# Task-1



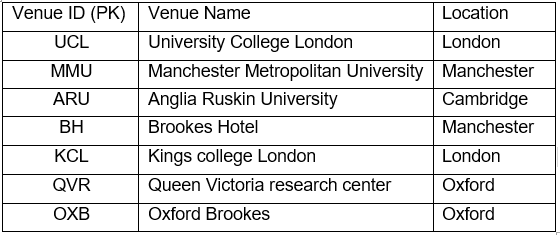


Fig 1: Entity relationship model for the proposed database system for Evans Conference Management.

B.

The process of reducing redundant data, removing insert, update, delete anomalies and logically splitting any compound is called normalization.

1NF / 2NF





3NF

C.

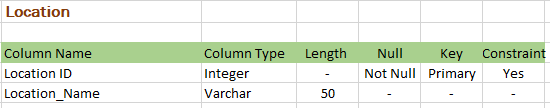


Fig 2: Data dictionary of location.

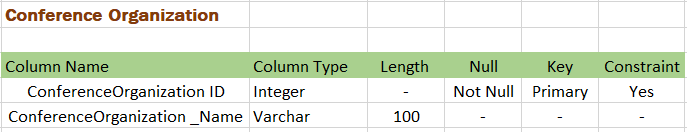


Fig 3: Data dictionary of Conference Organization.

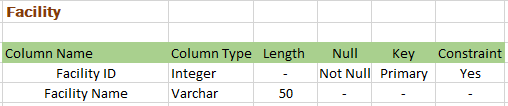


Fig 4: Data dictionary of Facility.

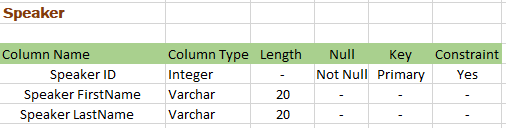


Fig 5: Data dictionary of Speaker.

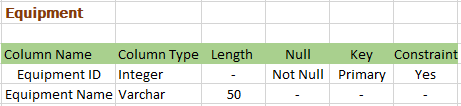


Fig 6: Data dictionary of Equipment.

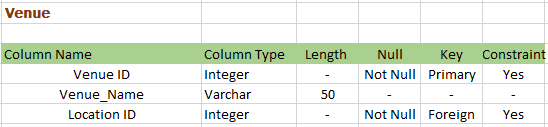


Fig 7: Data dictionary of Venue.

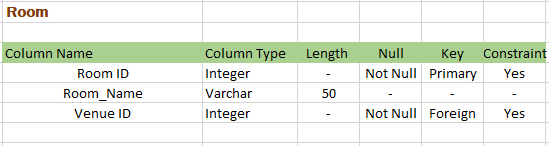


Fig 8: Data dictionary of Room.

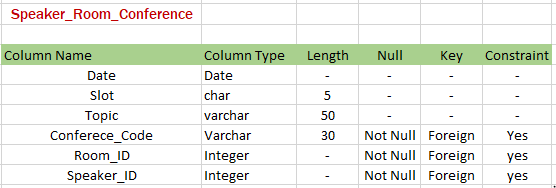


Fig 9: Data dictionary of Speaker\_Room\_Conference.

# Task-2

A.

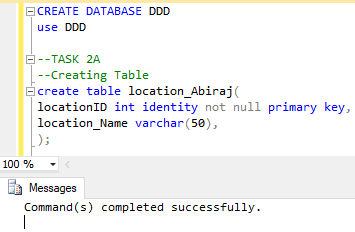


Fig 9: location table created successfully.

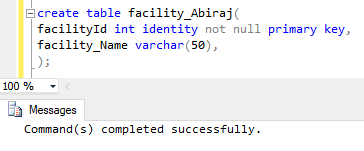


Fig 10: location table created successfully.

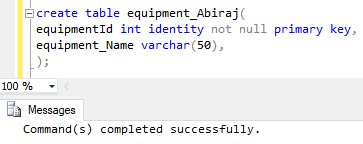


Fig 11: Equipment table created successfully.

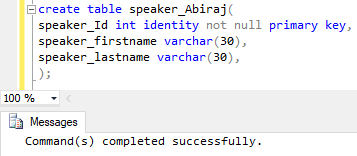


Fig 12: Speaker table created successfully.

