For the submission of your work:

- Create a folder named **RollNo_Name_DBI202_PaperNo**, e.g. se01245_LongNT_DBI202_01. **Do not** create any subfolder in this folder.

- For each question, create a separate .sql file named Q1.sql, Q2.sql, etc., corresponding to the question number. 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], *etc*.

- 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.

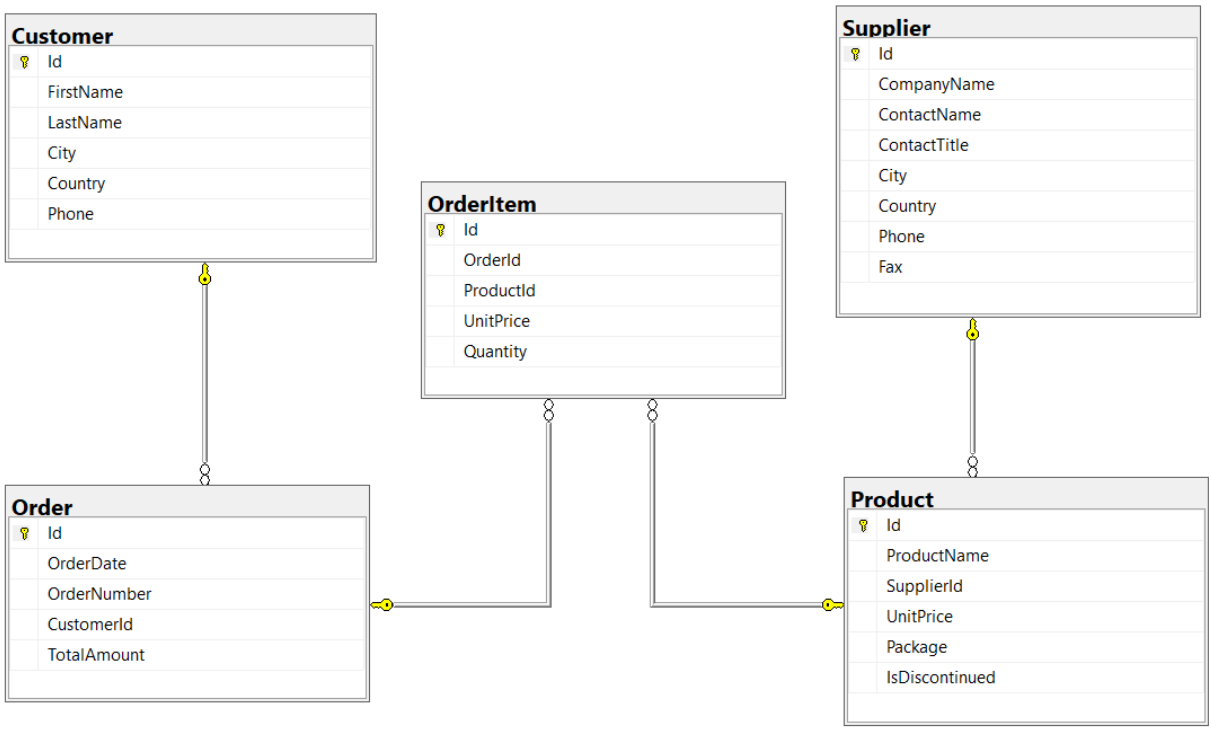
- On completion, import your work by browsing to the above folder.

- 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:

