



Senior Design Project

NSU Canteen Automation

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Spring, 2019

Declaration

This is to declare that no part of this report or the project has been previously submitted elsewhere for the fulfillment of any other degree or program. Proper acknowledgment has been provided for any material that has been taken from previously published sources in the bibliography section of this report.

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Approval

The Senior Design Project entitled “NSU Canteen Automation” by Mohammad Adib Khan (ID#1430420042), Rifat Arefin Badhon (ID#1511738042), and Sarwat Islam Dipanzan (ID#1510117042) has been accepted as satisfactory and approved for partial fulfillment of the requirement of BS. in CSE degree program on May 2019.

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Acknowledgment

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Abstract

North South University's (NSU) canteen has seen a major revamp in both appearance and in the way the cafeteria operates. Over the years it has been the go-to place for students and teachers alike for a quick meal or refreshments in between hectic schedules. The recent changes, however, has affected the average waiting times substantially. The new canteen has adopted many new technologies such as electronic displays and Point of Sale (POS) systems for completing payments which is more advanced and offers credibility. But this creates an additional bottleneck in the total time spent on the actual service of "getting the food".

The current mode of operation relies on having to stand in long queues for payments and then taking the payment slip (receipt) to another terminal to receive the food. Since the first queue builds up during peak hours, it creates a backlog of customers waiting in frustration.

This is not only inefficient but time-consuming as well. This has affected a large number of daily customers for the cafeteria as time is scarce in the daily lives of academics, students and teachers alike. The solution we have devised is to offload the manual payment process to an online payment system using a payment processor hosted on a mobile device using a web application and Android.

This will enable users to order and pay inside the canteen without having to resort to long queues. Users can use their bank accounts/cards for transferring funds to the application (canteen - account) which can be used for purchasing food inside the cafeteria. This will avoid the need for cash exchange at the counters, saving time and resources, reducing the need for additional queues.