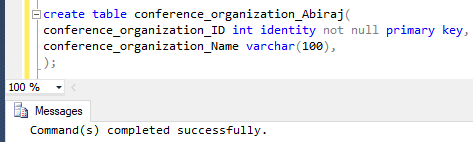


Fig 13: Conference table created successfully.

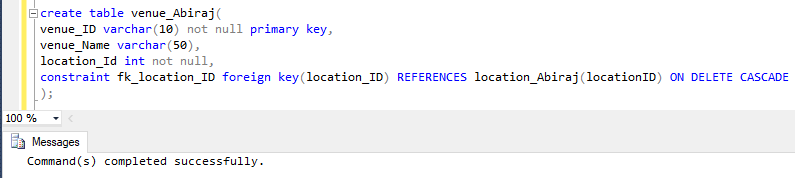


Fig 14: Venue table created successfully.

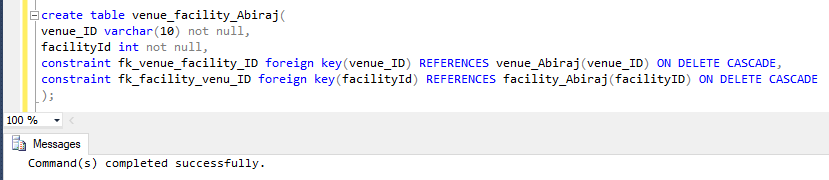


Fig 15: Venue\_Facility table created successfully.

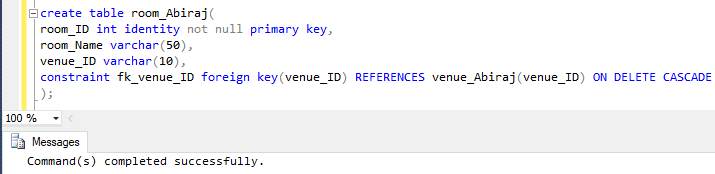


Fig 16: Room table created successfully.

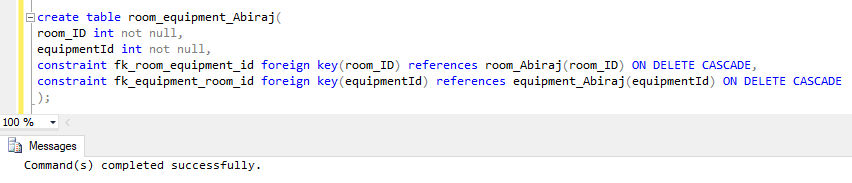


Fig 17: Room\_Eqipment table created successfully.

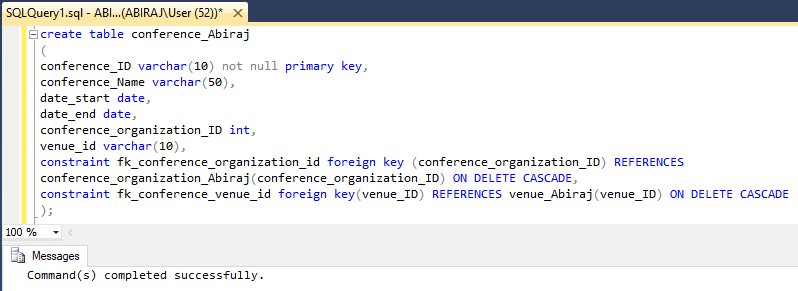


Fig 18: Conference table created successfully.

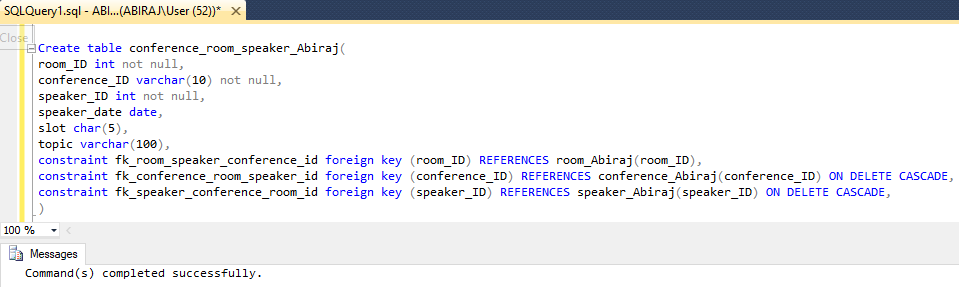


Fig 19: Conference\_Room\_Speaker table created successfully.

B.

