**Question-1 : 50 Points**

1. Perform Reverse engineering on "**damg7370\_new"** database by establishing a connection to **serverdamg7370.database.windows.net** database server via fall2023 user account. TAs will provide the credentials.

2. You can use E/R Studio or Navicat

**Note**: MacOS users: If Navicat Premium's data modeling crashes or gets stuck, please download and use Navicat Data Modeler (the link to download will be available on the Academic license mail that you must have received.)

3. Below changes are expected to be performed and generate DDL script which will be part of your artifacts for the submission.

**(A) Create a new table called "CustomerCredentials"  and include below COLUMNS**

1. ID primary key

2. CustomerID (reference key to Customer.CustomerID. This will establish the relationship between customer and customercredentials table)

3. PasswordHash and PasswordSalt (these is the column to be moved away from Customer table)

4. CreatedDate datetime datatype

5. ModifiedDate datetime datatype

**(B) Drop below columns from Customer table**

1. PasswordHash

2. PasswordSalt

**(C) Create new table called "SeasonalDiscounts" and include below columns**

1. ID primary key

2. SeasonName as Varchar 50

3. DiscountPercent as Numeric 2

4. CreatedDate as Date

5. ModifiedDate as Date

**(D) Alter the table SalesOrderDetail with below changes**

1. Add column called SeasonalDiscountID and this should reference to SeasonalDiscounts.ID

2. Drop the column UnitPriceDiscount

3. Add MemberShipType column as Varchar 50

**(E) Screen shots of Logical and Physical model and DDL script for the changes**

Reference document is available [here](https://northeastern.instructure.com/courses/157328/files/23308387?wrap=1)

[Actions](https://northeastern.instructure.com/courses/157328/assignments/2017883)

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**Question-2 : 50 Points**

**1.**Use the  Dataset named "[AdventureWorksLTLinks to an external site.](https://app.powerbi.com/groups/4245cd51-53a4-4aac-984f-18f6bde6a73e/datasets/f17e72c2-7aac-4beb-899f-e29ae15e511d/details?experience=power-bi" \t "_blank)" which is available on PowerBI cloud under NEU tenant. Use this dataset to answer the below questions.

**(A) Total sales (Using SalesOrderHeader at customer level and SalesOrderDetail at product level)**

by country

by city & country

by customer (person)

by customer (company)

**(B) Total number of customers**

    by addresstype

    by city and state

**(C) Number of products sold**

    by each day

    by category

**(D) Total sales**

by product name

by Product by Company

by product category

**NOTE:**

A) MAC book users please use powerbi.com (Browser based) to build the reports. Power BI desktop is not available for MAC users.

B) Windows users you can use either Power BI desktop or PowerBI web (Browser) version and make sure it is published to powerbi.com when desktop version is used.

C) In the second part of the assignment, please make sure that your PowerBI files follow the naming convention: **AdventureWorksLT\_Firstname\_Lastname.pbix**