HEALTHCARE MONITORING AND MANAGEMENT SYSTEM

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**Abstract:** This project is about a system to continuously monitor vital parameters of body temperature and pulse-rate. This is stored on a cloud server uploaded by NodeMCU and can be displayed through an online dashboard or mobile application to authorized personnel. The data is updated online and alert sent to the doctors for any abnormality. We have also worked on a mechanism to detect and alert caretakers if an elderly person accidentally falls down, so that they receive help on time.

**Individual contribution and findings**:

The idea of using the readily available platform to display the data in an attractive dashboard was mine, instead of the earlier displaying it on a basic webpage.

I researched that there was work which had been carried out, but not entirely what we were thinking of doing-integrating both mobile and web-based services into one project.

Fall detection by monitoring the accelerometer and gyroscopic sensors was my brainchild, since it occurred to me that when someone falls down, there is an immediate increase in the velocity of the body parts for a short duration of time; which means they did fall down. Whereas if we had proceeded with the earlier chain of thought where a fall would be detected by inclination/angle at which the body was with respect to the ground, then it had a design flaw that someone who was just picking up something from the ground, would be falsely detected as having fallen down, since the angle would have changed in such a case, too.

**Individual contribution to project report presentation**:

My main area of work was the dashboard, which I did entirely by myself.

I organised the planning part into a Gantt chart and included it in the report.

Along with that I searched some references for this project.

The final report was organised and put together, edited and made presentable, all the while taking care of the format specified, by me.

**Individual contribution for project presentation and demonstration**:

The overall collaboration between the team mates was managed by me, since we are in this online mode and not physically meeting each other.

I ensured that the report, presentation, abstract was ready before the deadline, so that if necessary, changes could be made.

The final edits to the presentation to make it hassle free for evaluation were also mine.

