

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

ANSWER: 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

ANSWER: mysqldump

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
- column level
- function level

ANSWER: COLUMN Level

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

- --options
- ?
- --help
- -h

ANSWER: --help

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
- PATH
- MYSQL\_HOME

ANSWER: PATH

6. How can you create a stored procedure in MySQL?

A. 1 CREATE PROCEDURE P () AS

2 BEGIN

3 END;

B. 1 CREATE PROCEDURE P ()

2 BEGIN

3 END

C. 1 CREATE PROC P

2 BEGIN

3 END;

D. 1 CREATE PROC P AS O

2 BEGIN

3 END;

ANSWER: B

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

ANSWER: ENUM

Q8. Management 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.

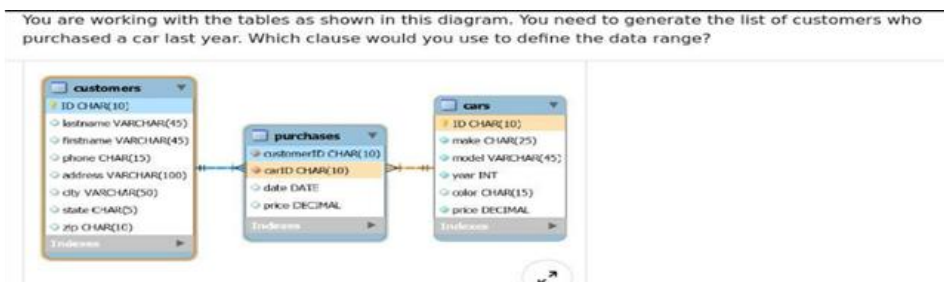
```
CREATE TABLE IF EXISTS employee (  
    employeeID char(10),  
    firstName varchar(50),  
    lastName varchar(50),  
    phone varchar(20),  
    address varchar(50),  
    PRIMARY KEY (employeeID)  
);
```