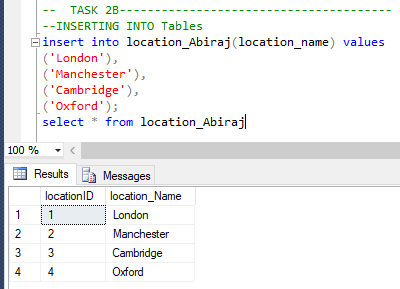


Fig 20: value successfully inserted into location.

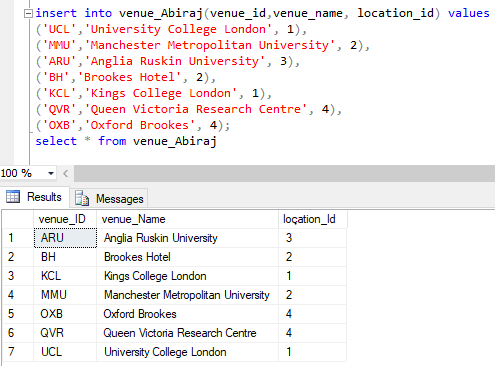


Fig 21: value successfully inserted into Venue.

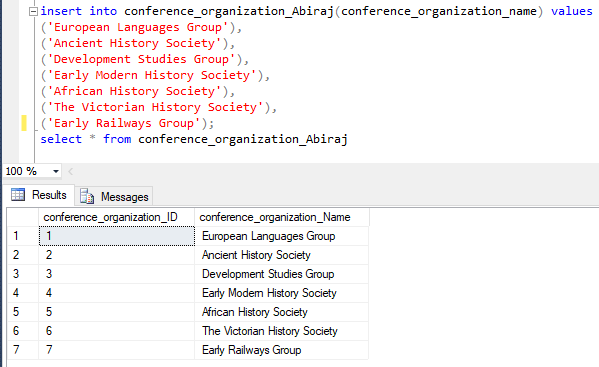


Fig 22: value successfully inserted into Conference\_Organization.

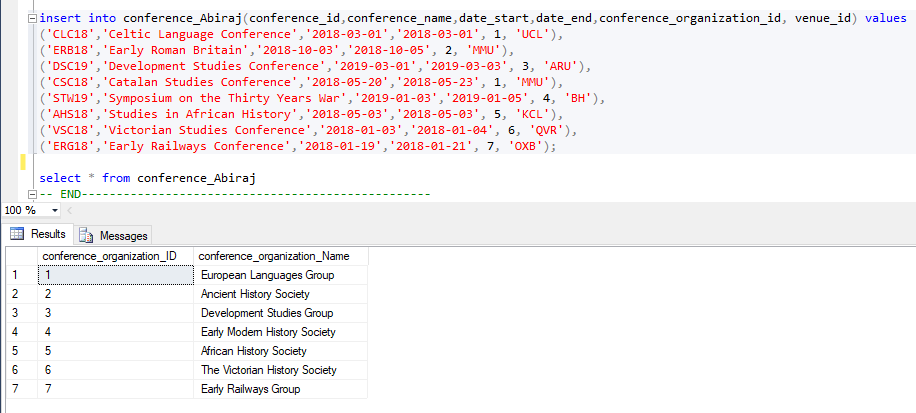


Fig 23: value successfully inserted into Conference.

C.

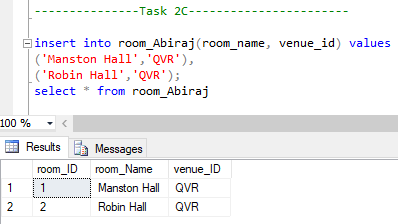


Fig 24: value successfully inserted into room.

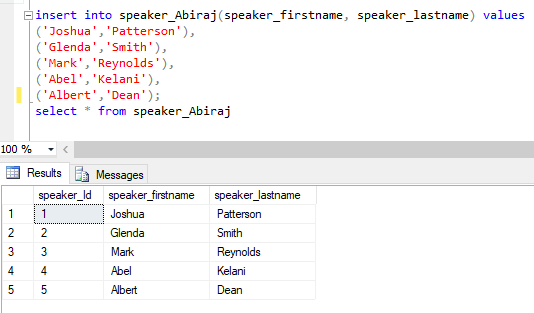


Fig 25: value successfully inserted into speaker.

