SQL Interview Questions and Answers

Table Name : Employee

Employee_id	First_name	Last_name	Salary	Joining_date	Department
1	John	Abraham	1000000	01-JAN-13 12.00.00 AM	Banking
2	Michael	Clarke	800000	01-JAN-13 12.00.00 AM	Insurance
3	Roy	Thomas	700000	01-FEB-13 12.00.00 AM	Banking
4	Tom	Jose	600000	01-FEB-13 12.00.00 AM	Insurance
5	Jerry	Pinto	650000	01-FEB-13 12.00.00 AM	Insurance
6	Philip	Mathew	750000	01-JAN-13 12.00.00 AM	Services
7	TestName1	123	650000	01-JAN-13 12.00.00 AM	Services
8	TestName2	Lname%	600000	01-FEB-13 12.00.00 AM	Insurance

Table Name : Incentives

Employee_ref_id	Incentive_date	Incentive_amount
1	01-FEB-13	5000
2	01-FEB-13	3000
3	01-FEB-13	4000
1	01-JAN-13	4500
2	01-JAN-13	3500

SQL Queries Interview Questions and Answers on "SQL Select"

1. Get all employee details from the employee table

Select * from employee

2. Get First_Name,Last_Name from employee table

Select first_name, Last_Name from employee

3. Get First_Name from employee table using alias name “Employee Name”

Select first_name Employee Name from employee

4. Get First_Name from employee table in upper case

Select upper(FIRST_NAME) from EMPLOYEE

5. Get First_Name from employee table in lower case

Select lower(FIRST_NAME) from EMPLOYEE
6. Get unique DEPARTMENT from employee table

select distinct DEPARTMENT from EMPLOYEE

Don't Miss - SQL and Database theory Interview Questions

7. Select first 3 characters of FIRST_NAME from EMPLOYEE

Oracle Equivalent of SQL Server SUBSTRING is SUBSTR, Query : select substr(FIRST_NAME,0,3) from employee

SQL Server Equivalent of Oracle SUBSTR is SUBSTRING, Query : select substring(FIRST_NAME,0,3) from employee

MySQL Server Equivalent of Oracle SUBSTR is SUBSTRING. In MySQL start position is 1, Query : select substring(FIRST_NAME,1,3) from employee

8. Get FIRST_NAME from employee table after removing white spaces from right side

select RTRIM(FIRST_NAME) from employee

MySQL Server Equivalent of Oracle INSTR is LOCATE, Query: Select LOCATE('o',FIRST_NAME) from employee where first_name='John'

9. Get position of 'o' in name 'John' from employee table

Oracle Equivalent of SQL Server CHARINDEX is INSTR, Query : Select instr(FIRST_NAME,'o') from employee where first_name='John'

SQL Server Equivalent of Oracle INSTR is CHARINDEX, Query: Select CHARINDEX('o',FIRST_NAME,0) from employee where first_name='John'

10. Get FIRST_NAME from employee table after removing white spaces from left side

select LTRIM(FIRST_NAME) from employee

11. Get length of FIRST_NAME from employee table

Oracle,MYSQL Equivalent of SQL Server Len is Length , Query :select length(FIRST_NAME) from employee

SQL Server Equivalent of Oracle,MYSQL Length is Len, Query :select len(FIRST_NAME) from employee

12. Get First_Name from employee table after replacing 'o' with '$'

select REPLACE(FIRST_NAME,'o','$') from employee

13. Get First_Name and Last_Name as single column from employee table separated by a '_'

Oracle Equivalent of MySQL concat is '||', Query : Select FIRST_NAME|| '_' ||LAST_NAME from EMPLOYEE

SQL Server Equivalent of MySQL concat is '+', Query : Select FIRST_NAME + '_' +LAST_NAME from EMPLOYEE

MySQL Equivalent of Oracle '||' is concat, Query : Select concat(FIRST_NAME,'_',LAST_NAME) from EMPLOYEE

