

Term Project: Department Intranet Services

2110472 Computer Network (First Semester/2545)

In this class, students are required to work on the term projects. Each team can consist of 9-13 students. Each team will implement different services and will be integrated together to provide departmental Intranet services. In order to allow integration, web services will be used as a main vehicle. The list of all assignments (one for each team) is as followed:

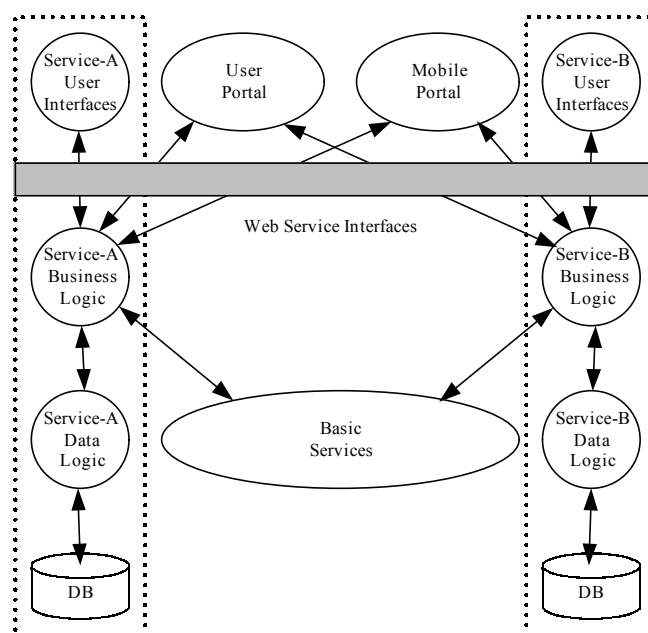
- **Department services (9 students each)**
 - Library services: search, borrow, reserve, add, edit, check status, etc.
 - eGroup services: add group, add user, remove user, post announcement, etc.
 - Facility management: reserve equipment, reserve room, add new equipment, etc.
 - User profile: new students (ajarns), edit profile, display, etc.
 - Email/SMS Alert: create new alert, modify alert, recurring alert, cancel alert, view alert, etc.
- **User portal**
 - Intranet portal: portal to all services and all functions (13 students).
 - Mobile portal: portal to some functions (10 students).

Service Architecture

To simplify the development processes, some basic services will be provided. All basic services can be invoked using web service mechanism. The details will be announced soon. The follow is the list of the basic services:

- Authentication.
- Service registry and administration.
- Cron service.

The overall architecture can be described below:



Each service team will design its own user interface, database schema, as well as the interfaces of the service methods at the service business logic. To provide business logic functions to both its own user

interface and user portal/mobile portal teams, the business logic will provide web services interface. Thus, service user interface module and portal modules will use SOAP to talk to business logic (sharing the same interface).

For Portal teams, both will have to use the business logic provided by each service to provide comprehensive user interface. The interface must be integrated and easy to use.

J2EE development platform will be provided for all teams.

Workload Recommendation

As each team has several people, we recommend you to separate tasks into the following sub-tasks:

- **Department Service Team (9 students each)**
 - Service User Interface = 3 students.
 - Service Business Logic = 3 students.
 - Service Data Logic = 3 students.
- **Intranet Portal Team (13 students)**
 - Overall User Interface = 3 students.
 - User Interface for each service = 2 students (there are 5 services).
- **Mobile Portal Team (10 students)**
 - User Interface for each service = 2 students (there are 5 services).

Important Dates

Each team is required to submit the reports in the following dates:

22 August	<p>Department Service Teams</p> <ul style="list-style-type: none"> ▪ Reports on dummy specification of the web service interface to the business logic and implement the dummy services. <p>User Portal Teams</p> <ul style="list-style-type: none"> ▪ Define the environment, the package that will be used to develop portal, demonstrate sample portal programs.
5 September	<p>Department Service Teams</p> <ul style="list-style-type: none"> ▪ Submit service user interface design. <p>User Portal Teams</p> <ul style="list-style-type: none"> ▪ Test dummy services provided by department service teams and provide the user interface design.
8 October	<p>All Teams</p> <ul style="list-style-type: none"> ▪ Submit the final project and present demo.

The first two reports (on Aug 22 and Sept 5) must be submitted to the instructor before the class (on the submission date) begins. The final report will be submitted during the final presentation. Any late report will not be accepted.

The final presentation and the demonstration of your project are required. To ensure that everyone has contributed and understood the project, the team must declare the responsible person of each module. In the case that there is more than one student working on the same module, all students must be able to clearly point out which part of the module they are responsible. In addition, everyone must be able to answer all basic questions of the project and any questions that are related to the module they are responsible. The team will be graded based on the completeness of the project (50%), reports (20%), extra features (10%), and the balance of the workload among team members (20%), especially the person who cannot answer the most questions. The time of the demonstration will be announced later.