Suppose you are asked to design a database that contains grade information of this course after the final exam. The database should contain the following information:

1. Students' basic information.
2. Section's information, i.e. lecture 1, lectures 2 etc.
3. TA information, i.e. which TAs teach lecture 1? Ignore the lab section for simplicity, that is, we assume that TA can only be identified by lecture number.
4. Prof's information.
5. Grade mapping information, i.e. from numerical grade to letter grade. You can make up this rule by yourself.
6. Raw grades in percentages after final exam.

Your tasks are:

A. Create the above database with necessary tables. In order to do this, you should think first how many tables you need to include above information. Hint: nouns from 1-6 suggest possible tables because those are "unit entity of information".
B. Define the primary key for each table you created.
C. With your design, describe in a paragraph, step by step, how to get the letter grades for students in lecture section 1? It should be something like this: "Combine table 1 and table 2 to get some intermediate table, called 1a; and combine table 1a and table 3 to get…finally, the information needed should be in table… "
D. Inserting 3-5 new data records by using forms for each table.
E. Generate a report that contains TA's last name and assigned lecture no. Something like this; "Gao, Lecture 5
…"
F. Write queries that retrieve the primary key column for each table. So no. of queries = no. of tables you've created.

You should:

Write tables you have in mind on paper; after you're convinced that tables are good enough, think about what columns you need for each table; this can be tricky because columns can be interrelated. For example, a student's basic information might include his/her lecture number, and the lecture number can indicate TA's information… (This is called relationships).