MySQL Interview Questions & Answers

Palle Technologies

1. what is primary key?
   - primary key gives uniqueness to the tables rows
   - only one primary key is allowed per table
   - primary key will not allow null values and duplicate values
2. What is the difference between primary key and unique key?

Primary key	Unique key
Only one primary key is allowed per table.	any number of unique keys are allowed per table
Primary key will not allow duplicates and null values	unique constraint will not allow duplicate values and allows one null value

3. what is foreign key?

- using foreign key constraint we can link 2 or more tables.
- using foreign key we can achieve referential integrity

Syntax

```
Create   table  table_name
(
Col1  datatype ,
Col2  datatype,
foreign key(col1)  references table_name(column_name)
)
```

4. show one example for using foreign key?

Independent table

```
create table state
(sid int primary key,
 statename varchar(40)
)
```

dependent table

```
create table student
(sid int,
 name varchar(40),
 stateid int,
foreign key(stateid) references state(sid))
```

5. what is the diff b/w char and varchar?

char is a fixed size data type & varchar is varying size data type. wastage of memory will be more in char type.

6. what is normalization? and what are the benefits?

normalization is used for eliminating the data redundancy. normalization will eliminate the insert, update anomalies.

7. is it possible to store null in a foreign key column?

Yes.

8. Is null allowed in primary key column?

   no.

9. how many primary keys we can give for a table?

   only one.

10. how many unique keys allowed for a table?

    any number.

11. How many foreign keys allowed per table?

    we can create any number of foreign keys per table.

12. what are the diff between drop and delete?

drop	delete
1. drop table will delete the table (along with data)	1. a delete statement will delete only data, but table will be retained.
2. drop is a DDL statement	2. delete is a DML statement
eg: drop table employee;	eg: delete from employee where eno = 1;

13. what are the diff between delete and truncate?

delete	truncate
1. a delete statement will delete only data, but table will be retained.	1. a truncate statement will delete only data, but table will be retained. (just like delete)
2. delete is a DML statement	2. truncate is a DDL statement
3. we can give where clause in delete. Delete operation is slower.	3. we can't give where clauses in truncate. Truncate is faster that delete.
4. we can roll back the delete operation	4. We can't roll back the truncate operation.

14. what is the purpose of joins in sql?

- joins are useful for getting data from 2 or more tables into a result set.

15. what are the different types of joins supported in sql server?

1.inner join

2.outer join

1)Left Outer Join

2)Right Outer Join

3.Self Join

4.Cross Join

16. what is inner join?

Inner join is used for getting matched data from 2 or more tables based on the condition.

17. what is LOJ?

In left outer join data from left table is completely included into the result-set but only matched data from right side table is included. In place of right table data null's are included where there is no match.

18. What is ROJ?

In right outer join data from right table is completely included into the result-set but only matched data from left side table is included. In place of left table data null's are included where there is no match.

19. What is self join?

1.Joining a table to itself is called as self join.

2.we must use inner join keyword for self join.

20. what is cross join?

cross join will join each row present in a table with all rows present in other table. in simple words it will produce Cartesian product of all rows present in both the tables.

21. what is the purpose of having clause?

using having clause we can filter the records which are produced by group by clause.

22. what is the purpose of order by clause?

Ans : order by clause specifies that a SQL SELECT statement returns rows with sorted order, by the values of given column.

23. what is the purpose of group by clause?

Ans : using group by clause we can group data based on one or more column.

Queries samples

1. write query to create employee table with eno, ename, esal?

Ans :

```
Create    table    employee
(
eno     int   primary key,
ename     varchar(50),
salary     int,
);
```

2. write query to insert below employee details into employee table?

1, ramesh, 30000
2, mahesh, 40000

Ans : insert into employee values(1,'ramesh',30000),(2,'mahesh',40000);

3. write query to select all employees who's name starts with a or A?

Ans : select * from employee where ename like 'a%' or 'A%';

4. write query to find number of rows in a table?

Ans : select count(*) from employee;

5. write query to select and display first highest salary from employee table.

Ans : select max(salary) from employee ;

Or

select salary from employee order by salary desc limit 1

6. write query to display employee details of second highest salary from employee table?

Ans : **select salary from employee e1 where 1=(select count(*) from employee e2 where e2.salary>e1.salary)**

Write one example for outer joins

Take one master table and child table.

a. perform left outer join
b. perform right outer join

country c

id	name	NAid
1	USA	4
2	India	1
3	Australia	5

animal a

Aid	Aname
1	Tiger
2	Bear
3	Tortoise
4	BaldEagle
5	kangaroo

select c.name, a.aname from country c left join animal a on c.NAid=a.Aid

select c.name, a.aname from country c right join animal a on c.NAid=a.Aid

Write one example for inner joins

Patient1 p

pid	name	bg_id	age
1	madhav	1	24
2	hari	2	27
3	kiran	1	21
4	raj	3	29

Bg b

id	bg
1	o+ve
2	o-ve
3	b+ve
4	b-ve
5	ab-ve

```
select p.name,b.bg,p.age from patient1 p  join bg b on
p.bg_id=b.id
```

Write one example for self join

Emp_mgr

eid	name	mgr_id	exp
1	ravi	2	9
2	suresh	4	6
3	kiran	NULL	16
4	mahesh	3	26
5	hari	1	3

Emp_mgr e2

eid	name	mgr_id	exp
1	ravi	2	9
2	suresh	4	6
3	kiran	NULL	16
4	mahesh	3	26
5	hari	1	3

```
select e1.name as 'employee',e2.name as 'manager' from emp_mgr e1
join emp_mgr e2 on e1.mgr_id=e2.eid
```