strength
Wonder Woman	Diana Prince	Force Fields	Reflexes	Telepathy
Spider-man	Peter Parker	Walcrawling	Web-making	Enhanced Senses
Aquaman	Arthur Curry	Underwater Breathing	Enhanced Sight	Stamina
Hulk	Bruce Banner	Super Strength	Radiation Immunity	Invulnerability

Create another table to serve as a lookup for powers with fields for code and description, as well as a junction table with superhero names and power codes.

Questions:

Consider the Sailors-Boats-Reserves DB described below.

S (sid, sname, rating, age)

B (bid, bname, color)

R (sid, bid, date)

se

Sailors

Sid	Sname	Rating	Age
22	Dustin	7	45
29	Brutus	1	33
31	Lubber	8	55.5
32	Andy	8	25.5
58	Rusty	10	35
64	Horatio	7	35
71	Zorba	10	16
74	Horatio	9	40
85	Art	3	25.5
95	Bob	3	63.5

Boats

bid	bname	color
101	Interlake	blue
102	Interlake	red
103	Clipper	green
104	Marine	red

Reserves

sid	bid	day
22	101	1998-10-10
22	102	1998-10-10
22	103	1998-10-8
22	104	1998-10-7
31	102	1998-11-10
31	103	1998-11-6
31	104	1998-11-12
64	101	1998-9-5
64	102	1998-9-8
74	103	1998-9-8

Figure 1: Instances of Sailors, Boats and Reserves

Give a SQL expression for each of the following queries:

1. Find the colors of boats reserved by Dustin.

```
mysql> select color from Sailors,Boats,Reserves where Reserves.sid=Sailors.sid and Reserves.bid=Boats.bid and sname="Dustin";
+-------+
| color |
+-------+
| blue  |
| red   |
| green |
| red   |
+-------+
4 rows in set (0.00 sec)
```

2. Find all IDs of sailors who have a rating of at least 8 or have reserved boat 103.

```
mysql> (select sid from Sailors where rating>=8) union (select sid from Reserves where bid=103);
+------+
| sid  |
+------+
|   31 |
|   32 |
|   58 |
|   71 |
|   74 |
|   22 |
+------+
6 rows in set (0.00 sec)
```

3. Find the names of sailors who have not reserved a red boat.

```
mysql> select sname from Sailors where sid not in (select sid from Reserves inner join Boats on Reserves.bid = Boats.bid
 where color = "red");
+---------+
| sname   |
+---------+
| Brutus  |
| Andy    |
| Rusty   |
| Zorba   |
| Horatio |
| Art     |
| Bob     |
+---------+
7 rows in set (0.00 sec)
```

4. Find the IDs of sailors with age over 20 who have not reserved a red boat.

```
mysql> select sid from Sailors where sid not in (select sid from Reserves inner join Boats on Reserves.bid = Boats.bid w
here color = "red") and age>20;
+------+
| sid  |
+------+
|   29 |
|   32 |
|   58 |
|   74 |
|   85 |
|   95 |
+------+
6 rows in set (0.00 sec)
```

5. Find the names of sailors who have reserved at least two boats.

```
mysql> select sname from reserves inner join Sailors on Reserves.sid=Sailors.sid group by Reserves.sid having count(Reserves.sid)
>=2;
+---------+
| sname   |
+---------+
| Dustin  |
| Lubber  |
| Horatio |
+---------+
3 rows in set (0.00 sec)
```

6. Find the names of sailors who have reserved all boats.

```
mysql> select sname from reserves inner join Sailors on Reserves.sid=Sailors.sid group by Reserves.sid having count(Reserves.sid)
=(select count(*) from boats);
+--------+
| sname  |
+--------+
| Dustin |
+--------+
1 row in set (0.00 sec)
```

7. Find the names of sailors who have reserved all boats called Interlake.

```
mysql> select sname from Sailors where sid in (select sid from Reserves inner join Boats on Reserves.bid=Boats.bid where
 bname="Interlake");
+---------+
| sname   |
+---------+
| Dustin  |
| Lubber  |
| Horatio |
+---------+
3 rows in set (0.00 sec)
```

8. Find the IDs of sailors whose rating is better than some sailor called Andy.

```
mysql> select sid from Sailors where rating>(select min(rating) from Sailors where sname="Andy");
+------+
| sid  |
+------+
|   58 |
|   71 |
|   74 |
+------+
```

9. Find the IDs of sailors whose rating is better than every sailor called Andy.

```
mysql> select sid from Sailors where rating>all(select rating from Sailors s where s.sname='Andy');
+------+
| sid  |
+------+
|   58 |
|   71 |
|   74 |
+------+
3 rows in set (0.00 sec)
```

10. Find the IDs of sailors with the highest rating.

```
mysql> select sid from Sailors where rating>=all(select rating from Sailors);
+------+
| sid  |
+------+
|   58 |
|   71 |
+------+
2 rows in set (0.00 sec)
```

11. Find the name and age of the oldest sailor

```
mysql> select s1.sname,s1.age from Sailors s1 where s1.age>=all(select age from Sailors);
+-------+------+
| sname | age  |
+-------+------+
| Bob   | 63.5 |
+-------+------+
1 row in set (0.00 sec)
```