



# FAST NUCES LAHORE

## Software Engineering Project Proposal

POS system for City Garments

### Members

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### Project Advisor

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### Project Client

City Garments – Civil Quarter Road, Jinnah Park

- Abstract

A point-of-sale system for the clothing store, City Garments. A brand-new system with the latest features and requirements will be implemented and installed. This document is a proposal for the system consisting of every detail, information, problems faced, solutions and any fact to be told.

- Introduction and Background

The present point-of-sale system of the clothing is done manually such as the bill receipt, record keeping. From the initial stage of the garment store the same manual system has been used. Bookkeeping and accounting are done in the traditional way of notebooks. Solving these could speed up many processes and make an efficient use of the company's resources and money.

- Problem Statement

This project would solve the problem of difficulty in data logging and inventory management. Physically, long queues would be avoided. For other orders, shipments and deliveries would be speedier.

- Objective(s) /Targets(s)

The main goal of this system is to have a backlog of data in one place, a single system to control and manage everything. A database system could be implemented to help achieve this. The store would be exponentially faster and more efficient in handling orders and large amounts of customers. Data entry and management would be easier and handled significantly in a better way, as no books or physical pages would be needed to be handled.

## ● List Of Features

The program will be able to have following properties:

### **1. User account Profiles and their Permissions**

Description: the user will be able to sign in through the administrative and general accounts with different permissions and levels of access.

### **2. Invoice Generator**

Description: an invoice consisting of quantity of item, price, total, date, and other necessary information will be generated, which will be printed, and the record would be updated.

### **3. Sales Record and Analytics**

Description: the complete record history of the month's sales including the quantity of items sold, net amount, tax paid and dates would be recorded and stored.

### **4. Promotion**

Description: an option will be applied to special discounts or promotions on items of the owner's choice.

### **5. Inventory Management**

Description: the stock of items would be automatically manipulated, especially after every sale.

### **6. Return, Refund and Exchange**

Description: it will check the possibility of refund and return/exchange and then allow to re-enter or replace the item to the inventory.

### **7. Dashboard**

Description: it will be a hub to every option mentioned above.

## ● Completeness Criteria

The program will be delivered as a stable complete unit after the code has been completed completely.

## ● Challenges

- Understand the business - the overall goal of creating a POS is to make sure it helps users perform their jobs, you will need a basic understanding of the business functions, how the system will support the individuals as well as department and enterprise goals.
- Focus on usability - the interface should make the users job easier, not harder; it should include all tasks, commands and communications between users and the information systems

## ● Knowledge Areas Required

The areas of knowledge according to our degree that are required will be:

- Basic Human Computer Interaction (HCI) Rules
- Object Oriented Programming and Data Structures(coding)
- Application and Software Development
- Graphical designs
- Basic mathematics (for calculation of taxes, prices, discounts etc.)
- Probability and Statistics
- Database systems
- SE principles and models

## ● Learning Outcomes

The biggest learning outcome from developing this system would be learning and mastering the ways of a Graphical User Interface (GUI). The proper use and implementation of graphics in the system would be of great help in this way.

It would help us learn and master the methods of different application programming interfaces especially for the point-of-sale systems.

We would learn the proper requirements engineering process, which is crucial as a software engineer. Being in the field and carrying out the processes is a huge opportunity to learn.

It is a great opportunity to gain some experience in the garment and clothing industry.

- Nature Of End Product

The product that will be delivered will be a desktop running application that will be operatable on windows operating system having version XP or newer.

- Initial Literature Survey

By learning from different renowned point-of-sale systems from different companies, we learn that the most common features in any POS system is the process of ordering and bill processing. It is the most essential feature of any system. The implementation of stock and inventory management is also key. We observed from some open-source GitHub sources the most common features in any system.

By keeping these systems in our mind, a few changes were made such as the refund policy and promotions directly implemented in the system database itself.

## References

[What is Point of Sale System | Key features of POS \(vinculumgroup.com\)](https://vinculumgroup.com/what-is-point-of-sale-system-key-features-of-pos/)

[15 Must-Have Features for Your Retail POS System - business.com](https://business.com/15-must-have-features-for-your-retail-pos-system/)

[GitHub - opensourcepos/opensourcepos: Open Source Point of Sale is a web based point of sale application written in PHP using CodeIgniter framework. It uses MySQL as the data back end and has a Bootstrap 3 based user interface.](https://github.com/opensourcepos/opensourcepos)