For the submission of your work:

- Create a folder named **RollNo_Name_DBI202_PaperNo**

eg: se01245_LongNT_DB1202_01

Do not create any subfolder in this folder. All file created will be located in the above folder.

- For each question, you are required to write a database script Create a flic 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.

- Do not use any commands having the database name such as create database, alter database, use [database name].

- Your response must contain only necessary commands for answering the question Do not include any other command. For example, if you are required to create a trigger/procedure. then your response should contain only commands for creating the corresponding trigger/procedure; all commands for testing the created trigger/procedure are forbidden.

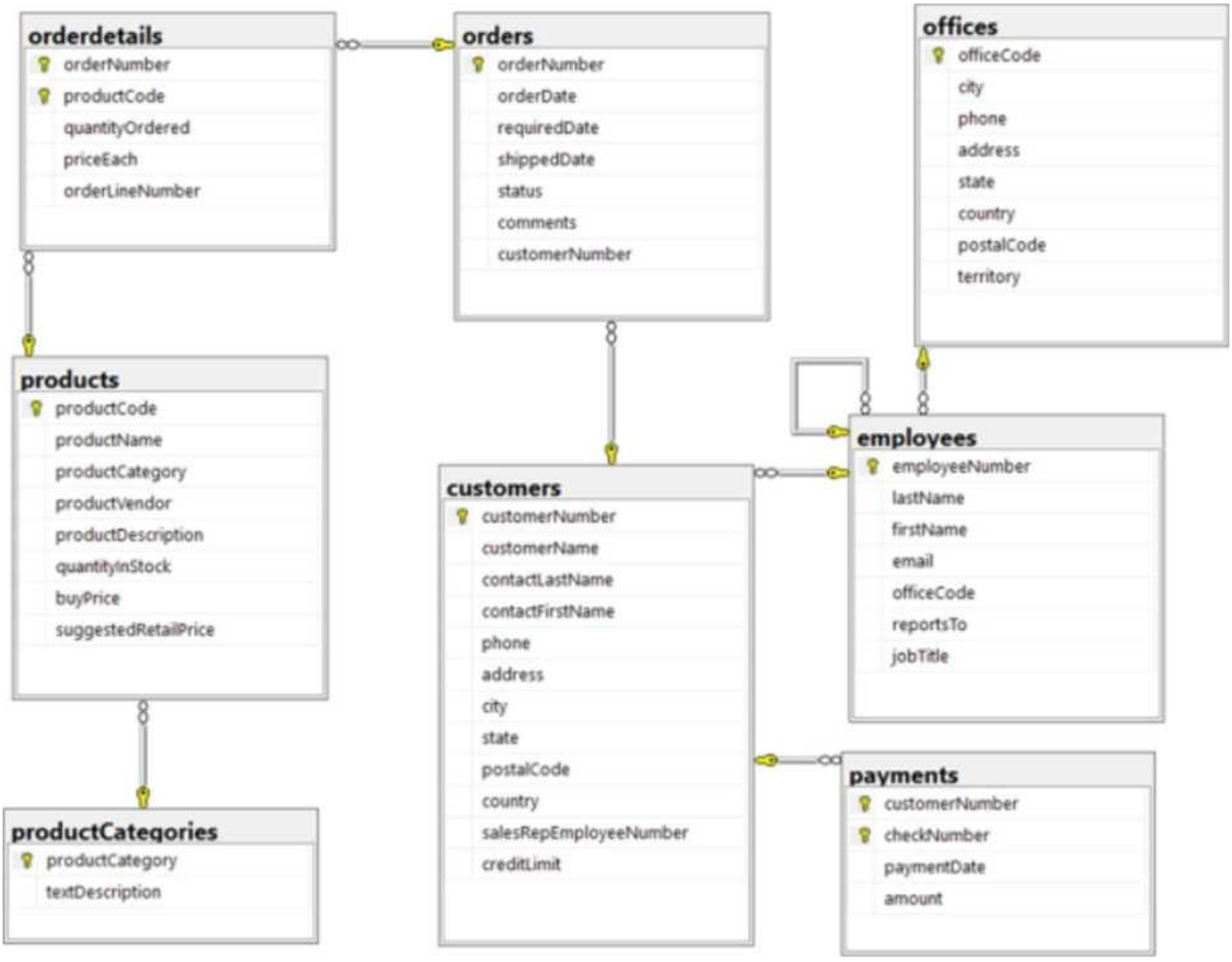
- On completion, import your work by browsing to the above folder.

- Note that:

+ You could use only SQL Server, SQL Server Management Studio, and paper or offline document in your computer.

+ If <u>any</u> of the previous requirements is not respected, your mark will be 0.

From the 2nd question, you should use the database provided in the .sql file which has the following database diagram. Please, run the provided script to create tables and insert data into your database.



