

ABSTRACT

When human entering the old age, the physical ability and the concentration also to be decreasing. because Of it, of course there are somethings which we must be worry , it is the loss of balance and causing a fatality fall. when the elderly people fall in under crowded conditions this is not a big problem, but the most feared when the elderly people falling in a state of quiet or lonely in any places. of course it will create a serious consequences for the elderly people.

In this final year project, we developpe a fall detector for elderly people using a microcontroller. The microcontroller will be linked to the IMU sensors and GSM / GPS / GPRS modules and will be supplied using the power bank. because of that, it can be recharged. To classify the fall condition, be used an algorithm which was made by an experimental data. the Information- information obtained from the system will be sent via short message and that will be received by a Smartphone which we was determine in the previously, which includes information indicative of fall and the location coordinates of fall.

From the device that was made, resulted a high accuracy that is 83,33%. And can be reduce the risk of undesirable events of the fall.

keywords : IMU, Microcontroller, fall detection, smarthphone