14. Get FIRST_NAME ,Joining year,Joining Month and Joining Date from employee table

SQL Queries in Oracle, Select FIRST_NAME, to_char(joining_date,'YYYY') JoinYear , to_char(joining_date,'Mon'), to_char(joining_date,'dd') from EMPLOYEE

SQL Queries in SQL Server, select SUBSTRING (convert(varchar,joining_date,103),7,4) , SUBSTRING (convert(varchar,joining_date,100),1,3) , SUBSTRING (convert(varchar,joining_date,100),5,2) from EMPLOYEE

SQL Queries in MySQL, select year(joining_date),month(joining_date), DAY(joining_date) from EMPLOYEE

"SQL Order By" Interview Questions

15. Get all employee details from the employee table order by First_Name Ascending

```
Select * from employee order by FIRST_NAME asc
```

16. Get all employee details from the employee table order by First_Name descending

```
Select * from employee order by FIRST_NAME desc
```

17. Get all employee details from the employee table order by First_Name Ascending and Salary descending

```
Select * from employee order by FIRST_NAME asc,SALARY desc
```

"SQL Where Condition" Interview Questions

18. Get employee details from employee table whose employee name is “John”

```
Select * from EMPLOYEE where FIRST_NAME='John'
```

19. Get employee details from employee table whose employee name are “John” and “Roy”

```
Select * from EMPLOYEE where FIRST_NAME in ('John','Roy')
```

20. Get employee details from employee table whose employee name are not “John” and “Roy”

```
Select * from EMPLOYEE where FIRST_NAME not in ('John','Roy')
```

"SQL Wild Card Search" Interview Questions

21. Get employee details from employee table whose first name starts with 'J'

```
Select * from EMPLOYEE where FIRST_NAME like 'J%'
```

22. Get employee details from employee table whose first name contains 'o'

```
Select * from EMPLOYEE where FIRST_NAME like '%o%'
```

23. Get employee details from employee table whose first name ends with 'n'

Select * from EMPLOYEE where FIRST_NAME like '%n'

"SQL Pattern Matching" Interview Questions

24. Get employee details from employee table whose first name ends with 'n' and name contains 4 letters

Select * from EMPLOYEE where FIRST_NAME like '___n' (Underscores)

25. Get employee details from employee table whose first name starts with 'J' and name contains 4 letters

Select * from EMPLOYEE where FIRST_NAME like 'J___' (Underscores)

26. Get employee details from employee table whose Salary greater than 600000

Select * from EMPLOYEE where Salary >600000

27. Get employee details from employee table whose Salary less than 800000

Select * from EMPLOYEE where Salary <800000

28. Get employee details from employee table whose Salary between 500000 and 800000

Select * from EMPLOYEE where Salary between 500000 and 800000

29. Get employee details from employee table whose name is 'John' and 'Michael'

Select * from EMPLOYEE where FIRST_NAME in ('John','Michael')

Interview Questions on "SQL DATE Functions"

30. Get employee details from employee table whose joining year is “2013”

SQL Queries in Oracle, Select * from EMPLOYEE where to_char(joining_date,'YYYY')='2013'

SQL Queries in SQL Server, Select * from EMPLOYEE where SUBSTRING(convert(varchar,joining_date,103),7,4)='2013'

SQL Queries in MySQL, Select * from EMPLOYEE where year(joining_date)='2013'

31. Get employee details from employee table whose joining month is “January”

SQL Queries in Oracle, Select * from EMPLOYEE where to_char(joining_date,'MM')='01' or Select * from EMPLOYEE where to_char(joining_date,'Mon')='Jan'

SQL Queries in SQL Server, Select * from EMPLOYEE where SUBSTRING(convert(varchar,joining_date,100),1,3)='Jan'

SQL Queries in MySQL, Select * from EMPLOYEE where month(joining_date)='01'

