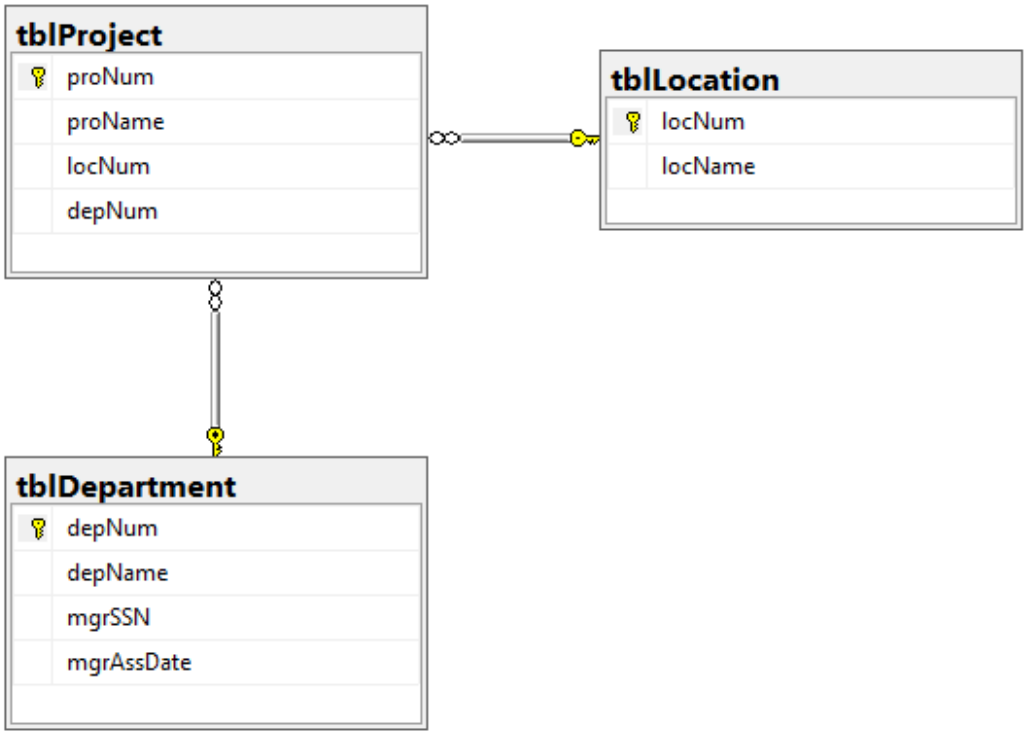
LAB 4

Paper No: 47

1. Create a folder named **RollNo_Name_DBI202_PaperNo ,** e.g. **SE01245_LongNT_DBI202_47**
2. For each question, you are required to write a database script. Create a file with the name corresponding to the index of the question. For example, **for question 1**, we will create a file named **Q1.sql** and create a file **Q2.sql for question 2**. So, if you do 10 questions, your folder must contain **only** 10 files Q1.sql, Q2.sql, Q3.sql, Q4.sql, Q5.sql, Q6.sql, Q7.sql, Q8.sql, Q9.sql and Q10.sql.
3. Do not look up on the internet or social networks.

Question 1: Write SQL statements to create following tables. Note: need to add appropriate primary and foreign keys.

- Diagram:



- Design:

  + tblProject table

Column Name	Data Type	Allow Nulls
proNum	int	☐
proName	nvarchar(50)	☑
locNum	int	☑
depNum	int	☑
		☐

+ tblDepartment table

Column Name	Data Type	Allow Nulls
depNum	int	☐
depName	nvarchar(50)	☑
mgrSSN	decimal(18, 0)	☑
mgrAssDate	datetime	☑
		☐

