Lab-1 (Joins)

Create Database with Name: **Person_Info**

Create following table under Person_Info database. (Using Design Mode)

Person		
Column_Name	**DataType**	**Constraints**
PersonID	Int	Primary Key
PersonName	Varchar (100)	Not Null
DepartmentID	Int	Foreign Key, Null
Salary	Decimal (8,2)	Not Null
JoiningDate	Datetime	Not Null
City	Varchar (100)	Not Null

Department		
Column_Name	**DataType**	**Constraints**
DepartmentID	Int	Primary Key
DepartmentName	Varchar (100)	Not Null, Unique
DepartmentCode	Varchar (50)	Not Null, Unique
Location	Varchar (50)	Not Null

PersonID	PersonName	DepartmentID	Salary	JoiningDate	City
101	Rahul Tripathi	2	56000	01-01-2000	Rajkot
102	Hardik Pandya	3	18000	25-09-2001	Ahmedabad
103	Bhavin Kanani	4	25000	14-05-2000	Baroda
104	Bhoomi Vaishnav	1	39000	08-02-2005	Rajkot
105	Rohit Topiya	2	17000	23-07-2001	Jamnagar
106	Priya Menpara	*NULL*	9000	18-10-2000	Ahmedabad
107	Neha Sharma	2	34000	25-12-2002	Rajkot
108	Nayan Goswami	3	25000	01-07-2001	Rajkot
109	Mehul Bhundiya	4	13500	09-01-2005	Baroda
110	Mohit Maru	5	14000	25-05-2000	Jamnagar

DepartmentID	DepartmentName	DepartmentCode	Location
1	Admin	Adm	A-Block
2	Computer	CE	C-Block
3	Civil	CI	G-Block
4	Electrical	EE	E-Block
5	Mechanical	ME	B-Block

From the above given table perform the following queries:

1. Find all persons with their department name & code.
2. Find person's name whose department located in C-Block.
3. Retrieve person name, salary & department name who belongs to Jamnagar city.
4. Retrieve person name, salary & department name who does not belongs to Rajkot city.
5. Find detail of all persons who belongs Computer department.
6. Find all persons who does not belongs to any department.
7. Retrieve person's name who joined Civil department after 1-Aug-2001.
8. Display all the person's name with department whose joining dates difference with current date is more than 365 days.
9. Find department wise person counts.
10. Give department wise maximum & minimum salary with department name.
11. Find city wise total, average, maximum and minimum salary.

12. Find all departments whose total salary is exceeding 100000.
13. Find average salary of person who belongs to Ahmedabad city.
14. List all departments who have no person.
15. List out department names in which more than two persons are working.
16. Produce Output Like: <PersonName> lives in <City> and works in <DepartmentName> Department. (In single column)
17. Produce Output Like: <PersonName> earns <Salary> from department <DepartmentName> monthly. (In single column)
18. Find city & department wise total, average & maximum salaries.
19. Give 10% increment in Computer department employee's salary. (Use Update)

Lab-2 & Lab-3 (SP)

Create Database with Name: **Worker_Info**
Create following tables under Worker_Info database. (Using Design Mode)

Person		
Column_Name	**DataType**	**Constraints**
WorkerID	Int	Primary Key, Auto Increment
FirstName	Varchar (100)	Not Null
LastName	Varchar (100)	Not Null
Salary	Decimal (8,2)	Not Null
JoiningDate	Datetime	Not Null
DepartmentID	Int	Foreign Key, Null
DesignationID	Int	Foreign Key, Null

Department		
Column_Name	**DataType**	**Constraints**
DepartmentID	Int	Primary Key
DepartmentName	Varchar (100)	Not Null, Unique

Designation		
Column_Name	**DataType**	**Constraints**
DesignationID	Int	Primary Key
DesignationName	Varchar (100)	Not Null, Unique