32. Get employee details from employee table who joined before January 1st 2013

SQL Queries in Oracle, Select * from EMPLOYEE where JOINING_DATE <to_date('01/01/2013','dd/mm/yyyy')

SQL Queries in SQL Server (Format - “MM/DD/YYYY”), Select * from EMPLOYEE where joining_date <'01/01/2013'

SQL Queries in MySQL (Format - “YYYY-DD-MM”), Select * from EMPLOYEE where joining_date <'2013-01-01'

33. Get employee details from employee table who joined after January 31st

SQL Queries in Oracle, Select * from EMPLOYEE where JOINING_DATE >to_date('31/01/2013','dd/mm/yyyy')

SQL Queries in SQL Server and MySQL (Format - “MM/DD/YYYY”), Select * from EMPLOYEE where joining_date >'01/31/2013'

SQL Queries in MySQL (Format - “YYYY-DD-MM”), Select * from EMPLOYEE where joining_date >'2013-01-31'

35. Get Joining Date and Time from employee table

SQL Queries in Oracle, select to_char(JOINING_DATE,'dd/mm/yyyy hh:mi:ss') from EMPLOYEE

SQL Queries in SQL Server, Select convert(varchar(19),joining_date,121) from EMPLOYEE

SQL Queries in MySQL, Select CONVERT(DATE_FORMAT(joining_date,'%Y-%m-%d-%H: %i:00'),DATETIME) from EMPLOYEE

36. Get Joining Date,Time including milliseconds from employee table

SQL Queries in Oracle, select to_char(JOINING_DATE,'dd/mm/yyyy HH:mi:ss.ff') from EMPLOYEE . Column Data Type should be “TimeStamp”

SQL Queries in SQL Server, select convert(varchar,joining_date,121) from EMPLOYEE

SQL Queries in MySQL, Select MICROSECOND(joining_date) from EMPLOYEE

37. Get difference between JOINING_DATE and INCENTIVE_DATE from employee and incentives table

Select FIRST_NAME,INCENTIVE_DATE - JOINING_DATE from employee a inner join incentives B on A.EMPLOYEE_ID=B.EMPLOYEE_REF_ID

38. Get database date

SQL Queries in Oracle, select sysdate from dual

SQL Queries in SQL Server, select getdate()

SQL Query in MySQL, select now()

"SQL Escape Characters" Interview Questions

39. Get names of employees from employee table who has '%' in Last_Name. Tip : Escape character for special characters in a query.

SQL Queries in Oracle, Select FIRST_NAME from employee where Last_Name like '%?%%'

SQL Queries in SQL Server, Select FIRST_NAME from employee where Last_Name like '%[%]%'

SQL Queries in MySQL, Select FIRST_NAME from employee where Last_Name like '%\%%'

40. Get Last Name from employee table after replacing special character with white space

SQL Queries in Oracle, Select translate(LAST_NAME,'%',' ') from employee

SQL Queries in SQL Server and MySQL, Select REPLACE(LAST_NAME,'%',' ') from employee

"SQL Group By Query" Interview Questions and Answers
41. Get department,total salary with respect to a department from employee table.

Select DEPARTMENT,sum(SALARY) Total_Salary from employee group by department

42. Get department,total salary with respect to a department from employee table order by total salary descending

Select DEPARTMENT,sum(SALARY) Total_Salary from employee group by DEPARTMENT order by Total_Salary descending

SQL Queries Interview Questions and Answers on "SQL Mathematical Operations using Group By"

43. Get department,no of employees in a department,total salary with respect to a department from employee table order by total salary descending

Select DEPARTMENT,count(FIRST_NAME),sum(SALARY) Total_Salary from employee group by DEPARTMENT order by Total_Salary descending

44. Get department wise average salary from employee table order by salary ascending

select DEPARTMENT,avg(SALARY) AvgSalary from employee group by DEPARTMENT order by AvgSalary asc

