Practice Query on DDL and DML Statements

Q1. Create table name as Student using a following field

Column Name	Data Type
Id	Int(5)
Name	Varchar(200)
Email	Varchar(200)
Contact	Varchar(200)
Salary	Int(5)

After creating a table performs following DDL operations on it.
Perform Alter Statement
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Add New Column address in student table using alter add option

Q2. Add New Column name as address with varchar (200) data type in student table using alter statement

Q3. Add New 3 columns at a time in Student table name as designation with varchar(200) data type , adharno varchar(200), panno varchar(200) using alter add option

Q4. You have to drop column name adharno from student table using alter drop statement

Q5. You have to rename column salary to sal from student table using alter rename option

Q6. You have to change the size of name column from 200 to 100 using alter rename option.

Q7. You have to drop the table student using drop table DDL Statement.

Practice Query on DML Statement
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Q1. Create table name as Employee with Following Field.

Column Name	Data Type
Id	Int(5)
Name	Varchar(200)

Email	Varchar(200)
Contact	Varchar(200)
Salary	Int(5)

Q2. Write SQL Query to insert 5 records in employee tables?

Q3. Write SQL query to insert only id, name and contact in employee table?

Q4. Write SQL Query to display all employee record using all columns values?

Q5. Write SQL Query to display only name, email and contact from employee table?

Q6. Write a SQL Query to display distinct name from employee table?

Q7. Write SQL Query to delete employee whose id is 1

Q8 . Write SQL Query to delete employee whose id is 1 and name is ram

Q9. Write SQL Query to delete employee whose id is 1 or name is shyam

Q10. Write SQL Query to change name, email and contact of employee whose is id 1

Practice Query using Logical Operator AND, NOT and OR

Q1. Write SQL Query to display all employee whose id is 1 and name is ram as well as salary is greater than 10000?

Q2. Write SQL Query to display all employee whose name is not ram and salary is less than 1000

Q3. Write SQL Query to display all employee whose name is ram and salary is not 10000

Q4. Write SQL Query to display all employee whose salary is 10000 and email is ram@gmail.com

Q5. Write SQL Query to display all employees whose salary is less than 10000 and name is ram?

SQL Query using IN and BETWEEN Operator

Q1. Display employee records whose salary is 10000, 20000, and 30000?

Q2. Display employee records whose salary is not in 10000, 20000, and 30000?

Q3. Display employee records whose salary between 10000 and 60000?

Q4. Display employee records whose salary is 10000,20000,30000 and name is not ramesh?

Q5. Display employee records whose name is ram, shyam, ganesh?

Q6. Display employee records whose salary is less than 100000 and name is shyam ,dinesh?

SQL Query using order by clause?

Q1. Write SQL Query to display employee records salary wise in ascending order?

Q2. Write SQL Query to display employee records salary wise in descending order?

Q3. Write SQL Query to display employee id wise in ascending order whose salary is greater than 10000?

Q4. Write SQL Query to display employee id wise in descending order whose salary is 10000, 20000, and 30000?

Q5. Write SQL Query to display employee in ascending order by its name and whose salary between 100000 to 60000?

SQL Query using group by and having clause?

Q1. Write SQL Query display employee count salary wise?

Means you have to show the count of employee whose salary is same

Q2. Write SQL Query display employee name whose salary is duplicated?

Q3. Write SQL Query to display employee list whose salary is duplicated and salary more than 10000 and arrange all employee records in ascending order?

Q4. Write SQL query to display employee whose name same in table and display count of same employee?

Q5. Write SQL Query to display employee name whose name is ram and occur more than 2 times in database table?

SQL Query using like operator

Q1. Write SQL Query to display list of employee whose name start with r?

Q2. Write SQL Query to display list of employee whose name start with r and end with sh?

Q3. Write SQL Query to display list of employee whose name contain r any where?

Q4. Write SQL Query to display list employee whose name contain at least 3 characters?

Q5. Write SQL Query to display list of employee whose contain only 3 letters?

Q6. Write SQL Query to display list of employee whose name ends with sh and salary is more than 20000 ?

Q7. Write SQL Query to display list of employee whose name contain r any where and salary is 10000, 20000, and 30000?

