Question 1:

You want to get rich by operating an auction Web site, similar to eBay, at which students can register used textbooks that they want to sell and other students can bid on purchasing those books. The site is to use the same proxy bidding system used by eBay.

Let's say you find something on eBay that you want... You're willing to pay $25.00 for it, but the current bid price is only $2.25. You could take the long route and sit at your computer, outbidding each new bid until you reach $25.00.

Luckily, there's a better way. Here's how it works:

1. Decide the maximum you're willing to pay and enter this amount.
2. eBay will now confidentially bid up to your maximum amount. In this way, you don't have

to keep an eye on your auction as it unfolds.
3. If other bidders outbid your maximum at the end of the auction, you don't get the item.

But otherwise, you're the winner--and the final price might even be less than the maximum you had been willing to spend!

Remember: eBay will use only as much of your maximum bid as is necessary to maintain your position as high bidder. Winning was never easier!

The following data must be either contained directly in the system or it should be possible to calculate it from the stored information:

1. For each book being auctioned: title, edition, ISBN number, bookId (unique), condition, initial offering price, current bid, current maximum bid, auction start date and time, auction end date and time, userId of the seller, userId of the current high bidder, and an indication that the auction is either active or complete.

2. For each registered user: name, userId(unique), password and e-mail address.

Design an form) database schema, to represent this.

The following are assumptions I made. State any additional assumptions you make.

- A user may sell more than 1 book
- A user may bid on more than 1 book
- A user can only bid once on a book.

Write Transact-SQL code to create the tables that you came up with, complete with constraints. Turn in your .sql code file.
In SSMS create an ERD (database diagram) representing your tables.

Question 2:

Use the pubs database on the server to accomplish the following:

Write SQL statements to pull the following information out of the pubs database. Turn in your .sql file. (HINT: On some of these, date functions such as DateDiff may help.) Be sure to look at the data to see if you are getting correct values back.

- Return the author's first and last names and their royalty percentage (royaltyper).
- Return the author's first and last names and their average royalty percentage (royaltyper).
- Return the maximum royalty percentage for all authors.
- List all publishers, their employees full name, and the length, in years, that the employee has been working there.
- Return each title and the number of years it has been published.
- Return all of the titles that have the word 'computer' in it.
- Return all authors name and phone numbers that live in the city of 'Oakland'
- Return each title and the stores at which they are sold.
- Return the store name and the total number of titles that they sell.
  Alias the number of titles as 'Number of Titles Carried'. List stores even if there are no titles that they sell.
- Return the discounttype for the maximum discount given in the discounts table.
- Return the top 10 percent of qty from the sales table, along with the store name and title for that qty.

- • Return the number of states that have a publisher in it. Alias the return value as 'Number of States with Publishers'