Homework #7:

A company, XYZ Industries, has contracted you to create a HR benefits election system. The requirements are below:

The solution must be delivered in 2 parts: a website for all employee selections and a desktop based administrative console to be used by employees in the HR department.

Administrative Console:
Using the desktop application, a member of the HR department will be able to do the following:
- Add employees
- Update employees
- Set employee status, i.e. "Active" or "Terminated". Employees are never deleted, only marked "Terminated" if they have left the company.
- Add/update/delete health care providers, for example:
    - Aetna
    - Blue Cross/Blue Shield
    - Assurant Health
- Each health care provider has its own unique list of names of doctors, dentists and optometrists. Members of the HR department must be able to add/update/delete the names on these lists.
- HR department members must be able to see what an employee chose (if any – employees may decline coverage).
- The choice an employee makes is only good for 12 months. Members of the HR department should be able to send notification/reminder emails to employees before selections are made, and confirmation emails after selections are made. The HR department will also define the "window", i.e. selection period within which employee selections may be made.
- The desktop application must also be secured using usernames and passwords.

Website:
- The company requires a secure website, i.e. accessible via username and password.
- Once authenticated, the users should be able to pick a provider or decline all. If they pick a provider, they should then be allowed to select a doctor, dentist and optometrist from the list of names for that provider. Once a selection is made, users may subsequently log in and change any part of their selections until the selection period is over.

- Once a selection is made, a confirmation email should be sent to the employee.

Employee information:
First Name
Last Name
Employee ID
Email Address
Department
Selected Provider Name
Selected Doctor
Selected Dentist
Optometrist

Notes:
- For this assignment, submit a UML diagram for either **ONE** of the two parts. ***Extra Credit***: submit a separate UML diagram for the other component

- This is *not* an implementation exercise. However, this homework assumes you are all familiar with how web pages look, not how they are implemented. There is no requirement for any HTML or Java, web servers, application servers, etc. Likewise, issues such as <u>detailed</u> session management, security (beyond authentication requirements listed above), etc. are to be ignored.

- The object of the exercise is for you to do the analysis (based on the requirements) and create a design. As a result, you will have to make certain assumptions regarding the screen elements that would need to be present if you were actually going to implement this. Hint: define methods to be triggered by user selections. Assume that as a result of these methods, data is made available from the user interface to wherever it is required. Also, define methods that will present your user interface.

- You may need to supplement the information in the requirements. Feel free to add information that will make your design more complete, without changing the requirements. Any such additions should be described.

- All information must be maintained in a relational database. The desktop application and website will share the same database.