SMART Plate

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Inventory or stock monitoring is one of the key aspects of a successful and sustainable business. Inventory monitoring enables businesses to maximise profit and reduce product lost or theft causing losses. Our research has found that, 80% of existing store owners do not have any system to monitor stock, while those who do employ manual techniques for stock checking. 50% of the store owners perform stock checking, while the remaining 50% have no stock checking mechanism. While a whopping 70% agree that their sales and inventory count often do not match. To overcome this, SMART Plate is proposed. SMART Plate is a type of plate that is designed to be placed on goods shelf to monitor the number of items on the shelf in real-time. It is designed to be used in stores and in supermarkets. The SMART Plate consists of a plate with a micro switch, an Arduino Kit and a computer. The plate is connected to the Arduino Kit using a wire, which is connected to a computer through a USB cable. A smart phone can be used to connect to the plate through Bluetooth technology. On a goods shelf, the plate is placed underneath the items on the shelf. The plate detects the presence of the items and signals the computer once an item is removed from the shelf. This way, real-time information on item count can be obtained. Moreover, SMART Plate can monitor multiple types of items on the shelf and can provide the user information on stock status, lost items and total sales achieved. All of these can be achieved through the computer or a smart phone. When the system is connected to the web, customers can view available stock before even going to the store to purchase. SMART Plate allows businesses to monitor their inventory automatically in real-time and detect irregularities to reduce loss.

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