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)  
);
```

ANSWER: D

Q9. 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 SQL clause do you use?



- LIKE
- IN
- BETWEEN
- HAVING

ANSWER: IN

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

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

ANSWER: SELECT column FROM tbl

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

ANSWER: ANSI

Q12 Which MySQL command shows the structure of a table?

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

ANSWER: 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;

ANSWER: 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

ANSWER: configuration files

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

ANSWER: UNION

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.

ANSWER: the subquery must return a single 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

ANSWER: show grants (displays the privileges and roles that are assigned to a MySQL user account or role)

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)

ANSWER: 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;

ANSWER: 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;

ANSWER: foreign key;

Query Writing :

1. 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 |

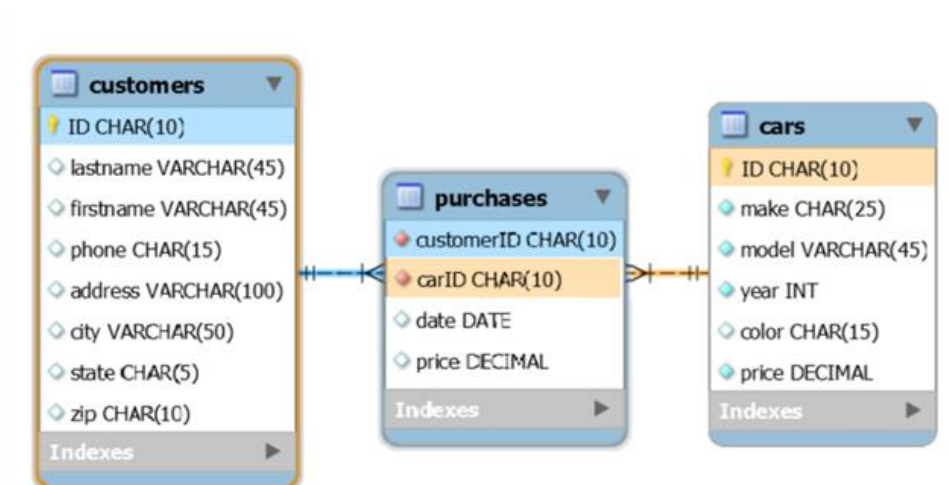
ANSWER:

`select * from customers where address like "%street%" or address like "%drive%";`

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

ANSWER: `CREATE VIEW v_name AS SELECT * FROM t_name;`

3. 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?





ANSWER:

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

4. 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 |

ANSWER:

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

5.

Questions:

Consider the Sailors-Boats-Reserves DB described in below.

S (sid, sname, rating, age)

B (bid, bname, color)

R (sid, bid, date)

| Sailors |         |        |      |     |           |       | Reserves |     |            |
|---------|---------|--------|------|-----|-----------|-------|----------|-----|------------|
| Sid     | Sname   | Rating | Age  | bid | bname     | color | sid      | bid | day        |
| 22      | Dustin  | 7      | 45   | 101 | Interlake | blue  | 22       | 101 | 1998-10-10 |
| 29      | Brutus  | 1      | 33   | 102 | Interlake | red   | 22       | 102 | 1998-10-10 |
| 31      | Lubber  | 8      | 55.5 | 103 | Clipper   | green | 22       | 103 | 1998-10-8  |
| 32      | Andy    | 8      | 25.5 | 104 | Marine    | red   | 22       | 104 | 1998-10-7  |
| 58      | Rusty   | 10     | 35   |     |           |       | 31       | 102 | 1998-11-10 |
| 64      | Horatio | 7      | 35   |     |           |       | 31       | 103 | 1998-11-6  |
| 71      | Zorba   | 10     | 16   |     |           |       | 31       | 104 | 1998-11-12 |
| 74      | Horatio | 9      | 40   |     |           |       | 64       | 101 | 1998-9-5   |
| 85      | Art     | 3      | 25.5 |     |           |       | 64       | 102 | 1998-9-8   |
| 95      | Bob     | 3      | 63.5 |     |           |       | 74       | 103 | 1998-9-8   |

Figure 1: Instances of Sailors, Boats and Reserves

Give a SQL expression for each of the following queries:

- Find the colors of boats reserved by Dustin.
- Find all IDs of sailors who have a rating of at least 8 or have reserved boat 103.
- Find the names of sailors who have not reserved a red boat.
- Find the IDs of sailors with age over 20 who have not reserved a red boat.
- Find the names of sailors who have reserved at least two boats.
- Find the names of sailors who have reserved all boats.
- Find the names of sailors who have reserved all boats called Interlake.
- Find the IDs of sailors whose rating is better than some sailor called Andy.
- Find the IDs of sailors whose rating is better than every sailor called Andy.
- Find the IDs of sailors with the highest rating.
- Find the name and age of the oldest sailor

ANSWER:

- SELECT color FROM s, b, r WHERE r.sid=s.sid AND r.bid=b.bid AND sname='Dustin'
- (SELECT sid FROM s WHERE rating>=8) UNION (SELECT sid FROM r WHERE bid=103)

3. SELECT S.sname  
FROM Sailors S, Boats B, Reserves R  
WHERE B.color <>'red' AND B.bid=R.bid AND S.sid = R.sid

4. SELECT S.sname  
FROM Sailors S, Reserves R, Boats B  
WHERE B.color != 'red' and B.bid = R.bid and S.sid = R.sid and S.sid > 20

5. SELECT S.sname  
FROM Sailors S, Reserves R, Sailors S2, Reserves R2  
WHERE S.sid = R.sid  
and S2.sid = R2.sid  
and S.sid = S2.sid  
and R.bid != R2.bid

6. SELECT sname FROM s WHERE NOT EXISTS ( SELECT \* FROM b WHERE NOT EXISTS ( SELECT \* FROM r  
WHERE r.sid=s.sid AND r.bid=b.bid))

7. select \* from sailors  
where sid in(select sid from reserves  
inner join boats on reserves.bid = boats.bid  
where boats.bname='Interlake')

8. SELECT S.sid  
FROM Sailors S  
WHERE S.rating > ANY ( SELECT S2.rating FROM Sailors S2 WHERE S2.sname = 'Andy' )

9. SELECT sid FROM s WHERE rating > all ( SELECT rating FROM s s2 WHERE s2.sname='Andy')

10. SELECT S.sid  
FROM Sailors S  
WHERE S.rating>=ALL(SELECT S2.rating  
FROM Sailors S2 )

11. SELECT S.sname, MAX (S.age) FROM Sailors S