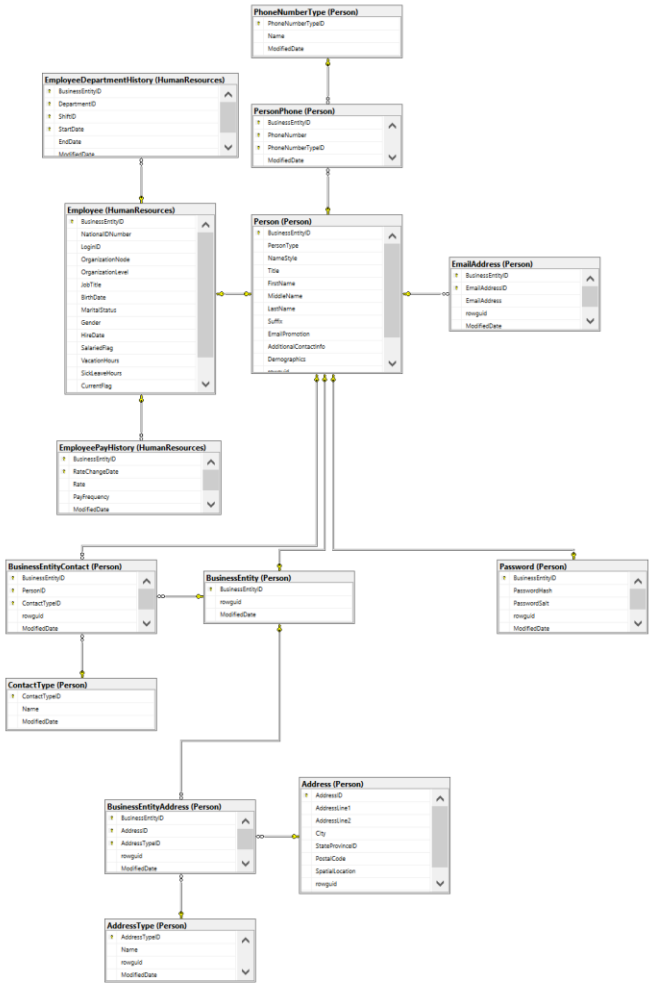
Assignments 31 - 34 are group assignments.

1. Write a short essay (500+ words) talking about a scenario: Good news everyone! We (Wide World Importers) just brought out a small company called “Adventure works”! Now that bike shop is our sub-company. The first thing of all works pending would be to merge the user logon information, person information (including emails, phone numbers) and products (of course, add category, colors) to WWI database. Include screenshot, mapping and query.

   Adventure Works is a company that has been bought and it is a bike shop with some information that needs to be merged in the company’s database. In order to check the integrity of the AW’s current status regarding the database, we first look at its schema:

