//We start with the sport table since it has no dependencies on other tables, ERD for reference.

CREATE TABLE [dbo].[Equipment] (

[LotNumber] INT NOT NULL,

[Type] CHAR (10) NOT NULL,

[Units] INT NOT NULL,

PRIMARY KEY CLUSTERED ([LotNumber] ASC)

);

//Next The Sport Table with one dependency on Equipment.

CREATE TABLE [dbo].[Sports] (

[SportName] CHAR (10) NOT NULL,

[EquipmentUsed] INT NOT NULL,

PRIMARY KEY CLUSTERED ([SportName] ASC),

CONSTRAINT [FK\_Sports\_ToTable] FOREIGN KEY ([EquipmentUsed]) REFERENCES [dbo].[Equipment] ([LotNumber])

);

//Now the building table with the 2 previous PKs as FKs

CREATE TABLE [dbo].[Building] (

[BuildingID] INT NOT NULL,

[BuildingName] CHAR (30) NOT NULL,

[Type] CHAR (10) NOT NULL,

[Area] DECIMAL (18) NOT NULL,

[FreeArena] INT NOT NULL,

[SportPlayed] CHAR (10) NOT NULL,

[EquipmentLot] INT NOT NULL,

PRIMARY KEY CLUSTERED ([BuildingID] ASC),

CONSTRAINT [FK\_Building\_ToTable] FOREIGN KEY ([SportPlayed]) REFERENCES [dbo].[Sports] ([SportName]),

CONSTRAINT [FK\_Building\_ToTable\_1] FOREIGN KEY ([EquipmentLot]) REFERENCES [dbo].[Equipment] ([LotNumber])

);

//The HotelRoom which is also independent but we create roomID as distinct Primary key in order to reference roomNumber which is not Unique

CREATE TABLE [dbo].[HotelRoom] (

[RoomID] INT NOT NULL,

[HotelName] CHAR (30) NOT NULL,

[Address] CHAR (30) NOT NULL,

[RoomNumber] INT NOT NULL,

[Type] CHAR (10) NOT NULL,

[Price] DECIMAL (18) NOT NULL,

CONSTRAINT [PK\_HotelRoom] PRIMARY KEY CLUSTERED ([RoomID] ASC)

);

//The Delegation chief table but for this one we allow null for the attribute Res\_ID which is a FK. Of a table we have not yet created, we need to do this or we will be unable to add data to delegation chief table.

CREATE TABLE [dbo].[DelegationChief] (

[ChiefID] INT NOT NULL,

[FirstName] VARCHAR (50) NOT NULL,

[LastName] VARCHAR (50) NOT NULL,

[PhoneNumber] INT NOT NULL,

[Res\_ID] INT NULL,

CONSTRAINT [FK\_DelegationChief\_Reservation] FOREIGN KEY ([Res\_ID]) REFERENCES [dbo].[Reservation] ([ReservationId])

);

//Now The Reservation Table which holds all the relationships together

CREATE TABLE [dbo].[Reservation] (

[ReservationId] INT NOT NULL,

[Date] DATE NOT NULL,

[StartHr] REAL NOT NULL,

[EndHr] REAL NOT NULL,

[Hotel\_Start] DATE NOT NULL,

[Hotel\_End] DATE NOT NULL,

[ChiefID] INT NOT NULL,

[SportBld] INT NOT NULL,

[Sport] CHAR (10) NOT NULL,

[Room\_Res] INT NOT NULL,

PRIMARY KEY CLUSTERED ([ReservationId] ASC),

CONSTRAINT [FK\_Reservation\_ToTable\_1] FOREIGN KEY ([SportBld]) REFERENCES [dbo].[Building] ([BuildingID]),

CONSTRAINT [FK\_Reservation\_ToTable\_2] FOREIGN KEY ([Sport]) REFERENCES [dbo].[Sports] ([SportName]),

CONSTRAINT [FK\_Reservation\_ToTable\_3] FOREIGN KEY ([Room\_Res]) REFERENCES [dbo].[HotelRoom] ([RoomID])

);

/\* Now we populate the database, I used the old access file I made for refrence and changed a few things, The final step was altering the delegation chief table and giving the RES\_ID values depending on the match type date and delegation chief, this was done via the design option on MSQL 19.

All the queries or solutions were made on MSQL19 and exported to the projects folder as SQL code

All data in the tables were extracted as flat files to the projects folder,I also provided images for type reference in SQL 19 design UI

I couldn’t export the ERD made by SQL 19 but I provided an image for it it was similar to the one I made using draw.io

I was also trying to export the whole database as .bak file but failed to do so I will bring my laptop on Tuesday and maybe I can submit it then\*/