45. Get department wise maximum salary from employee table order by salary ascending

select DEPARTMENT,max(SALARY) MaxSalary from employee group by DEPARTMENT order by MaxSalary asc

46. Get department wise minimum salary from employee table order by salary ascending

select DEPARTMENT,min(SALARY) MinSalary from employee group by DEPARTMENT order by MinSalary asc

47. Select no of employees joined with respect to year and month from employee table

SQL Queries in Oracle, select to_char (JOINING_DATE,'YYYY') Join_Year,to_char (JOINING_DATE,'MM') Join_Month,count(*) Total_Emp from employee group by to_char (JOINING_DATE,'YYYY'),to_char(JOINING_DATE,'MM')

SQL Queries in SQL Server, select datepart (YYYY,JOINING_DATE) Join_Year,datepart (MM,JOINING_DATE) Join_Month,count(*) Total_Emp from employee group by datepart(YYYY,JOINING_DATE), datepart(MM,JOINING_DATE)

SQL Queries in MySQL, select year (JOINING_DATE) Join_Year,month (JOINING_DATE) Join_Month,count(*) Total_Emp from employee group by year(JOINING_DATE), month(JOINING_DATE)

48. Select department,total salary with respect to a department from employee table where total salary greater than 800000 order by Total_Salary descending

Select DEPARTMENT,sum(SALARY) Total_Salary from employee group by DEPARTMENT having sum(SALARY) >800000 order by Total_Salary desc

Advanced SQL Queries Interview Questions and Answers

49. Select employee details from employee table if data exists in incentive table ?

select * from EMPLOYEE where exists (select * from INCENTIVES)

Explanation : Here "exists" statement helps us to do the job of If statement. Main query will get executed if the sub query returns at least one row. So we can consider the sub query as "If condition" and the main query as "code block" inside the If condition. We can use any SQL commands (Joins, Group By , having etc) in sub query. This command will be useful in queries which need to detect an event and do some activity.
50. How to fetch data that are common in two query results ?

select * from EMPLOYEE where EMPLOYEE_ID INTERSECT select * from EMPLOYEE where EMPLOYEE_ID < 4

Explanation : Here "INTERSECT" command is used to fetch data that are common in 2 queries. In this example, we had taken EMPLOYEE table in both the queries.We can apply INTERSECT command on different tables. The result of the above query will return employee details of "ROY" because, employee id of ROY is 3, and both query results have the information about ROY.
51. Get Employee ID's of those employees who didn't receive incentives without using sub query ?

select EMPLOYEE_ID from EMPLOYEE
MINUS
select EMPLOYEE_REF_ID from INCENTIVES

Explanation : To filter out certain information we use MINUS command. What MINUS Command odes is that, it returns all the results from the first query, that are not part of the second query. In our example, first three employees received the incentives. So query will return employee id's 4 to 8.

52. Select 20 % of salary from John , 10% of Salary for Roy and for other 15 % of salary from employee table

SELECT FIRST_NAME, CASE FIRST_NAME WHEN 'John' THEN SALARY * .2 WHEN 'Roy' THEN SALARY * .10 ELSE SALARY * .15 END "Deduced_Amount" FROM EMPLOYEE

Explanation : Here, we are using "SQL CASE" statement to achieve the desired results. After case statement, we had to specify the column on which filtering is applied. In our case it is "FIRST_NAME". And in then condition, specify the name of filter like John, Roy etc. To handle conditions outside our filter, use else block where every one other than John and Roy enters.

53. Select Banking as 'Bank Dept', Insurance as 'Insurance Dept' and Services as 'Services Dept' from employee table

SQL Queries in Oracle, SELECT distinct DECODE (DEPARTMENT, 'Banking', 'Bank Dept', 'Insurance', 'Insurance Dept', 'Services', 'Services Dept') FROM EMPLOYEE
SQL Queries in SQL Server and MySQL, SELECT case DEPARTMENT when 'Banking' then 'Bank Dept' when 'Insurance' then 'Insurance Dept' when 'Services' then 'Services Dept' end FROM EMPLOYEE

Explanation : Here "DECODE" keyword is used to specify the alias name. In oracle we had specify, Column Name followed by Actual Name and Alias Name as arguments. In SQL Server and MySQL, we can use the earlier switch case statements for alias names.