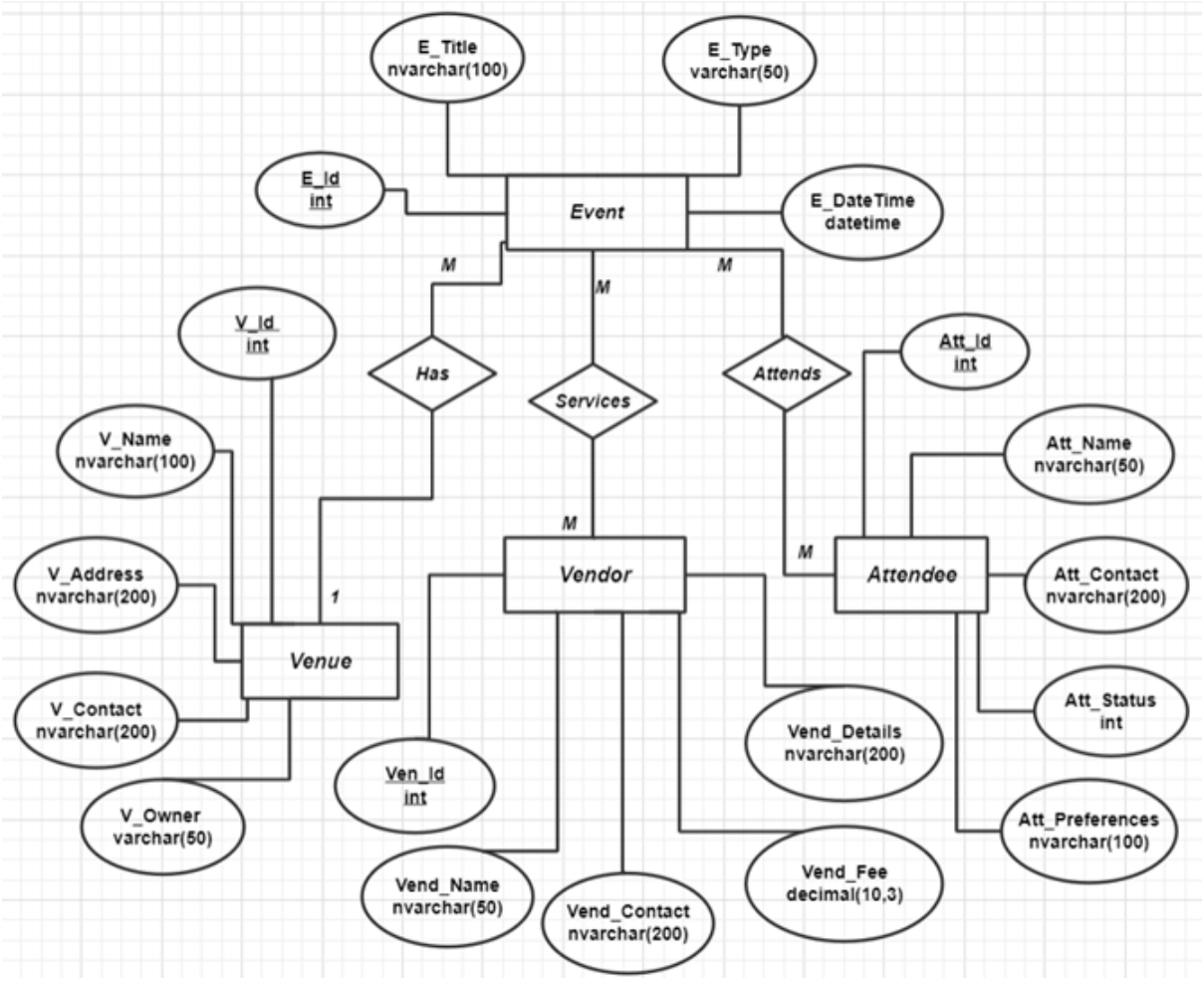
Create one database and then write SQL statements to create, in this database, all tables derived from the ERD given in the following picture with appropriate attributes, primary keys and foreign keys.

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.



Picture 1.1

Question 2:

Write a query to find Firstname, Lastname, City, Phone of Customer whose Country is 'France'

	Firstname	Lastname	City	Phone
1	Frédérique	Citeaux	Strasbourg	88.60.15.31
2	Laurence	Lebihan	Marseille	91.24.45.40
3	Janine	Labrune	Nantes	40.67.88.88
4	Martine	Rancé	Lille	20.16.10.16
5	Carine	Schmitt	Nantes	40.32.21.21
6	Daniel	Tonini	Versailles	30.59.84.10
7	Annette	Roulet	Toulouse	61.77.61.10
8	Marie	Bertrand	Paris	(1) 42.34.22.66
9	Dominique	Perrier	Paris	(1) 47.55.60.10
10	Mary	Saveley	Lyon	78.32.54.86
11	Paul	Henriot	Reims	26.47.15.10

Picture 2.1

Question 3:

Returns OrderID, TotalAmount, Fullname (as Firstname + Lastname), Country of Customers who have placed orders with TotalAmount between 6400 and 10000

