Feasibility Study of MongoDB and Radio Frequency Identification Technology in Asset Tracking System

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Abstract : Taking into consideration the real time situation specifically the higher academic institutions, small, medium to large companies, public to private sectors and the remaining sectors, do experience the inventory or asset shrinkages due to theft, loss or even inventory tracking errors. This happening is due to a zero or poor security systems and measures being taken and implemented in their organizations. Henceforth, implementing the Radio Frequency Identification (RFID) technology into any manual or existing web-based system or web application can simply deter and will eventually solve certain major issues to serve better data retrieval and data access. Having said, this manual or existing system can be enhanced into a mobile-based system or application. In addition to that, the availability of internet connections can aid better services of the system. Such involvement of various technologies resulting various privileges to individuals or organizations in terms of accessibility, availability, mobility, efficiency, effectiveness, real-time information and also security. This paper will look deeper into the integration of mobile devices with RFID technologies with the purpose of asset tracking and control. Next, it is to be followed by the development and utilization of MongoDB as the main database to store data and its association with RFID technology. Finally, the development of a web based system which can be viewed in a mobile based formation with the aid of Hypertext Preprocessor (PHP), MongoDB, Hyper-Text Markup Language 5 (HTML5), Android, JavaScript and AJAX programming language.
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