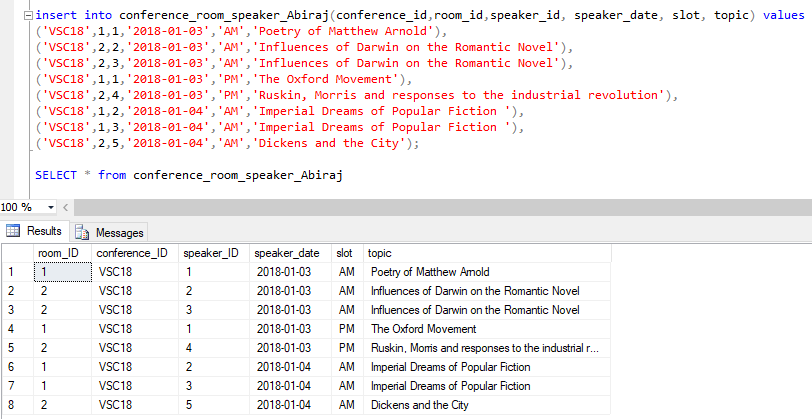


Fig 26: value successfully inserted into Conference\_Room\_Speaker.

D.

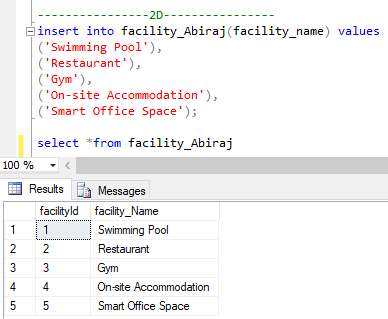


Fig 27: value successfully inserted into the facility.

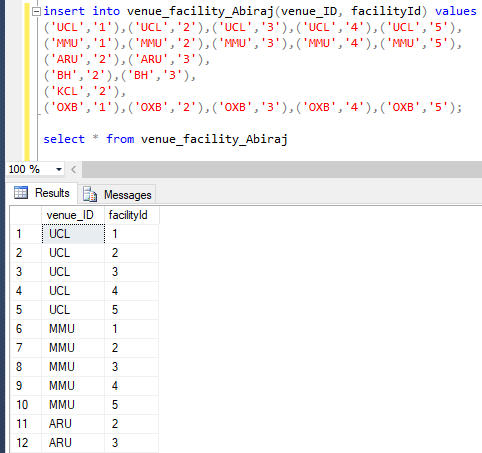


Fig 28: value successfully inserted into the Venue\_Facility.

E.

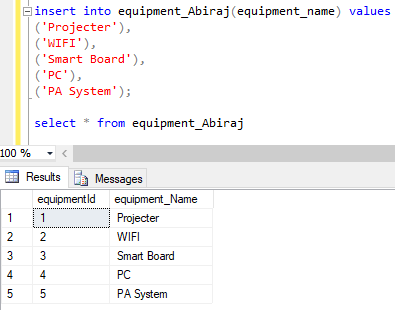


Fig 29: value successfully inserted into the equipment.

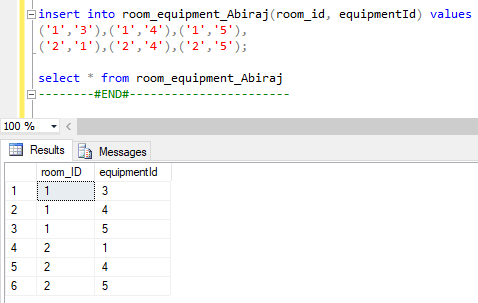


Fig 30: value successfully inserted into the Room\_Eqipment.

F.

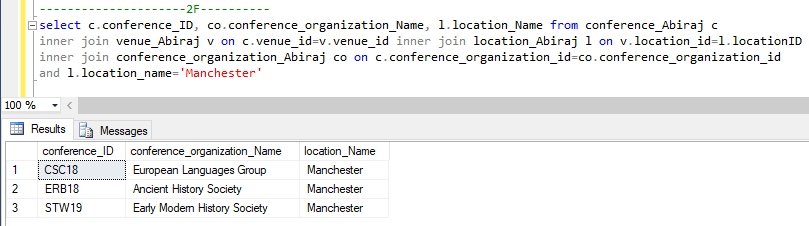


Fig 31: Query successfully run which select the conference code and conference organization for conference in Manchester.

G.