54. Delete employee data from employee table who got incentives in incentive table

delete from EMPLOYEE where EMPLOYEE_ID in (select EMPLOYEE_REF_ID from INCENTIVES)

Explanation : Trick about this question is that we can't delete data from a table based on some condition in another table by joining them. Here to delete multiple entries from EMPLOYEE table, we need to use Subquery. Entries will get deleted based on the result of Subquery.

55. Insert into employee table Last Name with " ' " (Single Quote - Special Character)

Tip - Use another single quote before special character
Insert into employee (LAST_NAME) values ('Test'')

56. Select Last Name from employee table which contain only numbers

Select * from EMPLOYEE where lower(LAST_NAME)=upper(LAST_NAME)

Explanation : In order to achieve the desired result, we use "ASCII" property of the database. If we get results for a column using Lower and Upper commands, ASCII of both results will be same for numbers. If there is any alphabets in the column, results will differ.

57. Write a query to rank employees based on their incentives for a month

select FIRST_NAME,INCENTIVE_AMOUNT,DENSE_RANK() OVER (PARTITION BY INCENTIVE_DATE ORDER BY INCENTIVE_AMOUNT DESC) AS Rank from EMPLOYEE a, INCENTIVES b where a.EMPLOYEE_ID=b.EMPLOYEE_REF_ID

Explanation : In order to rank employees based on their rank for a month, "DENSE_RANK" keyword is used. Here partition by keyword helps us to sort the column with which filtering is done. Rank is provided to the column specified in the order by statement. The above query ranks employees with respect to their incentives for a given month.

58. Update incentive table where employee name is 'John'

update INCENTIVES set INCENTIVE_AMOUNT='9000' where EMPLOYEE_REF_ID=(select EMPLOYEE_ID from EMPLOYEE where FIRST_NAME='John')

Explanation : We need to join Employee and Incentive Table for updating the incentive amount. But for update statement joining query wont work. We need to use sub query to update the data in the incentive table. SQL Query is as shown below.

"SQL Join" Interview Questions

59. Select first_name, incentive amount from employee and incentives table for those employees who have incentives

Select FIRST_NAME,INCENTIVE_AMOUNT from employee a inner join incentives B on A.EMPLOYEE_ID=B.EMPLOYEE_REF_ID

60. Select first_name, incentive amount from employee and incentives table for those employees who have incentives and incentive amount greater than 3000

Select FIRST_NAME,INCENTIVE_AMOUNT from employee a inner join incentives B on A.EMPLOYEE_ID=B.EMPLOYEE_REF_ID and INCENTIVE_AMOUNT >3000

61. Select first_name, incentive amount from employee and incentives table for all employes even if they didn't get incentives

Select FIRST_NAME,INCENTIVE_AMOUNT from employee a left join incentives B on A.EMPLOYEE_ID=B.EMPLOYEE_REF_ID

62. Select first_name, incentive amount from employee and incentives table for all employees even if they didn't get incentives and set incentive amount as 0 for those employees who didn't get incentives.

SQL Queries in Oracle, Select FIRST_NAME,nvl(INCENTIVE_AMOUNT,0) from employee a left join incentives B on A.EMPLOYEE_ID=B.EMPLOYEE_REF_ID

SQL Queries in SQL Server, Select FIRST_NAME, ISNULL(INCENTIVE_AMOUNT,0) from employee a left join incentives B on A.EMPLOYEE_ID=B.EMPLOYEE_REF_ID

SQL Queries in MySQL, Select FIRST_NAME, IFNULL(INCENTIVE_AMOUNT,0) from employee a left join incentives B on A.EMPLOYEE_ID=B.EMPLOYEE_REF_ID

