Topic –Database Fundamentals

Task-1 SQL Practices

Table Name : User

First Name	Last Name	Address	City	Age
Mickey	Mouse	123 Fantasy Way	Anaheim	73
Bat	Man	321 Cavern Ave	Gotham	54
Wonder	Woman	987 Truth Way	Paradise	39
Donald	Duck	555 Quack Street	Mallard	65
Bugs	Bunny	567 Carrot Street	Rascal	58
Wiley	Coyote	999 Acme Way	Canyon	61
Cat	Woman	234 Purrfect Street	Hairball	32
Tweety	Bird	543	Itotltaw	28

Table Name : Student and Exam

Primary Key

Student

Rollno	Name	Branch
1	Jay	Computer Science
2	Suhani	Electronic and Com
3	Kriti	Electronic and Com

Foreign Key

Exam

Rollno	S_code	Marks	P_code
1	CS11	50	CS
1	CS12	60	CS
2	EC101	66	EC
2	EC102	70	EC
3	EC101	45	EC
3	EC102	50	EC

B1	How to Create an Table student write an SQL Query ?
B2	How to Create a Exam table with Foreign key on rollno write a SQL Query ?
B3	What is SQL Key Constraints write an Example of SQL Key Constraints ?
B4	What is SQL View Create a View of Student Table ?
B5	How to Create a Table user write a SQL query ?
B6	What is SQL and How to Create a table with Forign Key ?
B7	What is store Proceedure write a query of creating store Proceedure ?
B8	What is save Point How to Create a save Point write a Query ?
B9	What is trigger and how to Create a Trigger in SQL ?
B10	What do you understood By Database ?
B11	What is Difference Between DBMS and RDBMS ?
B12	What do you understood By Data Redundancy ?
B13	What is Normalization ?
B14	What is DDL Interpreter ?
B15	What is DML Compiler in SQL ?
B16	What is Database transaction ?
B17	What is Store Procedure in Database ?

B18	What is MF Codd Rule of RDBMS Systems ?
B19	What do You understood by Data Independence in Database?
B20	What are the name of the different data models that are available for database systems ?

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 : Incentive

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

I1	Get First_Name from employee table using alias name “Employee Name”.
I2	Get FIRST_NAME, Joining year, Joining Month and Joining Date from employee table.
I3	Get all employee details from the employee table order by First_Name Ascending and Salary descending.
I4	Get employee details from employee table whose first name contains ‘o’.
I5	Get employee details from employee table whose joining month is “January”.
I6	Get department, total salary with respect to a department from employee table order by total salary descending.
I7	Get department wise maximum salary from employee table order by salary ascending.
I8	Select first_name, incentive amount from employee and incentives table for those employees who have incentives and incentive amount greater than 3000
I9	Select 2nd Highest salary from employee table.
I10	Select first_name, incentive amount from employee and incentives table for

	all employees who got incentives using left join.
I11	Create View OF Employee table in which store first name ,last name and salary only.
I12	Create Procedure to find out department wise highest salary.
I13	Create After Insert trigger on Employee table which insert records in view table

TABLE-1

TABLE NAME- SALSEPERSON

(PK)SNo	SNAME	CITY	COMM
1001	Peel	London	.12
1002	Serres	San Jose	.13
1004	Motika	London	.11
1007	Rafkin	Barcelona	.15
1003	Axelrod	New York	.1

TABLE-2

TABLE NAME- CUSTOMER

(PK)CNM.	CNAME	CITY	RATING	(FK)SNo
201	Hoffman	London	100	1001
202	Giovanne	Roe	200	1003
203	Liu	San Jose	300	1002
204	Grass	Barcelona	100	1002
206	Clemens	London	300	1007
207	Pereira	Roe	100	1004

TABLE-3

TABLE NAME- Order

(PK)ONM	AMT	ODE	(FK)CNM	(FK)SNo
3001	18.69	03-OCT-94	2008	1007
3003	767.19	03-OCT-94	2001	1001
3002	1900.10	03-OCT-94	2007	1004
3005	3005	03-OCT-94	2003	1002
3006	3006	04-OCT-94	2008	1007
3009	3009	04-OCT-94	2002	1003
3007	3007	05-OCT-94	2004	1002
3008	3008	05-OCT-94	2006	1001
3010	3010	06-OCT-94	2004	1002
3011	3011	06-OCT-94	2006	1001

A1	All orders for more than $1000.
A2	Names and cities of all salespeople in London with commission above 0.10.
A8	All salespeople either in Barcelona or in London.
A9	All salespeople with commission between 0.10 and 0.12. (Boundary values shouldbe excluded).
A10	All customers excluding those with rating <= 100 unless they are located in Rome.
A11	All orders except those with 0 or NULL value in amt field.
A12	Count the number of salespeople currently listing orders in the order table.
A13	Largest order taken by each salesperson, datewise.
A14	Largest order taken by each salesperson with order value more than $3000. (ie same city).

Create DataBase: Practices

Note: Use Create SQL statement for creating table.