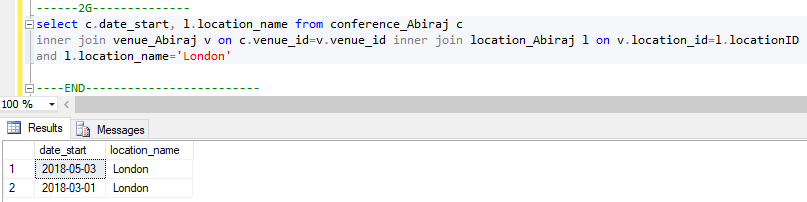


Fig 32: Query successfully run that selects start dates for all London based conferences.

H.

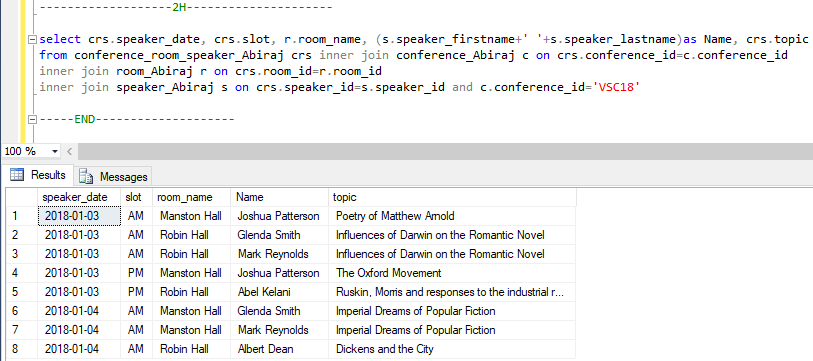


Fig 33: Query successfully run that shows the details for conferences VSC18.

I.

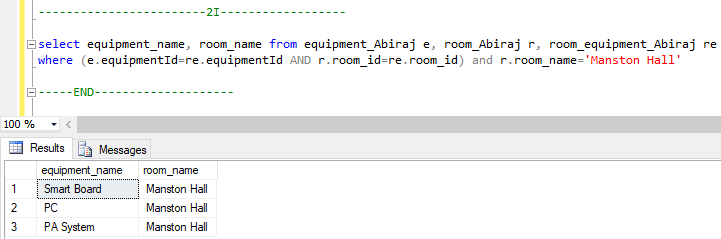


Fig 34: Query successfully run that shows the equipment in Manston Hall.

J.

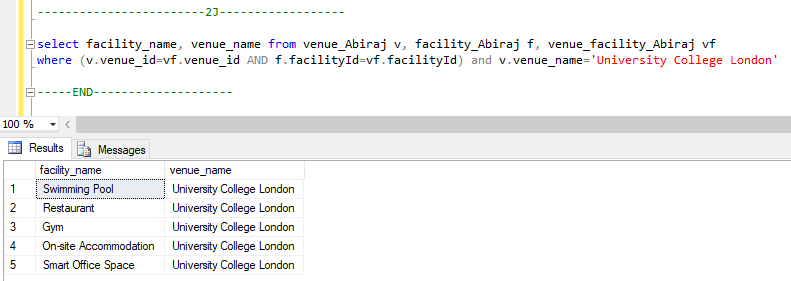


Fig 35: Query successfully run that shows the Facilities available at University College London.

K.

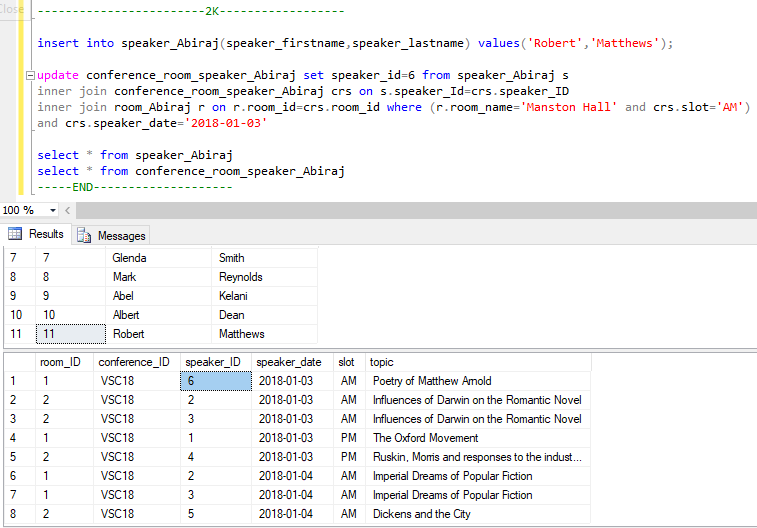


Fig 36: Query successfully updated for the AM slot in Manston Hall on the 03/JAN/2018 to Robert Matthews

L.