WorkerID	FirstName	LastName	Salary	JoiningDate	DepartmentID	DesignationID
101	Rahul	Anshu	56000	01-01-1990	1	12
102	Hardik	Hinsu	18000	25-09-1990	2	11
103	Bhavin	Kamani	25000	14-05-1991	*NULL*	11
104	Bhoomi	Patel	39000	20-02-2014	1	13
105	Rohit	Rajgor	17000	23-07-1990	2	15
106	Priya	Mehta	25000	18-10-1990	2	*NULL*
107	Neha	Trivedi	18000	20-02-2014	3	15

DepartmentID	DepartmentName
1	Admin
2	IT
3	HR
4	Account

DesignationID	DesignationName
11	Jobber
12	Welder
13	Clerk
14	Manager
15	CEO

From the above given tables perform the following queries:

Stored Procedures (Lab – 2)

1. All tables Insert
2. All tables Update
3. All tables Delete
4. All tables SelectPK
5. All tables SelectAll (If foreign key is available than do write join and take columns on select list)

Stored Procedures (Lab – 3)

1. Create Procedure that show detail of first 3 persons.
2. Create Procedure that takes department dame as input and returns a table with all workers working in that department.
3. Create Procedure that takes department name & designation name as input and returns a table with worker's first name, salary, joining date & department name.
4. Create Procedure that takes first name as an input parameter and display all the details of the worker with their department & designation name.
5. Create Procedure which displays department wise maximum, minimum & total salaries.
6. Create Procedure which displays designation wise maximum, minimum & total salaries.

Lab-4 (UDF)

Perform the following queries.

Scalar valued functions

1. Write a function to print "hello world".
2. Write a function which returns addition of two numbers.
3. Write a function to print cube of given number.
4. Write a function to check where given number is ODD or EVEN.
5. Write a function to compare two integers and returns the comparison result. (Using Case statement)
6. Write a function to print number from 1 to N. (Using while loop)
7. Write a function to print sum of even numbers between 1 to 20.
8. Write a function to check weather given number is prime or not.
9. Write a function which accepts two parameters start date & end date, and returns a difference in days.
10. Write a function which accepts year & month in integer and returns total days in given month & year.

Table valued functions (Use tables of lab-2)

11. Write a function which returns a table with detail of person whose first name starts with B.
12. Write a function which returns a table with unique first names from person table.
13. Write a function which accepts department ID as a parameter & returns a detail of the persons.

Lab-5 Mongo DB

Create Database with Name: **BANK_INFO**

Deposite

ACTNO	CNAME	BNAME	AMOUNT	ADATE
101	ANIL	VRCE	1000.00	1-3-95
102	SUNIL	AJNI	5000.00	4-1-96
103	MEHUL	KAROLBAGH	3500.00	17-11-95
104	MADHURI	CHANDI	1200.00	17-12-95
105	PRMOD	M.G. ROAD	3000.00	27-3-96
106	SANDIP	ANDHERI	2000.00	31-3-96
107	SHIVANI	VIRAR	1000.00	5-9-95
108	KRANTI	NEHRU PLACE	5000.00	2-7-95

From the above given collection perform the following queries:

1. Retrieve/Display every document of Deposite collection.
2. Retrieve/Display every document of Deposite collection. (Use: pretty())
3. Display only one document of Deposite collection. (Use: findOne())
4. Insert following document to Deposite collection. (Use: insertOne())

109	KIRTI	VIRAR	3000.00	3-5-97

5. Insert following documents to your collection. (Use: insertMany())

110	MITALI	ANDHERI	4500.00	4-9-95
111	RAJIV	NEHRU PLACE	7000.00	2-10-98

6. Display documents with CNAME, BNAME and AMOUNT fields.
7. Display every document of Deposite collection on ascending order by CNAME.
8. Display every document of Deposite collection on descending order by BNAME.
9. Display every document of Deposite collection on ascending order by ACTNO and descending order by AMOUNT.
10. Display only two documents of Deposite collection.
11. Display 3rd document of Deposite collection.
12. Display 6th and 7th documents of Deposite collection.
13. Display the count of documents in Deposite collection.
14. Delete the collection Deposite.
15. Drop BANK_INFO database.