Scope and Limitations

This project is a payment system using Radio-frequency Identification (RFID) that is linked to the student’s Identification card. It is built with a cloud system where transactions and file storage are present. An app is provided to the parents so that they can track the things the students buy and limit the child's expenses during the day. The RFID can be loaded anytime via a kiosk machine. The loading machine does not dispense cash and is limited only for paper bills, therefore the exact amount must be deposited. If the RFID is lost, a temporary card, along with the student’s credit information, will be provided. The client is then obliged to return the temporary card as soon as the lost card is replaced.

Every store in the cafeteria has a product list of all the products they sell. Product lists are then stored in the cloud, together with the number of purchased items, and monitored by the administrator. The administrator is the only person granted with access to the cloud. The vendors need to surrender to the administrator the product they want to sell and it will be added to the store’s product list in the cloud. The setup in the vendor side is a Barcode scanner, an NFC reader, PN532, and a computer that connects to the cloud.

The transaction method goes this way: first, the student picks a product to buy then the vendor will scan its barcode. The student will proceed to payment by tapping the RFID card on the NFC reader. After that transaction is sent to the cloud, the transaction of the student will reflect on the app given to the parents. The administrator monitors every transaction that is done in every store, including their daily income. Every week, the store can retrieve their liquidation reports from the administrator and claim their revenues from the school’s Business Office. In redeeming the money, rents and other utilities are automatically deducted.