

CSE471

Assignment 04

1. For large distributed business franchises in Bangladesh, a well-known software firm is building software that can be used commonly. Here the concept is that the business management policies are provided from a Head office and the Back offices are the distributed franchisors who abide by the business policies.

Here, the Head Office component contains five components that are Stock Item database component, Policy component, Tax component, Rebate component, and Special Price component. The Policy component provides two interfaces, setPolicy, and taxExempt. The setPolicy interface is required by the Stock Item component. Tax and Rebate components provide an interface called readStock which is dependent on stock details from the Stock Items component. These two components also require the taxExempt interface. The Special Price component requires the tax price interface which is provided by the Tax component and Rebate component. The Tax component provides taxStatus interface, Rebate component provides rebateStatus interface, Special Price component provides specialValue interface which are exposed outside of The Head Office component through 3 ports and all three of these interfaces are required by The Back Office component. The Back Office component provides two interfaces taxExempt and setArea which are required by the Tax Rebate component and the Region Component respectively.

Design a Component Diagram based on the above scenario.

2. Calculate Table volume at 5 years using the following information.

Field	Avg. size (characters)
Student ID	8
Student name	25
Phone no	11
Admission date	7
Overhead	25%
Initial table size	1000
Initial table volume	23000
Growth rate/month	300

3. CineplexBD has recently launched an app called “Movie review” that allows viewers to rate and review movies currently being aired in theaters. When a viewer first enters the app, there are two options – Rate Movie, See Movie Rating. In order to rate a movie, the viewer first needs to click on the “Rate Movie” button. Then the viewer is asked to fill up a form with their information. After filling up the form, the viewer clicks submit the form button and the viewer is redirected to another form where they need to enter the name of the movie and click on the search button. If

there is a match, the viewer can see the hyperlink list of movies with that name. Otherwise, there appears a popup window that says “No movies found” and a button to search again. From the list of movies, if the viewer clicks on a movie, they are taken to a form where they can rate and write reviews for that movie. On submitting that form the rating is stored and the viewer is taken to a thank you page. On the thank you page, there is a button to return to the home screen.

Viewers can see the moving ratings and reviews by clicking the “See Movie Rating” button. The viewers fill up a form in the same process and click on the search button. After that, a hyperlink list of movies is returned. Clicking on the hyperlink generates a report containing all the reviews and ratings for that movie. Viewers have the option to search again if the search result returns nothing.

Draw a Windows Navigation Diagram based on the above information. (4)