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.

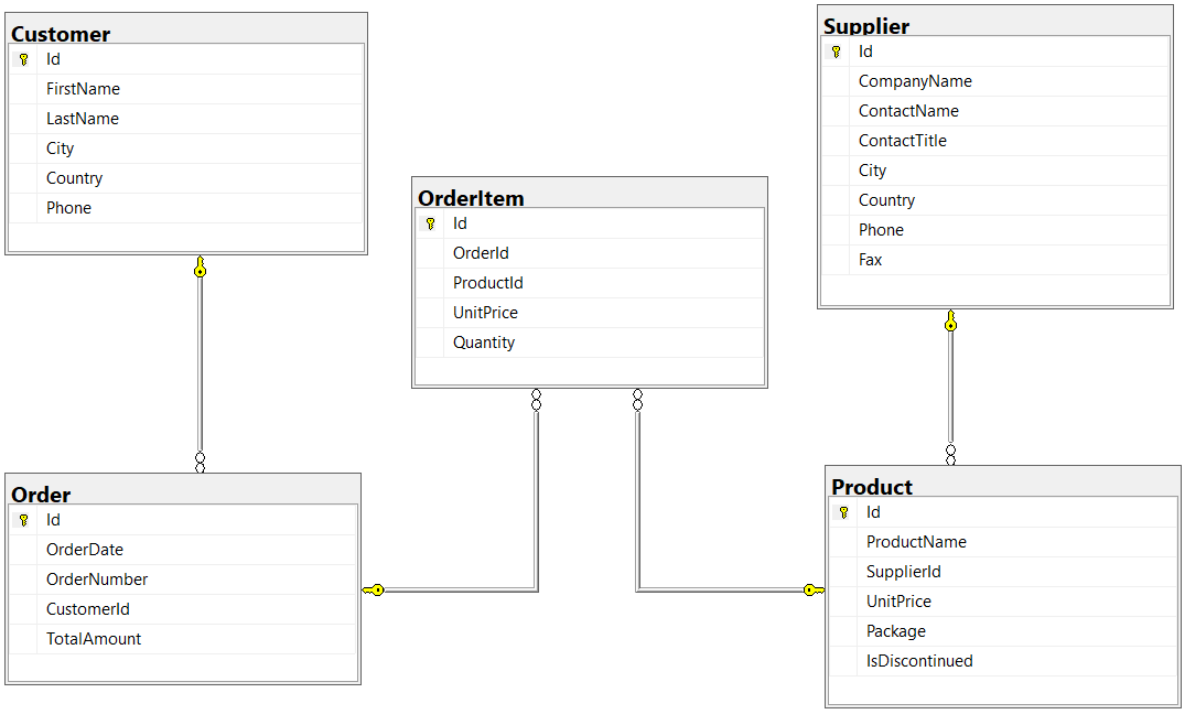
- On completion, import your work by browsing to the above folder.

- 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:

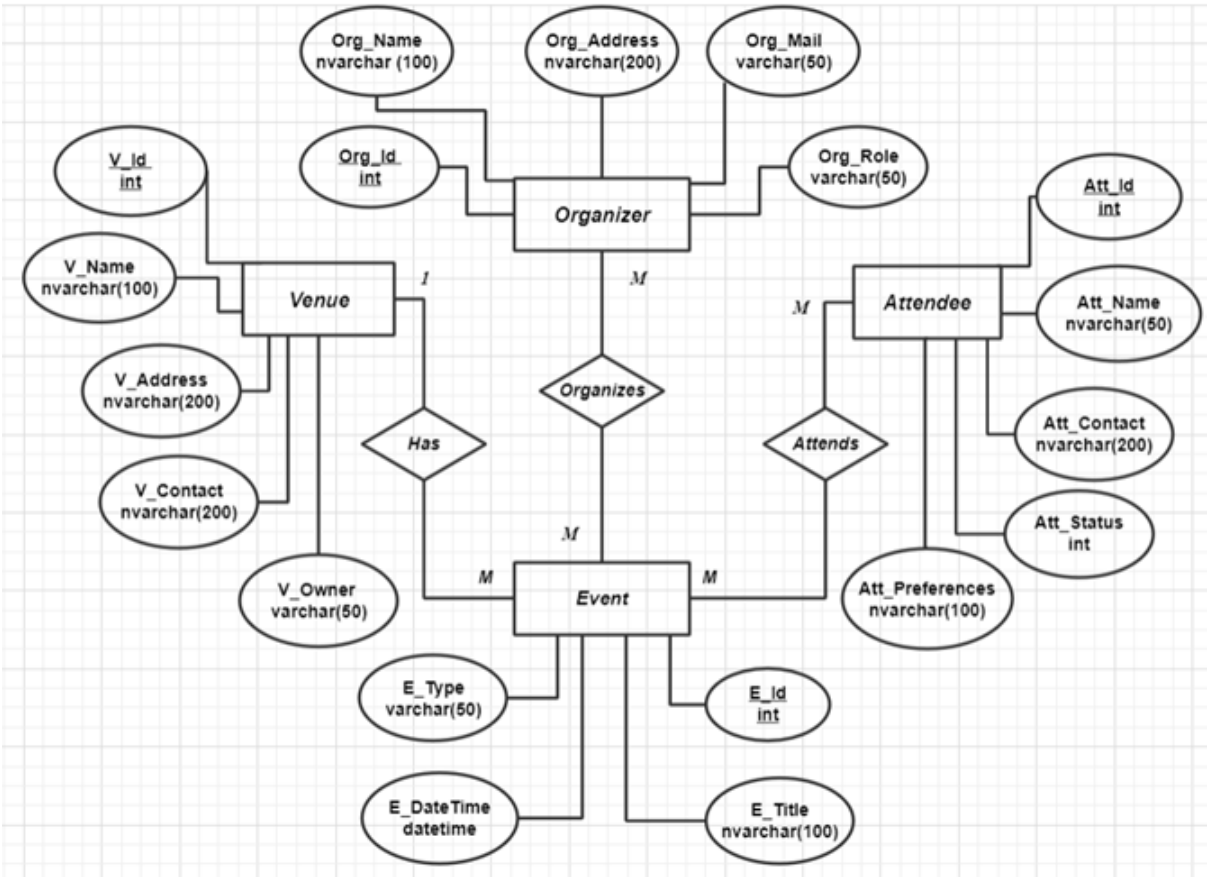
Create one database and then write SQL statements to create, in this database, all tables derived from the ERD given in the following picture with appropriate attributes, primary keys and foreign keys.