Q8. Write SQL Query to display list of employee whose name contain sh anywhere and salary between 10000 and 50000?

Q9. Write SQL Query to display list of employee whose name contain r anywhere and name occur more than once in table and salary is more than 10000?

Q10. Write SQL Query to display list of employee name start with r and ends with sh and salary not 10000 and name occur more than once in table?

SQL Query using Aggregate functions
_____

Q1.Write SQL Query to display max salary from employee table?

Q2. Write SQL Query to display min salary from employee table?

Q3. Write SQL Query to find avg() salary from employee table?

Q4. Write SQL Query to find sum() of all salary from employee table?

Q5. Write SQL Query to find the count of employee?

Q6. Write SQL Query to find the second highest salary of employee table?

Q7. Write SQL Query to find the nth highest salary of employee table?

Q8. Write SQL Query find the max salary of employee table who is present more than one times in table?

SQL Query on JOINS?
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Consider we have the Database

Course Table

Courseid	Course name	Fees
1	JAVA	26000
2	PHP	26000
3	.NET	26000

Student Table

Sid	Name	Email	Contact	Address
1	Ram	ram@gmail	123456	PUNE
2	Shyam	shyam@	343434	Nashik
3	Dinesh	dinesh@	43265	Mumbai

Placement Table

Pid	Comp name	Package	Pdate
1	TCS	360000	01/01/2020
2	Infosys	360000	01/02/2020

Csjoin table

Courseid	Sid	Pid
1	1	1
2	1	2
1	2	1
2	2	2

Above Table Description given below
Course Table
Column name data type   constraints
Courseid   int   primary key auto increment
name   varchar(200)   not null unique
fees   int(5)   not null
Student Table
Column Name   data type   constraints
sid   int(5)   primary key auto increment
name   varchar(200)   not null
email   varchar(200)   not null unique
contact   varchar(200)   not null unique
address   varchar(200)   not null

Placement Table
Column name   data type   constraints
pid   int(5)   primary key auto increment
comp name   varchar(200)   not null
package   int(5)   not null
pdate   date   not null
Csjoin table
column name   datatype   constraints
sid   int(5)   foreign key
cid   int(5)   foreign key
pid   int(5)   foreign key

Write the Following SQL Queries on Above Database

Q1. Write SQL Query to display the all courses?

Q2. Write SQL Query to display all courses whose fees is greater than 10000?

Q3. Write SQL Query to display the all courses whose fees is 10000, 20000, 30000, and 40000?

Q4. Write SQL Query to display the courses whose name start with J and ends with a?

Q5. Write SQL query to display the course in which at least 3 character?

Q6. Write SQL Query to display the course wise student list?

Above query output like as

Student Name	Course Name
Ram	JAVA
Ram	PHP
Shyam	JAVA
Shyam	PHP

Q7. Write a SQL Query to show the Student count Course Wise?

Output Like as

Course Name	Student Count
JAVA	2
PHP	2
.NET	0

Q8. Write SQL Query to show the course list who having more than 3 students?

Output like as

Course Name	Student Count
JAVA	4
PHP	5

Q9. Write SQL Query to show the courses who having no admission?

Output Like as

Course Name	Student Count
JAVA	0
PHP	0

Q10. Write SQL Query to show the student name with highest package?

Q11. Write SQL Query to show the student name with third highest package?

Q12. Write SQL Query to show the student name who having minimum package?

Q13. Write SQL Query to show the all student list who having more than 3 lakh packages?

Q14.Write SQL Query to show the student list package wise in descending order?

Q15. Write SQL Query to show the company name with student count?

Output like as

Company Name	Student Count
TCS	2
Infosys	2

Q16.Write SQL Query to show the Placement Count Course Wise?

Output Like as

Course Name	Placed Student Count
JAVA	3
PHP	5

Q16. Write SQL Query to show the student list course wise that got minimum single offer?

Q17. Write SQL Query to show the course name that having highest placement?

Q18. Write SQL Query to show placed student list of year 2020?

Q19. Write SQL Query show the placement count year wise?

Output like as

Year	Placement Count
2020	100
2021	120
2022	450

Q20 .Write SQL Query to show the year in which maximum student placed?