Question 1:

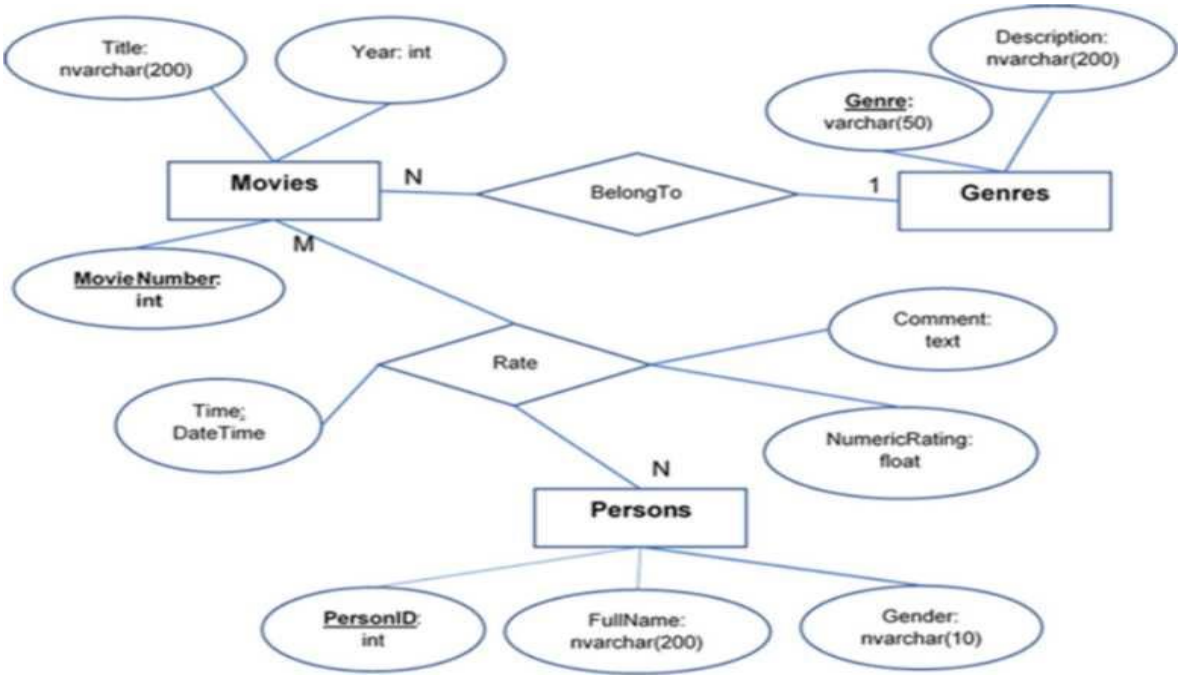
Create one database and then write SQL statements to create, in this database, all tables derived from the ERD given in the following picture with appropriate attributes, primary keys and foreign keys.

NOTE that when creating the SQL commands as request, you MUST keep the name of tables, relationship, attributes and data type of attributes as SAME as given in the given ERD.

Attributes with underline belong to the Primary Key of each entity.

Attributes which reference to the primary key of another table must have the same name as the attributes in the primary key of the referencing table.

When submitting the responses for this question, submit only SQL statements for creating tables with corresponding keys and foreign keys. Do not use “create database", “Alter database", “use database_name” or any statements using database's name in your submission.



Question 2:

Select all customers who are from ‘CA’ state of USA as follows:

Question 3:

Write a query to select orderNumber, productcode, quantityOrdered, priceEach of all order details in which the product 'S18_1749' was ordered with the quantity greater than 25; display the results by ascending order of price for each product, then by descending order of quantityOrdered as follows:

	orderNumber	productCode	quantityOrdered	priceEach
1	10100	S18_1749	30	136.00
2	10227	S18_1749	26	136.00
3	10254	S18_1749	49	137.70
4	10162	S18_1749	29	141.10
5	10367	S18_1749	37	144.50
6	10312	S18_1749	48	146.20
7	10110	S18_1749	42	153.00
8	10241	S18_1749	41	153.00
9	10420	S18_1749	37	153.00
10	10204	S18_1749	33	153.00
11	10379	S18_1749	39	156.40
12	10182	S18_1749	44	159.80
13	10280	S18_1749	26	161.50
14	10302	S18_1749	43	166.60
15	10344	S18_1749	45	168.30
16	10288	S18_1749	32	168.30

Question 4:

Write a query to display orderNumber, orderDate, requiredDate, shippedDate, status, customerNumber, customerName, city, country corresponding to all orders which have not been or have never been shipped of customers from USA where customerName, city, country are information corresponding to the customer of the order; display the results by ascending order of customerName as follows:

	orderNumber	orderDate	requiredDate	shippedDate	status	customerNumber	customerName	city	country
1	10422	2005-05-30	2005-06-11	NULL	In Process	157	Diecast Classics Inc.	Allentown	USA
2	10414	2005-05-06	2005-05-13	NULL	On Hold	362	Gifts4AllAges.com	Boston	USA
3	10248	2004-05-07	2004-05-14	NULL	Cancelled	131	Land of Toys Inc.	NYC	USA
4	10421	2005-05-29	2005-06-06	NULL	In Process	124	Mini Gifts Distributors Ltd.	San Rafael	USA
5	10401	2005-04-03	2005-04-14	NULL	On Hold	328	Tekni Collectables Inc.	Newark	USA

