

## GROUP 2-4 SMART BAG



In this project, a smart bag has been developed to increase the security and convenience of the normal bag often used by ladies. This bag secures one's valuables against bag theft and provides features such as expenditure tracking and bag lighting. This smart bag has four subsystems, which are the central subsystem, the automatic lighting and anti-slit subsystem, the automatic bag closing subsystem and the valuables securing subsystem.



The central subsystem is the core of the system which links up the other subsystems and also provides reminders and helps track personal expenditure. The console is easily removed from the side pockets and fits comfortably in one's hands.

The Bag Lighting and Anti-Slit system lights up the bag when it is dark to help one locate items in the bag. The Anti-Slit system raises an alert when there are light changes when the bag is closed as a slit would cause changes in lighting condition. The changes in lighting condition are determined using light dependent resistors.



The Automatic Bag Closing system detects when the bag is open and buzzes to alert the owner. This can alert users quickly in cases of pick pocketing and prompt action before the thief makes off with the valuable. When the bag is detected to be left open for a user defined period of time, the bag automatically closes. The open or close state is detected using proximity sensors at the edge of the bag.



Lastly, the valuable tracking system ensures that your valuables are always close by and sounds an alert if otherwise. If the valuable is too far away, a tracking buzzer can be activated to help locate the valuable by moving in the direction where the buzzer beeps the fastest. This system is implemented using radio frequency and can track items up to 10m away.