Q21. Write SQL queries to show the AVG placement ratio of last five year?

Q22. Write SQL Procedure to pass the course id and return the course name

Practice Query on Sub Query

_____

```
+--------------+------------+-----------+----------+--------------+------------+-----------+----------+----------------+------------+---------------+
| EMPLOYEE_ID | FIRST_NAME | LAST_NAME | EMAIL    | PHONE_NUMBER | HIRE_DATE  | JOB_ID    | SALARY   | COMMISSION_PCT | MANAGER_ID | DEPARTMENT_ID |
+--------------+------------+-----------+----------+--------------+------------+-----------+----------+----------------+------------+---------------+
|         100 | Steven      | King      | SKING    | 515.123.4567 | 2003-06-17 | AD_PRES   | 24000.00 |           0.00 |          0 |            90 |
|         101 | Neena       | Kochhar   | NKOCHHAR | 515.123.4568 | 2005-09-21 | AD_VP     | 17000.00 |           0.00 |        100 |            90 |
|         102 | Lex         | De Haan   | LDEHAAN  | 515.123.4569 | 2001-01-13 | AD_VP     | 17000.00 |           0.00 |        100 |            90 |
|         103 | Alexander   | Hunold    | AHUNOLD  | 590.423.4567 | 2006-01-03 | IT_PROG   |  9000.00 |           0.00 |        102 |            60 |
|         104 | Bruce       | Ernst     | BERNST   | 590.423.4568 | 2007-05-21 | IT_PROG   |  6000.00 |           0.00 |        103 |            60 |
|         105 | David       | Austin    | DAUSTIN  | 590.423.4569 | 2005-06-25 | IT_PROG   |  4800.00 |           0.00 |        103 |            60 |
|         106 | Valli       | Pataballa | VPATABAL | 590.423.4560 | 2006-02-05 | IT_PROG   |  4800.00 |           0.00 |        103 |            60 |
|         107 | Diana       | Lorentz   | DLORENTZ | 590.423.5567 | 2007-02-07 | IT_PROG   |  4200.00 |           0.00 |        103 |            60 |
|         108 | Nancy       | Greenberg | NGREENBE | 515.124.4569 | 2002-08-17 | FI_MGR    | 12008.00 |           0.00 |        101 |           100 |
|         109 | Daniel      | Faviet    | DFAVIET  | 515.124.4169 | 2002-08-16 | FI_ACCOUNT|  9000.00 |           0.00 |        108 |           100 |
|         110 | John        | Chen      | JCHEN    | 515.124.4269 | 2005-09-28 | FI_ACCOUNT|  8200.00 |           0.00 |        108 |           100 |
|         111 | Ismael      | Sciarra   | ISCIARRA | 515.124.4369 | 2005-09-30 | FI_ACCOUNT|  7700.00 |           0.00 |        108 |           100 |
|         112 | Jose Manuel | Urman     | JMURMAN  | 515.124.4469 | 2006-03-07 | FI_ACCOUNT|  7800.00 |           0.00 |        108 |           100 |
|         113 | Luis        | Popp      | LPOPP    | 515.124.4567 | 2007-12-07 | FI_ACCOUNT|  6900.00 |           0.00 |        108 |           100 |
```

```
+---------------+-----------------+------------+-------------+
| DEPARTMENT_ID | DEPARTMENT_NAME | MANAGER_ID | LOCATION_ID |
+---------------+-----------------+------------+-------------+
|            10 | Administration  |        200 |        1700 |
|            20 | Marketing       |        201 |        1800 |
|            30 | Purchasing      |        114 |        1700 |
|            40 | Human Resources |        203 |        2400 |
|            50 | Shipping        |        121 |        1500 |
|            60 | IT              |        103 |        1400 |
|            70 | Public Relations|        204 |        2700 |
|            80 | Sales           |        145 |        2500 |
```

Consider you have above table and execute the following query using sub query technique

Q1. From the Above table, write a SQL query to find those employees who receive a higher salary than the employee with ID 106. Return first name, last name.

Q2. From the Above table, write a SQL query to find out which employees have the same designation as the employee whose ID is 169. Return first name, last name, department ID and job ID.

