Project Requirements

1) DESIGN PHASE
   a) **Describe the enterprise**:
      i) Introduction and brief enterprise description.
      ii) What functions should the system perform? That is, inventory control, billing, ordering, etc.
      iii) Who are the end users? Remember that the DBA is NOT an end user. iv) How will data obsolescence be handled?
      v) Where did you get the idea for this project? Did you make it up, get it from work, or find it in a book? Please site your sources. The idea may NOT be something solved in a book, nor may it be a simple add-on to an existing database.

   b) **Entity Relationship Design**:
      i) Describe your entities. Be sure to define the meaning of each attribute. You must describe the "role" each attribute will play in your table (i.e. what is it and who will use it). You must have enough entities to insure your project is not a "toy" system. GENERAL RULE: you should have about 5 entities and 7 or 8 tables.

      ii) Describe your relationships and their type. Be sure to defend your choices. You may wish to give an example to illustrate your choice.

      iii) Draw the E--R Diagram for your database.

   c) **Conceptual Level**: Determine your tables from the E--R Diagram. Each base table MUST be in 3NF and must have the following information associated with it:

      (1) The Primary Key.
      (2) A list of any foreign keys.
      (3) A list of column domains.
      (4) A list of any domain integrity checks.
      (5) A list of and functional Dependencies that hold.

   d) **External View.** For each user of your system, you must list the tables/views each will have access to. To do this, develop a matrix with a row for each table and a column for each user. The entries will be the privileges for the column's user for the row's table.

   e) **Internal View.** Identify the 3-5 most frequent queries, optimize them, and build file structures to make them run most efficiently. You must have a at least one join, at least one simple selection and at least one that has both.

f) **Data Dictionary**. This includes the list of tables, views and indexes (provide the name and the definition). Also include your table from section d).

2) ACTUAL IMPLEMENTATION

Implement your tables in ORACLE. You must have tables and views defined. You must implement at least one query for each user. Your set of queries must also include queries that represent

a) Joins
b) Usage of advanced SQL features (i.e. Something from lab 2)
c) Built-in functions
d) Input from the user
e) The brilliance of your solution

You must also have

f) At least one insert
g) At least one update
h) At least one delete option
i) At least one data obsolescence command

You must implement your queries using Java/JDBC. You must have at least one program/subprogram for each user you define.