



**UNIVERSITY OF COLOMBO, SRI LANKA**



**UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING**



**DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (EXTERNAL)**

***Academic Year 2008/2009 – 3<sup>rd</sup> Year Examination – Semester 5***

***IT5103: Professional Issues in IT***

***CASE STUDY***

No. of Pages = 2

The Health Ministry of Sri Lanka is in the process of carrying out discussions in order to introduce an electronic health card to all citizens of Sri Lanka. This card will contain the health related information of each person in addition to identification information. Every time a patient goes to a hospital, the card will be updated where necessary. Each consultant in each hospital will have to have a card reader to read the patient information. A pilot project was carried out in the National Hospital, Colombo to assess the feasibility of this project. The web based system developed for electronic patient record management will have different levels of access rights for the following parties.

- a) Patients – Read only access to their own health records for informal matters. A doctor's signature is necessary for certification, for official purposes.
- b) Government Doctors – All doctors who treat patients will have read/ write access to their own patient's records. No deletion rights are granted to any record for security or Medico- Legal purpose. Every modification will be appended to the existing record.
- c) Government Health care institutions – They will be given access to view and update the patient records. Here, no deletion rights are granted.
- d) Private Health care institutions – They will have to pay an annual subscription to access the patient records. These institutes will only have rights to view records.
- e) Health Ministry of Sri Lanka - The ministry reserves the right to use this data for statistical purposes, whenever the need arises, for the benefit of the society.

The project will cost over Rs 30 million to implement the solution in the Western Province alone. The system is being developed by a Sri Lankan software development company, called ICT4U, after studying the requirements carefully. ICT4U is in the process of developing the software within two years. They are finding this a challenging task and are thinking of outsourcing some of the modules to another company. ICT4U is also responsible for the data entry of 50,000 patient records, which need to be kept very confidential since a blackmailer or an insurance agent could try to get unauthorized access to confidential medical records.

Once completed, the system will be handed over to the Ministry of Health where the server will be maintained and managed. The administrator of the system will be a person at the director level, working at the Ministry of Health. The hospital trade unions and patients are concerned about the following aspects of the system.

- i. Privacy and confidentiality of patient health records
- ii. Access rights given to private sector institutions
- iii. The benefit of the system to the health sector compared to the cost incurred
- iv. Recovery of the cost incurred in installing and maintaining the system
- v. The person who has final administrative rights of the proposed system and his/her credibility
- vi. The fear of insurance companies getting hold of patient information
- vii. The problem of patients losing their cards and making the medical information in the card vulnerable for others to read

The Ministry also wants to incorporate a monitoring system for e-mails and system related activities into the web based system to ensure that no employee misuses the information in the database for unlawful or unethical purposes. The administrator will have superpowers to monitor the activities of all users of the system.

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