63. Select first_name, incentive amount from employee and incentives table for all employees who got incentives using left join

SQL Queries in Oracle, Select FIRST_NAME,nvl(INCENTIVE_AMOUNT,0) from employee a right join incentives B on A.EMPLOYEE_ID=B.EMPLOYEE_REF_ID

SQL Queries in SQL Server, Select FIRST_NAME, isnull(INCENTIVE_AMOUNT,0) from employee a right join incentives B on A.EMPLOYEE_ID=B.EMPLOYEE_REF_ID

SQL Queries in MySQL, Select FIRST_NAME, IFNULL(INCENTIVE_AMOUNT,0) from employee a right join incentives B on A.EMPLOYEE_ID=B.EMPLOYEE_REF_ID

64. Select max incentive with respect to employee from employee and incentives table using sub query

SQL Queries in Oracle, select DEPARTMENT,(select nvl(max(INCENTIVE_AMOUNT),0) from INCENTIVES where EMPLOYEE_REF_ID=EMPLOYEE_ID) Max_incentive from EMPLOYEE

SQL Queries in SQL Server, select DEPARTMENT,(select ISNULL(max(INCENTIVE_AMOUNT),0) from INCENTIVES where EMPLOYEE_REF_ID=EMPLOYEE_ID) Max_incentive from EMPLOYEE

SQL Queries in SQL Server, select DEPARTMENT,(select IFNULL (max(INCENTIVE_AMOUNT),0) from INCENTIVES where EMPLOYEE_REF_ID=EMPLOYEE_ID) Max_incentive from EMPLOYEE

"Top N Salary" SQL Interview Questions and Answers

65. Select TOP 2 salary from employee table

SQL Queries in Oracle, select * from (select * from employee order by SALARY desc) where rownum <3

SQL Queries in SQL Server, select top 2 * from employee order by salary desc

SQL Queries in MySQL, select * from employee order by salary desc limit 2

66. Select TOP N salary from employee table

SQL Queries in Oracle, select * from (select * from employee order by SALARY desc) where rownum <N + 1

SQL Queries in SQL Server, select top N * from employee

SQL Queries in MySQL, select * from employee order by salary desc limit N

67. Select 2nd Highest salary from employee table

SQL Queries in Oracle, select min(salary) from (select * from (select * from employee order by SALARY desc) where rownum <3)

SQL Queries in SQL Server, select min(SALARY) from (select top 2 * from employee) a

SQL Queries in MySQL, select min(SALARY) from (select * from employee order by salary desc limit 2) a

68. Select Nth Highest salary from employee table

SQL Queries in Oracle, select min(salary) from (select * from (select * from employee order by SALARY desc) where rownum <N + 1)

SQL Queries in SQL Server, select min(SALARY) from (select top N * from employee) a

SQL Queries in MySQL, select min(SALARY) from (select * from employee order by salary desc limit N) a

"SQL Union" Query Interview Questions

69. Select First_Name,LAST_NAME from employee table as separate rows

select FIRST_NAME from EMPLOYEE union select LAST_NAME from EMPLOYEE

70. What is the difference between UNION and UNION ALL ?

Both UNION and UNION ALL is used to select information from structurally similar tables. That means corresponding columns specified in the union should have same data type. For example, in the above query, if FIRST_NAME is DOUBLE and LAST_NAME is STRING above query wont work. Since the data type of both the columns are VARCHAR, union is made possible. Difference between UNION and UNION ALL is that , UNION query return only distinct values.