Question 5:

Write a query to display customerNumber, customerName, city, country, totalAmountOfPayments corresponding to each customer from Germany, where totalAmountOfPayments is the total amount of all payments of each customer; display the results by ascending order of totalAmountOfPayments. Note that totalAmountOfPayments is NULL for customers who have no payment.

	customerNumber	customerName	city	country	totalAmountOfPayments
1	273	Franken Gifts, Co	München	Germany	NULL
2	307	Der Hund Imports	Berlin	Germany	NULL
3	335	Cramer Spezialitäten, Ltd	Brandenburg	Germany	NULL
4	361	Kommission Auto	Münster	Germany	NULL
5	223	Natürlich Autos	Cunewalde	Germany	NULL
6	247	Messner Shopping Network	Frankfurt	Germany	NULL
7	128	Blauer See Auto, Co.	Frankfurt	Germany	75937.76
8	259	Toms Spezialitäten, Ltd	Köln	Germany	89223.14

Question 6:

Write a query to display the information of all employees who are not sales representative of any customer. Note that in the table customers, salesRepEmpoyeeNumber is the employeeNumber of the sales representative for each customer.

	employeeNumber	lastName	firstName	email	officeCode	reportsTo	jobTitle
1	1002	Murphy	Diane	dmurphy@classicmodelcars.com	1	NULL	President
2	1056	Patterson	Mary	mpatterso@classicmodelcars.com	1	1002	VP Sales
3	1076	Firrelli	Jeff	jfirrelli@classicmodelcars.com	1	1002	VP Marketing
4	1088	Patterson	William	wpatterson@classicmodelcars.com	6	1056	Sales Manager (APAC)
5	1102	Bondur	Gerard	gbondur@classicmodelcars.com	4	1056	Sale Manager (EMEA)
6	1143	Bow	Anthony	abow@classicmodelcars.com	1	1056	Sales Manager (NA)
7	1619	King	Tom	tking@classicmodelcars.com	6	1088	Sales Rep
8	1625	Kato	Yoshimi	ykato@classicmodelcars.com	5	1621	Sales Rep

Question 7:

Write a query to display productcode, productName, productcategory, numberOfOrders, numberOfCustomers, totalQuantityOrdered, totalprofit corresponding to each 'Planes' product where:

- numberOfOrders is the number of orders in which the product was ordered
- numberOfCustomers is the number of different customers who have already ordered the product
- totalQuantityOrdered is the total quantity of the corresponding product ordered in all orders
- totalprofit is the total profit from all orders of the corresponding product. Note that the profit for one item of the product is calculated by the difference between priceEach (in orderdetails table) and buyPrice (in products table).

Display the results in descending order of totalProfit as follows:

	productCode	productName	productCategory	numberOfOrders	numberOfCustomers	totalQuantityOrdered	totalProfit
1	S18_1662	1980s Black Hawk Helicopter	Planes	20	19	729	45170.83
2	S700_2834	ATA: B757-300	Planes	23	20	758	35475.90
3	S700_4002	American Airlines: MD-11S	Planes	25	23	974	29380.03
4	S24_3949	Corsair F4U (Bird Cage)	Planes	25	23	929	27795.79
5	S24_4278	1900s Vintage Tri-Plane	Planes	24	18	877	27388.74
6	S24_1785	1928 British Royal Navy Airplane	Planes	23	18	804	24412.01
7	S700_1691	American Airlines: B767-300	Planes	22	17	665	21900.23
8	S24_2841	1900s Vintage Bi-Plane	Planes	20	18	703	20179.31
9	S18_2581	P-51-D Mustang	Planes	23	20	765	19958.58
10	S700_2466	America West Airlines B757-200	Planes	25	22	885	19491.63
11	S700_3167	F/A 18 Hornet 1/72	Planes	23	19	861	15804.80
12	S72_1253	Boeing X-32A JSF	Planes	21	20	748	8975.19

Question 8:

Create a stored procedure named proc.numberOfOrders to calculate the number of orders made by a given customer where @customerNumber int is an input parameter and @numberOfOrders int is an output parameter of the procedure.

For example, when we execute the procedure proc_numberOfOrders by using the following statements, the result should be as in the figure:

```
declare @x int
exec proc_numberOfOrders 103, @x output
select @x as NumberOfOrders
```

	NumberOfOrders
1	3

Question 9:

Create a trigger named tr_insertPayment for the insert statement on table payments so that when we insert one or more payments in the table payments, the system will display customerNumber, customerName, checkNumber, paymentDate, amount corresponding to the payments that have been inserted.

for example, when you execute the following statement, the system will display the following results:

insert into payments(customerNumber,checkNumber, paymentDate, amount)

values (103,'HQ336364','2004-10-29',1000),

(112,'QM789234','2005-10-30',200)

	customerNumber	customerName	checkNumber	paymentDate	amount
1	112	Signal Gift Stores	QM789234	2005-10-30	200.00
2	103	Atelier graphique	HQ336364	2004-10-29	1000.00

Question 10:

Write queries to delete from table products all products that have never been sold in any order.