

## A Web Service Based Sensor Data Management System

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**Abstract :** The deployment of wireless sensor network has rapidly increased, however with the increased capacity and diversity of sensors, and applications ranging from biological, environmental, military etc. generates tremendous volume of data's where more attention is placed on the distributed sensing and little on how to manage, analyze, retrieve and understand the data generated. This makes it more quite difficult to process live sensor data, run concurrent control and update because sensor data are either heavyweight, complex, and slow. This work will focus on developing a web service platform for automatic detection of sensors, acquisition of sensor data, storage of sensor data into a database, processing of sensor data using reconfigurable software components. This work will also create a web service based sensor data management system to monitor physical movement of an individual wearing wireless network sensor technology (SunSPOT). The sensor will detect movement of that individual by sensing the acceleration in the direction of X, Y and Z axes accordingly and then send the sensed reading to a database that will be interfaced with an internet platform. The collected sensed data will determine the posture of the person such as standing, sitting and lying down. The system is designed using the Unified Modeling Language (UML) and implemented using Java, JavaScript, html and MySQL. This system allows real time monitoring an individual closely and obtain their physical activity details without been physically presence for in-situ measurement which enables you to work remotely instead of the time consuming check of an individual. These details can help in evaluating an individual's physical activity and generate feedback on medication. It can also help in keeping track of any mandatory physical activities required to be done by the individuals. These evaluations and feedback can help in maintaining a better health status of the individual and providing improved health care.

**Keywords :** HTML, java, javascript, MySQL, sunspot, UML, web-based, wireless network sensor

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