71. Write syntax to delete table employee

DROP table employee;

72. Write syntax to set EMPLOYEE_ID as primary key in employee table

ALTER TABLE EMPLOYEE add CONSTRAINT EMPLOYEE_PK PRIMARY KEY(EMPLOYEE_ID)

73. Write syntax to set 2 fields(EMPLOYEE_ID,FIRST_NAME) as primary key in employee table

ALTER TABLE EMPLOYEE add CONSTRAINT EMPLOYEE_PK PRIMARY KEY(EMPLOYEE_ID,FIRST_NAME)

74. Write syntax to drop primary key on employee table

Alter TABLE EMPLOYEE drop CONSTRAINT EMPLOYEE_PK;

SQL Interview Questions on "SQL Table Scripts"

75. Write create table syntax for employee table

Oracle -CREATE TABLE EMPLOYEE (
EMPLOYEE_ID NUMBER,
FIRST_NAME VARCHAR2(20 BYTE),
LAST_NAME VARCHAR2(20 BYTE),
SALARY FLOAT(126),
JOINING_DATE TIMESTAMP (6) DEFAULT sysdate,
DEPARTMENT VARCHAR2(30 BYTE))
SQL Server -CREATE TABLE EMPLOYEE(
EMPLOYEE_ID int NOT NULL,
FIRST_NAME varchar(50) NULL,
LAST_NAME varchar(50) NULL,
SALARY decimal(18, 0) NULL,
JOINING_DATE datetime2(7) default getdate(),
DEPARTMENT varchar(50) NULL)

76. Write Sql Syntax to create EMPLOYEE_REF_ID in INCENTIVES table as foreign key with respect to EMPLOYEE_ID in employee table

ALTER TABLE INCENTIVES ADD CONSTRAINT INCENTIVES_FK FOREIGN KEY (EMPLOYEE_REF_ID) REFERENCES EMPLOYEE(EMPLOYEE_ID)

77. Write SQL to drop foreign key on employee table

ALTER TABLE INCENTIVES drop CONSTRAINT INCENTIVES_FK;

78. Write SQL to create Orcale Sequence

CREATE SEQUENCE EMPLOYEE_ID_SEQ START WITH 0 NOMAXVALUE MINVALUE 0 NOCYCLE NOCACHE NOORDER;

79. Oracle Procedure81. Oracle View

An example oracle view script is given below
create view Employee_Incentive as select FIRST_NAME,max(INCENTIVE_AMOUNT) INCENTIVE_AMOUNT from EMPLOYEE a, INCENTIVES b where a.EMPLOYEE_ID=b.EMPLOYEE_REF_ID group by FIRST_NAME

80. Write Sql syntax to create Oracle Trigger before insert of each row in employee table

```
CREATE OR REPLACE TRIGGER EMPLOYEE_ROW_ID_TRIGGER
BEFORE INSERT ON EMPLOYEE FOR EACH ROW
DECLARE
seq_no number(12);
BEGIN
select EMPLOYEE_ID_SEQ.nextval into seq_no from dual ;
:new EMPLOYEE_ID :=seq_no;
END;
SHOW ERRORS;
```

82. Oracle materialized view - Daily Auto Refresh

```
CREATE MATERIALIZED VIEW Employee_Incentive
REFRESH COMPLETE
START WITH SYSDATE
NEXT SYSDATE + 1 AS
select FIRST_NAME,INCENTIVE_DATE,INCENTIVE_AMOUNT from EMPLOYEE a,
INCENTIVES b
where a.EMPLOYEE_ID=b.EMPLOYEE_REF_ID
```

83. Oracle materialized view - Fast Refresh on Commit

Create materialized view log for fast refresh. Following materialized view script wont get executed if materialized view log doesn't exists

```
CREATE MATERIALIZED VIEW MAT_Employee_Incentive_Refresh
BUILD IMMEDIATE
REFRESH FAST ON COMMIT AS
select FIRST_NAME,max(INCENTIVE_AMOUNT) from EMPLOYEE a, INCENTIVES b
where a.EMPLOYEE_ID=b.EMPLOYEE_REF_ID group by FIRST_NAME
```

84. What is SQL Injection ?

SQL Injection is one of the the techniques uses by hackers to hack a website by injecting SQL commands in data fields.