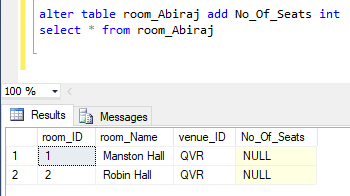


Fig 37: database successfully altered to keep a record of number of seats available in each room.

# Task-4

A database that involves of more files located in different locations that interconnect passing through the computer networks is known as distributed database system. Also, a distributed database system do not have any multiprocessing arrangement.

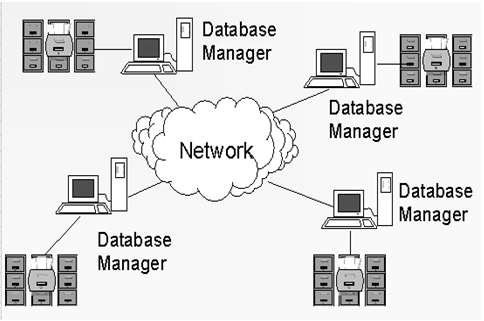


Fig: distributed database system.

There are several advantages of distributed database system which are explained below:

* **Quick response:** If all the data is kept in one location and when users try to fetch that data from multiple locations then it takes time to response for multiple users who are fetching data from multiple time, due to over requesting load. Instead of that if data is kept in different sites then the response time to user is less, due to less requesting load.
* **Flexible growth:** The system can be easily expanded in future than centralized database system. If a new system need to be expanded in centralized database system then it requires hard work whereas in distributed system we can easily add new system with files and connecting them to the distributed system without any large labors and interference in current function.
* **Provide improved availability and reliability:** if one system is failed then the whole system will be down in centralized database system. But in distributed system the other system will work continually even the one part of the system fails.
* **Decrease operating cost:** if the one part of the system needs to be maintain or update in distributed system then no need to down the whole system. If we have to down the whole system and again make up for maintenance or update then it will add to your additional operating cost. As this happens in centralized system.

The disadvantages of distributed database system are as follows:

* It is costly as it is complex and also it is difficult to maintain.
* Database need to be secured in all the sites where the database are stored. So, it is challenging to provide security in distributed database system and also tough to secured the setup joining all the nodes.
* There could be data redundancy because of the data is kept in different locations and also it will be problematic to maintain the reliability of data.
* It is somewhat complex and because of data is distributed in different locations it is difficult to ensure that the user got the homogenous outlook of database.

According to the scenario Evans Conference Management Company manages academic conference for third party organization across all over the United Kingdom. Hence, they might have branches too in across all over the United Kingdom.

* So, to implement that to store the data from all the branches of Evans Conference Management Company then they have to implement distributed database system.
* After implementing distributed database system all the data stored in databases in different location should be secured for data protection as well as they have to secure the setup connections in all the nodes.
* And to expand the system in future they do not have to worry about that just they need to add the computer with data and connect it to the distributed database system.

In this way the distributed database system can be contributed according to the scenario.

# Task – 5

A.

Evaluation of work.

* **Conceptual work:** the Lincoln, United Kingdom based is Evans Conference Management Company which arrange academic conference for third party organizations like universities in all across the United Kingdom. And according to the scenario the database system should be developed to carry out the business which should have capability to store all the information needed for the Evans Conference management company.
* **Logical work:** after understanding the requirements I have made entity relationship diagram and then did normalization to reduce the data redundancy. So, to make entity relationship diagram I have used visual paradigm software from where I easily developed this and after that did normalization. In normalization I have break down the documentation 1 table into three parts 1NF, 2NF and 3NF after that those data which came after normalizing the documentation 1 table up to 3Nf it became the final result to implement it into the query.
* **Physical work:** Finally, after making entity relationship diagram and doing normalization I wrote that final outcome of normalization into structure query language (SQL) to make able to store all the information needed for the Evans Conference management company into the database. So, I have used SQL Server management studio 2014 software to implement that final outcome of normalization into the SQL query.

Likewise, I created database name as DDD and then started to create the table according to the requirements like: room, venue, conference, speaker, location, facility and so on also then inserted all the data given in the scenario. Except this I also updated query in some cases like updating speaker and then altering the table room adding new column as number of seats available and so on.

Finally, in this way I created the database that has capability to store the all the information needed for the Evans Conference management company.