+ tblLocation table

Column Name	Data Type	Allow Nulls
locNum	int	☐
locName	nvarchar(50)	☑
		☐

Question 2: Insert data in to table

- tblProject table

	proNum	proName	locNum	depNum
1	1	ProjectA	1	3
2	2	ProjectB	1	2
3	3	ProjectC	3	2

- tblDepartment table

	depNum	depName	mgrSSN	mgrAssDate
1	1	Phòng Phần mềm trong nước	30121050037	2003-01-10 00:00:00.000
2	2	Phòng Phần mềm nước ngoài	30121050142	2005-01-06 00:00:00.000
3	3	Phòng Giải pháp mạng truyền thông	30121050254	2000-01-01 00:00:00.000

- tblLocation table

	locNum	locName
1	1	TP Hà Nội
2	2	TP Hải Phòng
3	3	TP Đà Nẵng

Question 3: In tblLocation, Add locAddress with data type nvarchar(200).

Question 4: Update ProjectC to ProjectE and delete the dataset with proNum=2 in table tblProject

Question 5: Open File DBscript_lab4.sql and Execute to Create Database

Select all locations in 'US' or 'CA' as follows:

	LocationID	StreetAddress	PostalCode	City	StateProvince	CountryID
1	1400	2014 Jabberwocky Rd	26192	Southlake	Texas	US
2	1500	2011 Interiors Blvd	99236	South San Francisco	California	US
3	1600	2007 Zagora St	50090	South Brunswick	New Jersey	US
4	1700	2004 Charade Rd	98199	Seattle	Washington	US
5	1800	147 Spadina Ave	M5V 2L7	Toronto	Ontario	CA
6	1900	6092 Boxwood St	YSW 9T2	Whitehorse	Yukon	CA

Question 6:

Write a query to select EmployeeID, FirstName, LastName, Salary, Commission_pct, HireDate of all employees having Salary between 4000 and 10000, having Commission_pct greater than 0 and their FirstName contains at least an 'E' or an 'e'; display the results by descending order of HireDate as follows:

	EmployeeID	FirstName	LastName	Salary	Commission_pct	HireDate
1	164	Mattea	Marvins	7200	0.1	2008-01-24
2	179	Charles	Johnson	6200	0.1	2008-01-04
3	155	Oliver	Tuvault	7000	0.15	2007-11-23
4	178	Kimberely	Grant	7000	0.15	2007-05-24
5	172	Elizabeth	Bates	7300	0.15	2007-03-24
6	163	Danielle	Greene	9500	0.15	2007-03-19
7	154	Nanette	Cambrault	7500	0.2	2006-12-09
8	153	Christopher	Olsen	8000	0.2	2006-03-30
9	170	Tayler	Fox	9600	0.2	2006-01-24
10	160	Louise	Doran	7500	0.3	2005-12-15
11	152	Peter	Hall	9000	0.25	2005-08-20
12	159	Lindsey	Smith	8000	0.3	2005-03-10
13	150	Peter	Tucker	10000	0.3	2005-01-30
14	156	Janette	King	10000	0.35	2004-01-30

Question 7:

Write a query to display EmployeeID, FirstName, LastName, HireDate, JobID, JobTitle, DepartmentID, DepartmentName of all employees who were hired in 2005 and who work as 'Stock Clerk' as follows:

	EmployeeID	FirstName	LastName	HireDate	JobID	JobTitle	DepartmentID	DepartmentName
1	125	Julia	Nayer	2005-07-16	ST_CLERK	Stock Clerk	50	Shipping
2	129	Laura	Bissot	2005-08-20	ST_CLERK	Stock Clerk	50	Shipping
3	130	Mozhe	Atkinson	2005-10-30	ST_CLERK	Stock Clerk	50	Shipping
4	131	James	Marlow	2005-02-16	ST_CLERK	Stock Clerk	50	Shipping
5	138	Stephen	Stiles	2005-10-26	ST_CLERK	Stock Clerk	50	Shipping
6	142	Curtis	Davies	2005-05-19	ST_CLERK	Stock Clerk	50	Shipping

Question 8:

Write a query to display JobID, JobTitle, NumberOfEmployees corresponding to each job where NumberOfEmployees is the number of employees doing each job; display the results by descending order of NumberOfEmployees.

