

Team: 2-5

## Smart Shoe for the Elderly



### Summary of Project

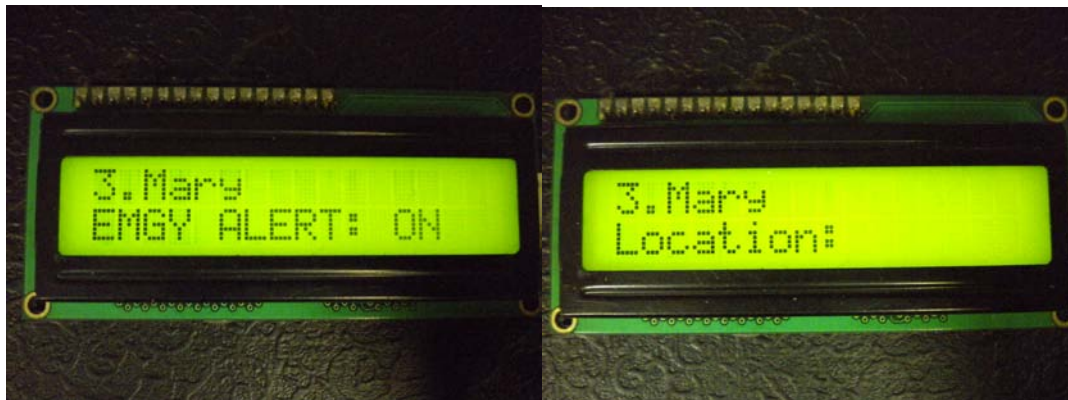
Our Smart Shoe for the Elderly focuses on active, mobile elderly who live in nursing homes. With our Smart Shoe, the elderly who wear it will find their lives more convenient, comfortable as well as safe. This will encourage independent living in the elderly.

The automatic fastening feature will fasten the shoe strap for the elderly once he slips on the shoe so he does not have to bend over to tighten the fastener. The automatic sole support will adjust the sole to fit the arch of the foot to ensure better support. The massage feature will provide comfort to the elderly with foot aches as well as administer electrical foot reflexology. The mosquito repellent will activate at 5-7pm, the active hours of the Aedes mosquito to prevent the elderly from contracting dengue fever, which may be fatal to the elderly due to their old age. A led strip will also light up on the shoe when worn at night to illuminate the surroundings so the elderly will not trip over anything by accident.

The elderly will also be able to call for help immediately during an emergency with a button connected to the shoe and can be strapped to the pants of the elderly.



Once the button is pressed, the wireless transmitter in the shoe will alert the staff, who will be holding the handheld monitor. The staff will be able to find the elderly through the search function on the monitor.



The buzzer on the shoe will also sound to guide the staff member as well as alert anyone nearby. If the shoe detects that the elderly has fallen over, some time (a few minutes) will be given to see if the person stands up again. If not, the same procedure as above will be followed. Lastly, the staff will be able to call the elderly to a certain location in the nursing home for events like doctor visits or medicine administration. This encourages the elderly to be independent. The staff selects the announcement to play. Once activated, the message will be played out of the speaker at the front of the shoe worn by the elderly.