# Instructions and Due Date

This is an individual assignment. Due date is on **September 30th, 2021 before our class starting.** You will need to use SQL Server Management Studio and the SQL Server Express database engine to complete this assignment. Mac users may use DBeaver or other tool in place of Management Studio.

Download the hw2\_sql.sql (or hw2\_sql\_mac.sql if Mac) and execute in Management Studio. You will execute the script against the Master Database if you are using a Windows PC. This will create the database, tables and add data. If you are using a remote instance, you not create a database but will run the script against your user database to create the tables and insert data.

Download the hw2\_sql.sql and execute in SQL Server. Answer the questions below. Submit your responses on a separate Word or PDF for questions 1 and 2b. Create a zip file for the document and output and send TA Rohan Jacob [rjacob2@umbc.edu](mailto:rjacob2@umbc.edu) via email or upload it to GoogleDrive and send TA the link.

# Questions

1. List the names of the entity tables. (20 points)
2. Let us assume that the HR Director is a super fan of a popular zombie apocalypse themed show on TV and takes it too seriously. He has established new procedures that employees are required to get certified annually in neutralizing zombie threats. (60 points)
   1. Modify the model to add tables to track the certification for each employee. The data the director requires: (15 points)
      1. certification for each employee,
      2. date of certification achievement,
      3. annual renewal date, and
      4. training hours.
   2. Provide a diagram of the new model from step a above that: (15 points)
      1. show data types for each data field, and
      2. label the relationships and cardinality between the new tables and existing table.
      3. Show whether the relationships are binary, unary or ternary.  
         This diagram can be done in Visio, Word, or you can scan in a hand drawn document.
   3. Create the new database table (s) in your physical database. (30 points)
3. Perform a backup of the database and write down your SQL codes of adding columns and your SQL codes of the backup databases, zip the back file and diagram, then submit it using email. (20 points)