Q3. From the above table, write a SQL query to find those employees whose salary matches the lowest salary of any of the departments. Return first name, last name and department ID.

Q4. From the above table, write a SQL query to find those employees who earn more than the average salary. Return employee ID, first name, last name.

Q5. From the above table, write a SQL query to find those employees who report to that manager whose first name is 'Payam'. Return first name, last name, employee ID and salary.

Q6. From the above tables, write a SQL query to find all those employees who work in the IT department. Return department ID, name (first), job ID and department name.

Q7. From the Above table, write a SQL query to find the employee whose salary is 3000 and reporting person's ID is 121. Return all fields

Q8. From the above table, write a SQL query to find those employees whose ID matches any of the numbers 134, 159 and 183. Return all the fields.

Q9. From the above table, write a SQL query to find those employees whose salary is in the range of 1000, and 3000 (Begin and end values have included.). Return all the fields.

Q10. From the above table and write a SQL query to find those employees whose salary falls within the range of the smallest salary and 2500. Return all the fields.

Q11. From the above tables, write a SQL query to find those employees who do not work in the departments where managers' IDs are between 100 and 200 (Begin and end values are included.). Return all the fields of the employees.

Q12. From the above table, write a SQL query to find those employees who get second-highest salary. Return all the fields of the employees.

Practice Query on View

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Consider we have following table

Table Name: Salesman

```
 salesman_id |    name     |   city    | commission
-------------+-------------+-----------+------------
        5001 | James Hoog  | New York  |     0.15
        5002 | Nail Knite  | Paris     |     0.13
        5005 | Pit Alex    | London    |     0.11
        5006 | Mc Lyon     | Paris     |     0.14
        5007 | Paul Adam   | Rome      |     0.13
        5003 | Lauson Hen  | San Jose  |     0.12
```

Table Name: Customer

```
customer_id |    cust_name    |    city    | grade | salesman_id
------------+-----------------+------------+-------+------------
       3002 | Nick Rimando    | New York   |  100  |    5001
       3007 | Brad Davis      | New York   |  200  |    5001
       3005 | Graham Zusi     | California |  200  |    5002
       3008 | Julian Green    | London     |  300  |    5002
       3004 | Fabian Johnson  | Paris      |  300  |    5006
       3009 | Geoff Cameron   | Berlin     |  100  |    5003
       3003 | Jozy Altidor    | Moscow     |  200  |    5007
```

Sample table: orders

```
ord_no      purch_amt    ord_date      customer_id  salesman_id
----------  ----------   ----------    -----------  -----------
70001       150.5        2012-10-05    3005         5002
70009       270.65       2012-09-10    3001         5005
70002       65.26        2012-10-05    3002         5001
70004       110.5        2012-08-17    3009         5003
70007       948.5        2012-09-10    3005         5002
70005       2400.6       2012-07-27    3007         5001
70008       5760         2012-09-10    3002         5001
```

Q1. From the Above table, create a view for those salespeople who belong to the city of New York.

Q2. From the Above table, create a view for all salespersons. Return salesperson ID, name, and city.

Q3. From the Above table, create a view to locate the salespeople in the city 'New York'.

Q4. From the Above table, create a view that counts the number of customers in each grade.

Q5. From the Above table, create a view to count the number of unique customers, compute the average and the total purchase amount of customer orders by each date.

Q6. From the Above tables, create a view to get the salesperson and customer by name. Return order name, purchase amount, salesperson ID, name, customer name.

Q7. From the Above table, create a view to find the salesperson who handles a customer who makes the highest order of the day. Return order date, salesperson ID, name.

Q8. From the Above table, create a view to find the salesperson who deals with the customer with the highest order at least three times per day. Return salesperson ID and name.

Q9. From the Above table, create a view to count the number of salespeople in each city. Return city, number of salespersons.

Q10. From the Above table, create a view to compute the average purchase amount and total purchase amount for each salesperson. Return name, average purchase and total purchase amount. (Assume all names are unique.).

Practice Query on Procedure

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Q1. Write SQL Query to create procedure name as saveStudent with name, email, contact and store in data in student table and all parameters should be IN.

