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. All file created will be located in the above folder.

- 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.

- 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.

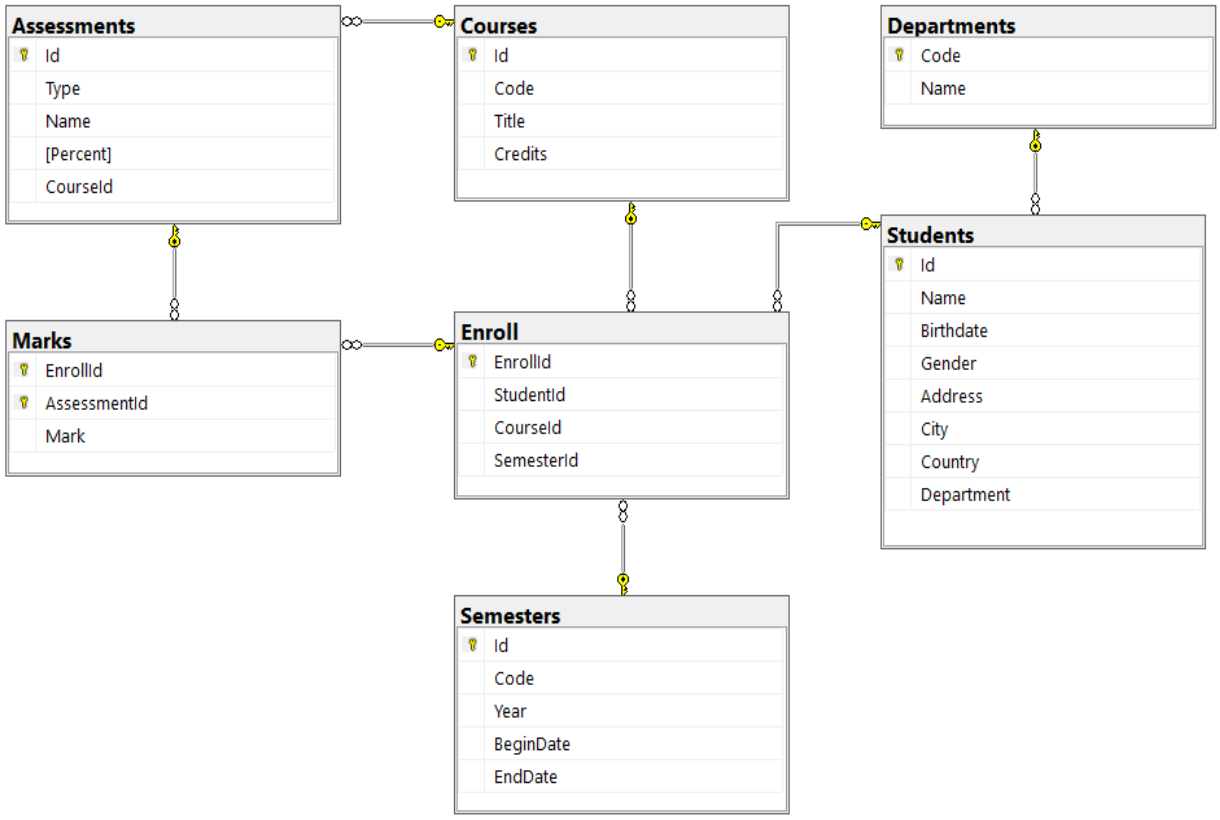
- On completion, import your work by browsing to the above folder.

- 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:

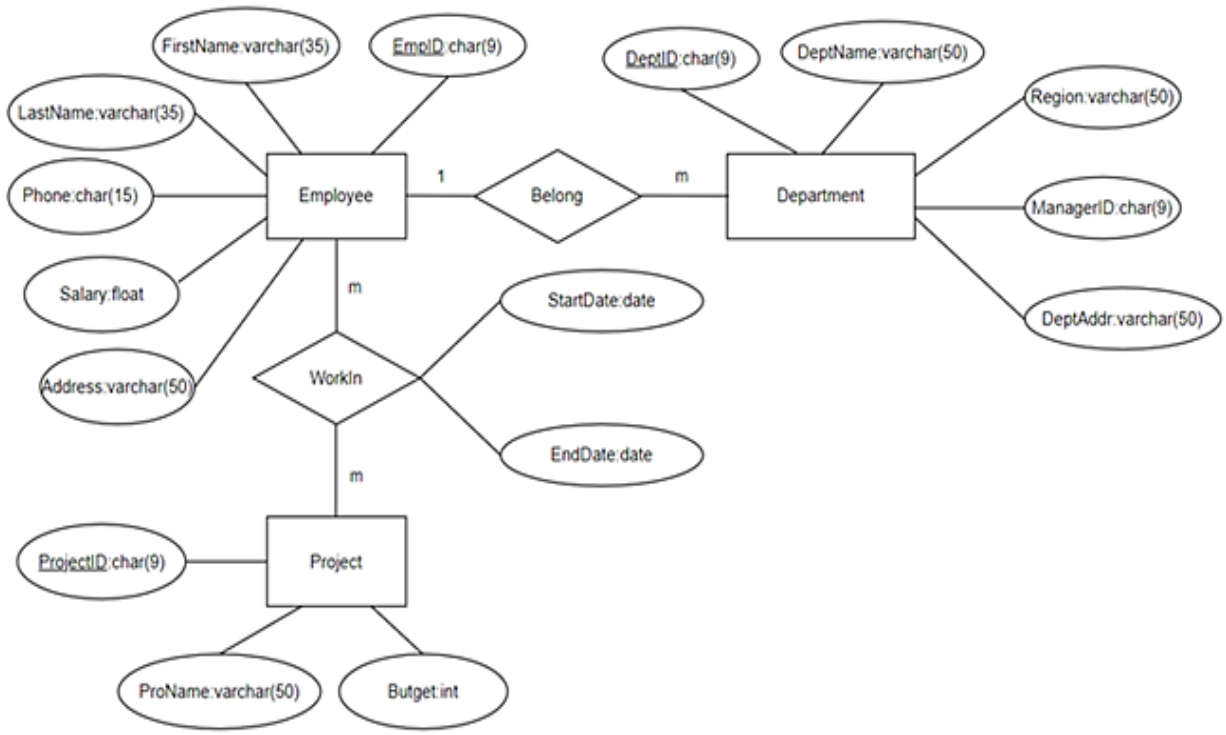
Create one database and then write SQL statements to create, in this database, all tables derived from the ERD given in the following picture with appropriate attributes, primary keys and foreign keys.