	OrderID	TotalAmount	Fullname	Country
1	360	6475.40	Jose, Pavarotti	USA
2	386	6483.05	Roland, Mendel	Austria
3	746	6527.25	Maria, Larsson	Sweden
4	770	6750.00	Roland, Mendel	Austria
5	774	6941.49	Horst, Kloss	Germany
6	529	6984.50	Roland, Mendel	Austria
7	113	7390.20	Frédérique, Citeaux	France
8	665	8267.40	Patricia, McKenna	Ireland
9	267	8623.45	Roland, Mendel	Austria
10	569	8891.00	Howard, Snyder	USA
11	785	8902.50	Karl, Jablonski	USA

Picture 3.1

Question 4:

Show the ProductId, ProductName and Quantity of each product ordered in December. Only show items with quantity >=120

	ProductId	ProductName	Quantity
1	60	Camembert Pierrot	126
2	72	Mozzarella di Giovanni	127
3	53	Perth Pasties	130
4	74	Longlife Tofu	134
5	56	Gnocchi di nonna Alice	138
6	68	Scottish Longbreads	141
7	39	Chartreuse verte	168
8	71	Flotemysost	189
9	55	Pâté chinois	195
10	51	Manjimup Dried Apples	206
11	31	Gorgonzola Telino	313

Picture 4.1

Question 5:

Show Firstname, Lastname of Customers who purchased the product with Productname Longlife Tofu, calculate the order quantity of each of these customers

	Firstname	Lastname	TotalQuantity
1	Carlos	González	14
2	Carlos	Hernández	16
3	Horst	Kloss	15
4	Jean	Fresnière	30
5	Mary	Saveley	15
6	Paolo	Accorti	5
7	Pascale	Cartrain	20
8	Pirkko	Koskitalo	35
9	Roland	Mendel	86
10	Yang	Wang	41
11	Zbyszek	Piestrzeniewicz	20

Picture 5.1

Question 6:

Revenue statistics for each product in 2014, knowing that Revenue is calculated by the total amount of the product (OrderItem.UnitPrice * OrderItem.Quantity) on all orders. Only show the top 10 products with the highest Revenue.

	Productid	Productname	Revenue
1	38	Côte de Blaye	68510.00
2	29	Thüringer Rostbratwurst	39365.22
3	59	Raclette Courdavault	28215.00
4	60	Camembert Pierrot	18428.00
5	62	Tarte au sucre	17304.30
6	7	Uncle Bob's Organic Dried Pears	12420.00
7	51	Manjimup Dried Apples	11766.00
8	64	Wimmers gute Semmelknödel	11138.75
9	10	Ikura	9641.00
10	18	Carnarvon Tigers	9437.50

Picture 6.1

Question 7:

Find all Suppliers that supply the fewest products

	SupplierId	CompanyName	ContactName	City	Country	Phone
1	10	Refrescos Americanas LTDA	Carlos Diaz	Sao Paulo	Brazil	(11) 555 4640
2	13	Nord-Ost-Fisch Handelsgesellschaft mbH	Sven Petersen	Cuxhaven	Germany	(04721) 8713
3	27	Escargots Nouveaux	Marie Delamare	Montceau	France	85.57.00.07

Picture 7.1

Question 8:

Write a procedure List_product to display the list information of ProductName, Quantity, Unitprice (of OrderItem), Price (calculated by Quantity * Unitprice) when knowing the Id of Customer. Display the result sorted by Product name.

For example, when you execute the following statement, the system will display the results as in the following figure:

exec List_product 13

	ProductName	Quantity	UnitPrice	Price
1	Gravad lax	1	20.80	20.80
2	Sir Rodney's Scones	10	8.00	80.00

Picture 8.1

Question 9:

Write a trigger Auto_fill_phone on the Customer table for the Insert and Update events to automatically fill in the Phone column if it is null. Running the following test statement gives the result as shown below:

```
SET IDENTITY_INSERT Customer ON;

INSERT INTO Customer (Id,FirstName,LastName,City,Country,Phone)

VALUES(102,'Maria','Anders','Berlin','Germany',null)

SET IDENTITY_INSERT Customer OFF;

select * from Customer

where id = 102
```

	Id	FirstName	LastName	City	Country	Phone
1	102	Maria	Anders	Berlin	Germany	(1) 135-9999

Picture 9.1

Question 10:

Delete all products that have not been ordered by anyone