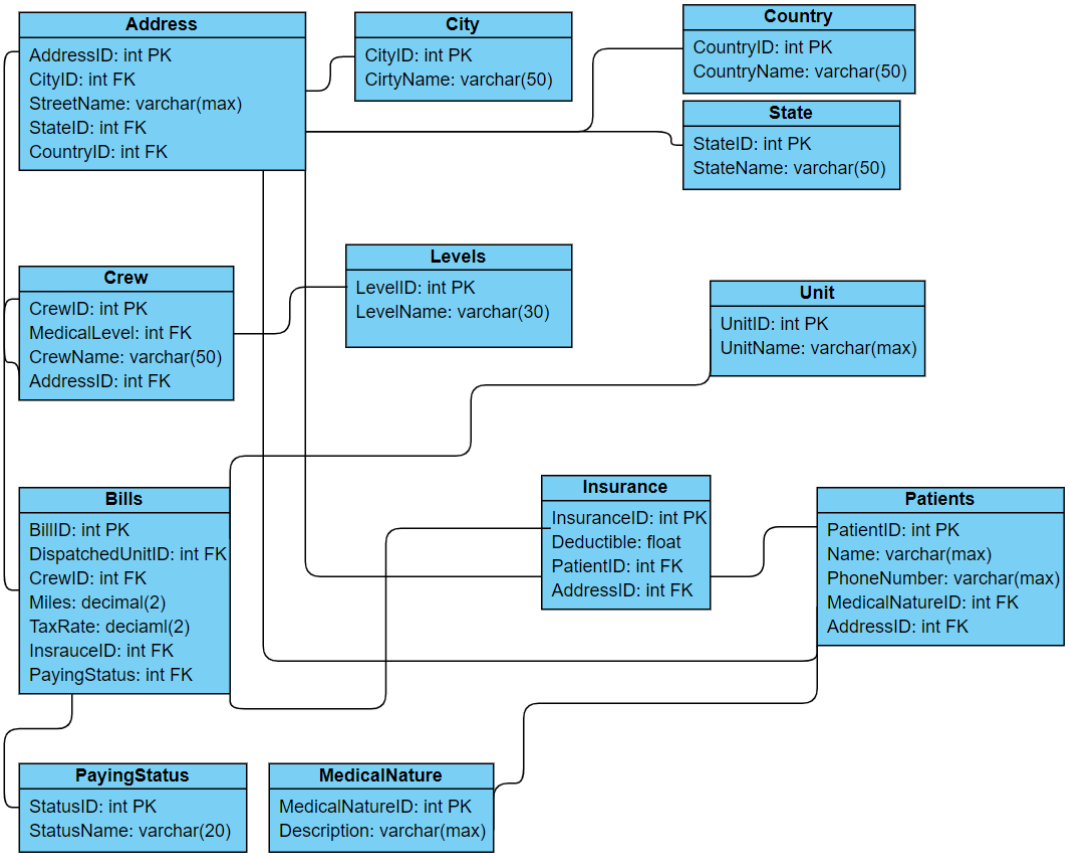


   In order to protect the integrity of our original database we would first create a temporary table which stores the information from AW in WWI schema:

```
CREATE TABLE #personAW(
    PersonID INT PRIMARY KEY NOT NULL,
    Fullname NVARCHAR(50) NOT NULL,
    PreferredName NVARCHAR(100) NOT NULL,
    IsPermittedToLogon bit NOT NULL,
    LogoName NVARCHAR(50),
    IsExternalLogonProvider bit NOT NULL,
    HashedPassword VARBINARY(MAX),
    IsSystemUser BIT NOT NULL,
    IsEmployee BIT NOT NULL,
    IsSalesperson BIT NOT NULL,
    UserPreferences NVARCHAR(MAX),
    PhoneNumber NVARCHAR(20),
    FaxNumber NVARCHAR(20),
    EmailAddress NVARCHAR(20),
    Photo VARBINARY(MAX),
    CustomFields VARCHAR(MAX),
    OtherLanguages NVARCHAR(MAX),
    LastEditedBy INT NOT NULL,
    ValidFrom DATETIME2 NOT NULL,
    ValidTo DATETIME2 NOT NULL
)
GO
```

After having the table created, we would insert the data from joined tables in AW to this newly created table. The information should match so that we can merge this to our WWI later.
In the adventure work database, there are many distributed information across different tables that need to be concated. For an example, people's full name is consisted of first name, middle name, last name which is placed in person table. After extracting these information, using concat command to transfer into one single column.
Besides these information that need to be reformatted, there are some information that is not convinent to merge with all the other data at the same time, such as

2. Database Design: OLTP db design request for EMS business: when people call 911 for medical emergency, 911 will dispatch UNITs to the given address. A UNIT means a crew on an apparatus (Fire Engine, Ambulance, Medic Ambulance, Helicopter, EMS supervisor). A crew member would have a medical level (EMR, EMT, A-EMT, Medic). All the treatments provided on scene are free. If the patient needs to be transported, that's where the bill comes in. A bill consists of Units dispatched (Fire Engine and EMS Supervisor are free), crew members provided care (EMRs and EMTs are free), Transported miles from the scene to the hospital (Helicopters have a much higher rate, as you can image) and tax (Tax rate is 6%). Bill should be sent to the patient insurance company first. If there is a deductible, we send the unpaid bill to the patient only. Don't forget about patient information, medical nature and bill paying status.



~~3. Database Design: Design a DW based on the scenario given in (32).~~

4. Study the Wide World Importers DW. Think the integration schema is the ODS. Come up with a TSQL Stored Procedure driven solution to move the data from WWI database to ODS, and then from the ODS to the fact tables and dimension tables. By the way, WWI DW is a galaxy schema db. Requirements:
    a. Luckly, we only start with 1 fact: Order. Other facts can be ignored for now.
    b. Add a new dimension: Country of Manufacture. It should be given on top of Stock Items.
    c. Write script(s) and stored procedure(s) for the entire ETL from WWI db to DW.