Department of Computing
Hong Kong Polytechnic University
COMP 5527 Mobile Computing and Data Management

Project

Due: Wednesday, 11 April, 2012

In this assignment, you are required to do a group project. Students freely form groups of 3-4 each. Within a group, each student is expected to play certain role (leader, coordinator, etc.) and is responsible of certain parts of the assignment (think of ideas, design, implementation, testing, report and presentation).

What to Do

The following is the specification of the assignment and how it will be assessed.

Design and implement a mobile data management application using J2ME or other programming platforms based on iOS, Android, Windows Phone 7, Symbian, etc. The application is about Mobile Healthcare (MH) and may consist of the following functional components:

- Mobile Access to Healthcare Information (MAHI) – allow mobile users to access healthcare-related information stored in a MH Server on the Internet. Such information may include patient's records, diseases, hospitals, organization's emails, job schedules, and meeting minutes, etc.

- Mobile Healthcare Data Management (MHDM) – allow mobile users to download healthcare information and store (cache) it in mobile devices, update the information locally and then later synchronize it with the MH Server; Allow MH Server to push updated information to mobile users.

- Mobile Healthcare Service (MHS) – allow mobile users to make online medical appointments; check and make changes to appointments; monitor and transmit patients' conditions for doctors' diagnosis; other services.

Your project should have BOTH *client side* and *server side* programming (a hybrid of smart client and wireless Internet models). For client side, you need to develop code for

- the user interface and
- access to mobile device's storage for information saving and retrieving.

For server side, you need to develop code for

- interacting with the clients and
- the application / business logic, e.g., enterprise information databases, etc.

You should do a good requirement survey and analysis. The above are the basic requirements. You can add more features, such as mobility management, location based services, context-awareness, and security mechanism, and take care of the detailed design issues. You can gain more credits if you could deploy your application to real mobile devices.

Assessment

Regarding grading criteria, your assignment will be evaluated on the following criteria:
- Implementation (compiled code) and functionality (50%)
- Ease of use and interface (20%)
- Testing results (10%)
- Report (20%) –It describes the design of the mobile application, such as the system structure, the components in the system, programming languages and tools used (e.g., web/JSP server, databases), testing strategies, deployment guide and user manual. It should also include a section describing the role each member played in the group (Team members may receive separate grades.)

Time will be arranged for each group to present the project and do a demo. You should also submit a soft copy of your report together with your source code.