ISYS 464, Fall 23, Exam 2 Review

Assignments covered in this exam:

Assignment 4: Implement database constraints
Assignment 5: Basic SQL query operations: selection, projection, join, total and subtotal, calculated field
Assignment 6: Regular subquery
Assignment 7: Correlated subquery, set operators, outer join and database view.

PowerPoint presentations:

Relational database design: Design database based on ERD
Working with MySQL and SQL DDL (Constraints and referential integrity)
SQL Select basics: SQL Select statements for doing selection, projection, join, total and subtotal, calculated field, sorting.
SQL Subquery: Using subquery to return value for main query criteria, using subquery to avoid join.
Advanced SQL:
    SQL Correlated subquery: Be able to pass data from main query to subquery; Exists, Not Exists.
    Outer joins
    Set operators: Union, intersect, difference and Cartesian product.
    Database views

We have 3 databases to practice SQL: mydatabase, university database, sales database. I may use these databases for SQL questions.

I may give you an ERD, and ask you to design the relational database, similar to exam 1.

How to create domain constraints and referential integrity and what are the meanings for each of the ON UPDATE, ON DELETE options.

I may give you two or 3 tables, and ask you to write down the records that may be generated in a natural join, outer join, left outer join and right outer join.

I may give you a database with multiple tables and ask you to use SQL to retrieve information similar to questions in assignment 5.

I may ask you to use subquery or correlated subquery, or set operators to retrieve information similar to questions in assignment 6 and 7.