Task-1

tblProducts:

ColumnName	DataType	Constraint	Description
tID	int	Primarykey	AutoIncrement
ProductName	Varchar(20)		
RecommendedPrice	Money		
Category	Varchar(10)		

tblCustomers:

ColumnName	DataType	Constraint	Description
CustomerID	int	Primarykey	AutoIncrement
FirstName	Varchar(50)		
LastName	Varchar(50)		
City	Varchar(50)		
State	Char(2)		
Zip	Varchar(10)		

tblSales

Column Name	DataType	Constraint	Description
SalesID	int	Primarykey	AutoIncrement
ProductID	Int	Foreignkey	
CustomerID	Int	Foreignkey	
SalesPrice	Money		
SalesDate	Smalldatetime		

Note : Insert data using insert statement in to table

tblProduct:

ProductID	ProductName	RecommendedPr	Category
1	DVD	105.00	LivingRoom
2	Microwave	98.00	Kitchen
3	Monitor	200.00	Office
4	Speakers	85.00	Office
5	Refrigerator	900.00	Kitchen
6	VCR	165.00	LivingRoom
7	CoffeePot	35.00	Kitchen

tblCustomers:

CustomerID	FirstName	LastName	City	State	Zip
1	Chintan	Patel	Anand	GJ	388001
2	Paresh	Prajapati	Nadiad	GJ	387001
3	Pragnesh	Patel	Surat	GJ	395008
4	Nilesh	Dharsandia	Mumbai	MH	400002
5	Sonal	Patel	Mumbai	MH	400002
6	Harshal	Patel	Mogri	GJ	388345
7	Prakash	Rathod	Mogri	GJ	388345
8	Aarzoo	Dodhiya	Rajkot	GJ	360003
9	Heta	Dave	Varanasi	UP	221002
10	Nikita	Dave	Varanasi	UP	221002
11	Vaibhav	Dave	Varanasi	UP	221002
12	Paresh	Patel	Pune	MH	411001
13	Prakash	Patel	Pune	MH	411001
14	Sandhya	Patel	Hyedrabad	AP	500031
15	Divesh	Patel	Banglore	KA	560002
16	Payal	Shah	Banglore	KA	560002
17	Priyanka	Rana	Anand	GJ	388001
18	Sanket	Dhebar	V.V.Nagar	GJ	388121
19	Puja	Shah	Varanasi	UP	221002
20	Priya	Shah	Varanasi	UP	221002

tblSales:

SalesID	ProductID	CustomerID	SalesPrice	SalesDate
1	1	1	130.00	2005-06-14
2	2	2	97.00	2005-06-19
3	3	3	200.00	2005-09-20
4	4	4	80.00	2005-03-22
5	5	5	899.00	2005-01-23
6	6	6	150.00	2005-03-24
7	3	7	209.00	2005-03-10
8	4	8	90.00	2005-08-11
9	6	9	130.00	2005-08-12
10	2	14	85.00	2005-12-13
11	3	15	240.00	2005-05-14
12	1	17	87.00	2005-07-19
13	2	18	99.00	2005-09-20
14	6	19	150.00	2005-07-22
15	5	5	900.00	2005-03-06
16	4	6	86.00	2005-04-07
17	2	7	88.00	2005-11-08
18	3	8	198.00	2005-05-09
19	1	9	150.00	2005-10-10
20	6	14	99.00	2005-05-09
21	6	15	104.00	2005-09-20
22	4	14	90.00	2005-07-22
23	1	1	130.00	2005-03-06
24	2	2	102.00	2005-04-07
25	1	3	114.00	2005-11-08
26	5	4	1000.00	2005-05-09
27	5	5	1100.00	2005-10-10
28	3	6	285.00	2005-06-11
29	2	7	87.00	2005-10-12
30	3	8	300.00	2005-07-13
31	3	20	205.00	2005-12-31

B1	Return the FirstName, LastName, ProductName, and SalePrice for all products sold in the month of October200
B2	Return the CustomerID, FirstName, and LastName of those individuals in the Customer table who have made no Sales purchases.
B3	.Return the FirstName, LastName, SalePrice, Recommended SalePrice, and the difference between the SalePrice and Recommended SalePrice for all Sales. The difference must be returned as a positive number.

I1	I1.Add the following Customer and Sale information to the database. (using store procedure) FirstName : Priyanka LastName : Chopra City:Mumbai State:MH Zip:400001 ProductID:3 SalePrice:205 SaleDate:12/31/2005
I2	Return the Product Category and the average Sale Price for those customers who have purchased two or more products.
A1	Update the Sale Price to the Recommended Sale Price of those Sales occurring between 6/10/2005and6/20/2005.
A2	Number of Sales by Product Category where the average Recommended Priceis10 or more dollars greater than the average Sale Price.
A3	Largest order taken by each salesperson, datewise.
A4	Without using a declared iterative construct, return Sale Date and the running total for all sales, ordered by the Sale Date in Ascending Order.

Task-2

Note : Operatinal Statement with Employement.

tblemp(eno,ename,bdate,title,salary, dno), tblproj(pno,pname,budget,dno),

tbldept(dno,dname,mgreno), tblworkson(eno,pno,resp,hours).

B1	Write an SQL query that returns the project number and name for projects with a budget greater than $100,000.
B2	Write an SQL query that returns all works on records where hours worked is less than10and the responsibility is “Manager”.

B3	Write an SQL query that returns the employees (number and name only) who have a title of “EEE‟ or “SA‟ and make more than $35,000.
B4	Write an SQL query that returns the employees (name only) in department “D1‟ordered by decreasing salary.
I1	Write an SQL query that returns the departments (all fields) ordered by ascending department name.
I2	Write an SQL query that returns the employee name, department name, and employee title.
I3	Write SQL query that returns the project name, hours worked, and project number for all works on records where hours > 10.
A1	Write an SQL query that returns the project name, department name, and budget for all projects with a budget < $50,000.
A2	Write an SQL query that returns the employee numbers and salaries of all employees in the “Consulting” department ordered by descending salary.
A3	Write an SQL query that returns the employee name, project name, employee title and hours for all works on records.