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 'Germany'

	Firstname	Lastname	City	Phone
1	Maria	Anders	Berlin	030-0074321
2	Hanna	Moos	Mannheim	0621-08460
3	Sven	Ottlieb	Aachen	0241-039123
4	Peter	Franken	München	089-0877310
5	Philip	Cramer	Brandenburg	0555-09876
6	Renate	Messner	Frankfurt a.M.	069-0245984
7	Alexander	Feuer	Leipzig	0342-023176
8	Henriette	Pfalzheim	Köln	0221-0644327
9	Horst	Kloss	Cunewalde	0372-035188
10	Karin	Josephs	Münster	0251-031259
11	Rita	Müller	Stuttgart	0711-020361

Picture 2.1

Question 3:

Show OrderID, TotalAmount, Fullname (as Firstname + Lastname), Country of Customer who placed orders with TotalAmount > 10000

	OrderID	TotalAmount	Fullname	Country
1	444	10164.80	Horst, Kloss	Germany
2	293	10191.70	Horst, Kloss	Germany
3	232	10495.60	Paula, Wilson	USA
4	268	10588.50	Horst, Kloss	Germany
5	106	10741.60	Georg, Pipps	Austria
6	650	10835.24	Patricia, McKenna	Ireland
7	170	11283.20	Jytte, Petersen	Denmark
8	642	11380.00	Paula, Wilson	USA
9	570	11490.70	Philip, Cramer	Germany
10	177	11493.20	Jean, Fresnière	Canada
11	125	12281.20	Lúcia, Carvalho	Brazil
12	734	15810.00	Mario, Pontes	Brazil
13	783	16321.90	Jose, Pavarotti	USA
14	618	17250.00	Horst, Kloss	Germany

Picture 3.1

Question 4:

Show the ProductId, ProductName and Quantity of each product ordered in February. Only show items with quantity >=150

	ProductId	ProductName	Quantity
1	30	Nord-Ost Matjeshering	154
2	39	Chartreuse verte	159
3	75	Rhönbräu Klosterbier	162
4	61	Sirop d'érable	165
5	24	Guaraná Fantástica	166
6	29	Thüringer Rostbratwurst	188
7	55	Pâté chinois	220

Picture 4.1

Question 5:

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

	Firstname	Lastname	TotalQuantity
1	Christina	Berglund	30
2	Elizabeth	Lincoln	20
3	Felipe	Izquierdo	70
4	Horst	Kloss	60
5	Maria	Anders	6
6	Palle	Ibsen	14
7	Paula	Wilson	4
8	Philip	Cramer	49
9	Roland	Mendel	45
10	Victoria	Ashworth	30

Picture 5.1

Question 6:

Revenue statistics for each product in 2013, 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	51962.20
2	59	Raclette Courdavault	37917.00
3	29	Thüringer Rostbratwurst	36194.18
4	56	Gnocchi di nonna Alice	34754.80
5	51	Manjimup Dried Apples	26065.40
6	62	Tarte au sucre	22673.60
7	60	Camembert Pierrot	21794.00
8	17	Alice Mutton	19718.40
9	18	Carnarvon Tigers	17250.00
10	69	Gudbrandsdalsost	15156.00

Picture 6.1

Question 7:

Find all Suppliers that supply the most products

	SupplierId	CompanyName	ContactName	City	Country	Phone
1	7	Pavlova, Ltd.	Ian Devling	Melbourne	Australia	(03) 444-2343
2	12	Plutzer Lebensmittelgroßmärkte AG	Martin Bein	Frankfurt	Germany	(069) 992755

Picture 7.1

Question 8:

Write a procedure Create_an_invoice to display the list information of Product, Quantity, Unitprice (of OrderItem), Price (calculated by Quantity * Unitprice) when knowing the Id of Order. 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 Create_an_invoice 13

	ProductName	Quantity	UnitPrice	Price
1	Jack's New England Clam Chowder	16	7.70	123.20
2	Outback Lager	21	12.00	252.00
3	Ravioli Angelo	50	15.60	780.00
4	Tarte au sucre	15	39.40	591.00

Picture 8.1

Question 9:

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

SET IDENTITY_INSERT Supplier ON;

INSERT INTO Supplier (Id,CompanyName,ContactName,City,Country,Phone)

VALUES (33,'Sweet Company', 'John Calkin', 'Wuerburg', 'Germany', '0912334567')

SET IDENTITY_INSERT Supplier OFF;

select * from Supplier

where Id = 33

	Id	CompanyName	ContactName	ContactTitle	City	Country	Phone	Fax
1	33	Sweet Company	John Calkin	NULL	Wuerburg	Germany	0912334567	0912334567

Picture 9.1

Question 10:

Delete all Customers who did not order any products