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 show Coursid, Code, Title of all Courses which have code is DBI202.

	Coursid	Code	Title
1	8	DBI202	Introduction to Databases

Picture 2.1

Question 3:

Write a query to select StudentId, Name, Gender, Country, Department of all Students having the id equal or greater than 70 and Department is AI as follows:

	StudentId	Name	Gender	Country	Department
1	70	Jael Chang	Male	South Korea	AI
2	71	Sheila Brock	Female	South Korea	AI
3	72	Melyssa Kirk	Male	Turkey	AI
4	73	Jena Skinner	Male	Norway	AI
5	74	Quyn Whitehead	Male	Nigeria	AI
6	75	Noah Fitzgerald	Female	Australia	AI
7	76	Isaiah Gates	Male	Peru	AI
8	77	Ferris Mcfarland	Female	South Africa	AI

Picture 3.1

Question 4:

Write a query to find StudentId, StudentName, Mark, Department of all Students having the highest Mark in Department is SE. The result is ordered by StudentId.

	StudentId	StudentName	Mark	Department
1	5	Austin Schroeder	10.0	SE
2	5	Austin Schroeder	10.0	SE
3	9	Clio Mcintyre	10.0	SE
4	39	Tamara Combs	10.0	SE

Picture 4.1

Question 5:

Write a query to display StudentId, StudentName, Code, Department, NumberOfStudents, where NumberOfStudents is the count of distinct Students enroll in Semesters Su2022 and Department is SE as follows:

	StudentId	StudentName	Code	Department	NumberOfStudents
1	1	Stacey Payne	Su2022	SE	1
2	6	Halla Grimes	Su2022	SE	1
3	10	Henry Travis	Su2022	SE	1
4	14	Blossom Donovan	Su2022	SE	1
5	18	Orlando Pena	Su2022	SE	1
6	19	Grant Glover	Su2022	SE	1
7	25	Blythe Ballard	Su2022	SE	1
8	26	Kameko Sanders	Su2022	SE	1
9	28	Malcolm Burks	Su2022	SE	1

Picture 5.1

Question 6:

Write a query to find StudentId, StudentName, EnrollId, CodeName, Department, BeginDate of all Students with a EnrollId between 10 and 20 and Department is SE. The result is ordered by BeginDate descending.

	StudentId	StudentName	EnrollId	CodeName	Department	BeginDate
1	22	Kaitlin Adkins	20	Sp2022_B5	SE	2022-04-01
2	6	Halla Grimes	19	Sp2022	SE	2022-01-01
3	39	Tamara Combs	18	Fa2021_B5	SE	2021-12-01
4	21	Jermaine Thornton	17	Fa2021	SE	2021-09-01
5	28	Malcolm Burks	16	Su2021_B5	SE	2021-08-01

Picture 6.1

Question 7:

Write a query to find StudentId, StudentName, AssessmentID, Type, CourseId, Avg_Mark of all Students with Avg_Mark greater than or equal 9.8.

	StudentId	StudentName	AssessmentID	Type	CourseId	Avg_Mark
1	21	Jermaine Thornton	29	assignment	6	9.900000
2	29	Jael Alexander	14	assignment	1	9.900000
3	36	Ina Melton	50	lab	10	9.900000
4	37	Arthur Cook	70	lab	13	9.900000
5	43	Avye Christian	60	lab	12	9.900000
6	78	Lacey Wilkinson	34	quiz	7	9.900000
7	93	Deanna Chapman	21	quiz	5	9.900000
8	89	Thaddeus Wilkinson	34	quiz	7	10.000000

Picture 7.1

Question 8:

Create a trigger named trgDelayEndSemester for the update event to prevent the end date of the semester from occurring before the previously determined EndDate (The existing EndDate in the database). However, if the end date of the semester is specified to occur after the existing end date, it will take effect, and the data will be updated

For example, when the following statement is executed, the result will be as in the following figure:

```
        UPDATE Semesters
        SET EndDate = '2020-07-30'
        WHERE Id =9
SELECT EndDate
 FROM Semesters
WHERE Id =9
```

	EndDate
1	2020-07-31

Picture 8.1

Question 9:

Create a procedure named prcgetDepartment to get the Name of an Student's Department base on Student's name.

For example, when the following statement is executed, the result will be as in the following figure:

```
DECLARE @X varchar(50);
DECLARE @In varchar(100)= 'Kelly Dillard';
EXECUTE prcgetDepartment @In, @X OUTPUT;
SELECT @X AS Department
```

	Department
1	Artificial Intelligence

Picture 9.1

Question 10:

Find all students whose names are Stacey Payne from Italy and update country to VietNam.