Q2. Write SQL Query to create Procedure and two parameter one is input parameter as id and name as output parameter and pass student id as input parameter and get student name as output parameter using its id.

Practice Query on Trigger

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sid	name	email	contact	address
1	abc	abc@gmail.com	123456	PUNE
2	mno	mno@gmail.com	456789	Nashik
3	STV	stv@gmail.com	8765423	Mumbai
4	PQR			

Backup

sid	name	email	contact	address

Q1. Create Trigger on student table using on after delete and store record in backup table means when we delete record from student table using student id then delete student record should be stored in backup table means you have to insert record in backup table.

Q2. Create Trigger on student table on before update and store record in backup table before updation means when we update the student record in student table using student id then before updation value must be stored in backup table

SQL Query on Date and Time API
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1. Write a query to display the first day of the month (in datetime format) three months before the current month.
Sample current date: 2014-09-03
Expected result: 2014-06-01

2. Write a query to display the last day of the month (in datetime format) three months before the current month.

Suppose consider we have following table.

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID
100	Steven	King	SKING	515.123.4567	2003-06-17	AD_PRES	24000.00	0.00	0	90
101	Neena	Kochhar	NKOCHHAR	515.123.4568	2005-09-21	AD_VP	17000.00	0.00	100	90
102	Lex	De Haan	LDEHAAN	515.123.4569	2001-01-13	AD_VP	17000.00	0.00	100	90
103	Alexander	Hunold	AHUNOLD	590.423.4567	2006-01-03	IT_PROG	9000.00	0.00	102	60
104	Bruce	Ernst	BERNST	590.423.4568	2007-05-21	IT_PROG	6000.00	0.00	103	60
105	David	Austin	DAUSTIN	590.423.4569	2005-06-25	IT_PROG	4800.00	0.00	103	60
106	Valli	Pataballa	VPATABAL	590.423.4560	2006-02-05	IT_PROG	4800.00	0.00	103	60
107	Diana	Lorentz	DLORENTZ	590.423.5567	2007-02-07	IT_PROG	4200.00	0.00	103	60
108	Nancy	Greenberg	NGREENBE	515.124.4569	2002-08-17	FI_MGR	12008.00	0.00	101	100
109	Daniel	Faviet	DFAVIET	515.124.4169	2002-08-16	FI_ACCOUNT	9000.00	0.00	108	100
110	John	Chen	JCHEN	515.124.4269	2005-09-28	FI_ACCOUNT	8200.00	0.00	108	100
111	Ismael	Sciarra	ISCIARRA	515.124.4369	2005-09-30	FI_ACCOUNT	7700.00	0.00	108	100
112	Jose Manuel	Urman	JMURMAN	515.124.4469	2006-03-07	FI_ACCOUNT	7800.00	0.00	108	100
113	Luis	Popp	LPOPP	515.124.4567	2007-12-07	FI_ACCOUNT	6900.00	0.00	108	100

3. Write a query to get the distinct Mondays from hire_date in employees tables?
4. Write a query to get the first day of the current year?
5. Write a query to get the last day of the current year?
6. Write a query to calculate the age in year?

7. Write a query to get the current date in the following format.

Sample date: 2014-09-04

Output: September 4, 2014

8. Write a query to get the current date in Thursday September 2014 format.

Thursday September 2014

9. Write a query to extract the year from the current date.

10. Write a query to get the DATE value from a given day (number in N).

Sample days: 730677

Output: 2000-07-11

11. Write a query to get the first name and hire date from employees table where hire date between '1987-06-01' and '1987-07-30'

12. Write a query to display the current date in the following format.

Sample output: Thursday 4th September 2014 00:00:00

13. Write a query to display the current date in the following format.

Sample output: 05/09/2014

14. Write a query to display the current date in the following format.

Sample output: 12:00 AM Sep 5, 2014

15. Write a query to get the first name, last name who joined in the month of June consider above table

16. Write a query to get the years in which more than 10 employees joined.

17. Write a query to get first name of employees who joined in 1987.

18. Write a query to get department name, manager name, and salary of the manager for all managers whose experience is more than 5 years.

19. Write a query to get employee ID, last name, and date of first salary of the employees.

20. Write a query to get first name, hire date and experience of the employees.