	JobID	JobTitle	NumberOfEmployees
1	SA_REP	Sales Representative	30
2	SH_CLERK	Shipping Clerk	20
3	ST_CLERK	Stock Clerk	20
4	ST_MAN	Stock Manager	5
5	FI_ACCOUNT	Accountant	5
6	PU_CLERK	Purchasing Clerk	5
7	IT_PROG	Programmer	5
8	SA_MAN	Sales Manager	5
9	AD_VP	Administration Vice President	2
10	MK_MAN	Marketing Manager	1
11	MK_REP	Marketing Representative	1
12	PR_REP	Public Relations Representative	1
13	AC_ACCOUNT	Public Accountant	1
14	AC_MGR	Accounting Manager	1
15	AD_ASST	Administration Assistant	1
16	AD_PRES	President	1
17	PU_MAN	Purchasing Manager	1
18	FI_MGR	Finance Manager	1
19	HR_REP	Human Resources Represent...	1

Question 9:

Write a query to display EmployeeID, FirstName, LastName, DepartmentID, DepartmentName, NumberOfSubordinates of each employee who manages at least one other employee or who is in the 'IT' department where NumberOfSubordinates is the number of employees that he/she manages as follows:

	EmployeeID	FirstName	LastName	DepartmentID	DepartmentName	NumberOfSubordinates
1	100	Steven	King	90	Executive	14
2	120	Matthew	Weiss	50	Shipping	8
3	121	Adam	Fripp	50	Shipping	8
4	122	Payam	Kaufling	50	Shipping	8
5	123	Shanta	Vollman	50	Shipping	8
6	124	Kevin	Mourgos	50	Shipping	8
7	145	John	Russell	80	Sales	6
8	146	Karen	Partners	80	Sales	6
9	147	Alberto	Errazuriz	80	Sales	6
10	148	Gerald	Cambrault	80	Sales	6
11	149	Eleni	Zlotkey	80	Sales	6
12	101	Neena	Kochhar	90	Executive	5
13	108	Nancy	Greenberg	100	Finance	5
14	114	Den	Raphaely	30	Purchasing	5
15	103	Alexander	Hunold	60	IT	4
16	102	Lex	De Haan	90	Executive	1
17	205	Shelley	Higgins	110	Accounting	1
18	201	Michael	Hartstein	20	Marketing	1
19	104	Bruce	Ernst	60	IT	0
20	105	David	Austin	60	IT	0
21	106	Valli	Pataballa	60	IT	0
22	107	Diana	Lorentz	60	IT	0

Question 10:

Write a View function named View_FullName_Employee that concatenates FirstName and LastName into FullName and Salary > 10000 and displays the data as follows:

	EmployeeID	FullName	Phone	JobID	Salary	ManagerID	DepartmentID
1	100	Steven King	515.123.4567	AD_PRES	24000	NULL	90
2	101	Neena Kochhar	515.123.4568	AD_VP	17000	100	90
3	102	Lex De Haan	515.123.4569	AD_VP	17000	100	90
4	108	Nancy Greenberg	515.124.4569	FI_MGR	12000	101	100
5	114	Den Raphaely	515.127.4561	PU_MAN	11000	100	30
6	145	John Russell	011.44.1344.429268	SA_MAN	14000	100	80
7	146	Karen Partners	011.44.1344.467268	SA_MAN	13500	100	80
8	147	Alberto Errazuriz	011.44.1344.429278	SA_MAN	12000	100	80
9	148	Gerald Cambrault	011.44.1344.619268	SA_MAN	11000	100	80
10	149	Eleni Zlotkey	011.44.1344.429018	SA_MAN	10500	100	80
11	162	Clara Vishney	011.44.1346.129268	SA_REP	10500	147	80
12	168	Lisa Ozer	011.44.1343.929268	SA_REP	11500	148	80
13	174	Ellen Abel	011.44.1644.429267	SA_REP	11000	149	80
14	201	Michael Hartstein	5.151.235.555	MK_MAN	13000	100	20
15	205	Shelley Higgins	5.151.238.080	AC_MGR	12000	101	110