

School of Arts and Sciences
Department of Computer Science/Information Technology
CSCI513 Advanced Database Systems

Assignment One

1. Display the ERD of a relational database composed of the following:
 - Minimum of four relations
 - 1 to many relationship
 - Many to many relationship
2. Write the below relational algebra operations on the above database (explain the purpose of every operation)
 - select operation with multiple conditions in one statement
 - 2 different statements of containing project operation + select operations
 - 2 join + select operation in one statement
 - 2 different statements of union operation
 - 2 different statements of intersection operation
 - minus + select operations in one statement
 - select + union + project operations in one statement
 - select + union + join +project operations in one statement
3. Write SQL queries containing the below:
 - Average , having, group by
 - Max , having , group by, where
 - Count , having , group by, order by