**Updated SRS Document by:**

**Team Viaeyes**

**Syed Farhan Jafri (21L-6074)**

**Shaaf Salman (21L-6083)**

**Zoya Arif (21L-5832)**

**Abdul Hadi (21L-6077)**

**(actual document with pattern starts from below this is just for the submission on Google Classroom)**

Software Requirements Specification

for

Point of Sale

**Version 2.0 approved**

**Prepared by Viaeyes**

**City Garments**

**19th November 2022**

**Table of Contents**

[1. Introduction 1](#_Toc118648998)

[1.1 Purpose 1](#_Toc118648999)

[1.2 Document Conventions 1](#_Toc118649000)

[1.3 Intended Audience and Reading Suggestions 1](#_Toc118649001)

[1.4 Product Scope 1](#_Toc118649002)

[1.5 References 1](#_Toc118649003)

[2. Overall Description 2](#_Toc118649004)

[2.1 Product Perspective 2](#_Toc118649005)

[2.2 Product Functions 2](#_Toc118649006)

[2.3 User Classes and Characteristics 2](#_Toc118649007)

[2.4 Operating Environment 2](#_Toc118649008)

[2.5 Design and Implementation Constraints 3](#_Toc118649009)

[2.6 User Documentation 3](#_Toc118649010)

[2.7 Assumptions and Dependencies 3](#_Toc118649011)

[3. External Interface Requirements 3](#_Toc118649012)

[3.1 User Interfaces 3](#_Toc118649013)

[3.2 Hardware Interfaces 3](#_Toc118649014)

[3.3 Software Interfaces 3](#_Toc118649015)

[3.4 Communications Interfaces 4](#_Toc118649016)

[4. System Features 4](#_Toc118649017)

[4.1 User Management 4](#_Toc118649018)

[4.2 Sales Handling 4](#_Toc118649019)

[4.3 Promotions and Discounts 5](#_Toc118649020)

[4.4 Return and Refund 5](#_Toc118649021)

[5. Other Nonfunctional Requirements 6](#_Toc118649022)

[5.1 Performance Requirements 6](#_Toc118649023)

[5.2 Safety Requirements 6](#_Toc118649024)

[5.3 Security Requirements 6](#_Toc118649025)

[5.4 Software Quality Attributes 6](#_Toc118649026)

[5.5 Business Rules 7](#_Toc118649027)

Appendix A: Glossary 7

# Introduction

## Purpose

This SRS document contains information, requirements and needs for a point-of-sale system for the City Garments clothing store. A brand-new system with the latest features and requirements will be implemented and installed.

## Document Conventions

The document follows conventional standards with a heading font size being 14 and being written in **bold format**. Subheading will be **bold** and the font size being 12. Regular information and data will not be bold and the font size being 11.

Software requirements will follow a standardized format, detailed requirements are to be inherited from higher level requirements and will be clearly stated.

## Intended Audience and Reading Suggestions

The intended audience for the document is the Viaeyes Team, City Garments team which includes the manager, cashier and other staff. This document is also written for third party stakeholders including Sir Zeeshan Rana and other outside testers/evaluators.

It is imperative for the Viaeyes Team to thoroughly read through Section 3, 4, 5 and 6 with the utmost importance and patience. It is recommended for the City Garments team to learn from Section 1 and 2 the most. Whereas, the third-party investors and stakeholders may read the document in a sequential manner.

## Product Scope

The point-of-sale system is being implemented for City Garments to solve the problem of difficulty in data logging and inventory management. 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.

Physically, long queues would be avoided, shipments and deliveries would be speedier. The store would be exponentially faster and more efficient in handling orders and large amounts of customers.

## References

[SRE Project Proposal.docx](SRE%20Project%20Proposal.docx)

[List\_of\_Software\_Requirements\_for\_Point\_of\_Sale[1].docx](List_of_Software_Requirements_for_Point_of_Sale%5b1%5d.docx)

[POS City Garments Approval.pdf](POS%20City%20Garments%20Approval.pdf)

# Overall Description

## Product Perspective

The point-of-sale system is being implemented in order to replace the current manual/on-paper system. Currently, the shop uses notebooks for bookkeeping and accounting. Receipts are hand written and take up a lot of time, stock management is also hindered due to this. The POS system will replace the hands-on method and bring about an efficiency to the flow of work.

## Product Functions

* Inventory Management
* Invoice Generation
* Sales Record and Analytics
* User Profiles and Permissions
* Promotions, Return, Exchange Functionality
* A dashboard for all functions

## User Classes and Characteristics

**Cashier**The cashier is the main user group of the software. They will make use of the system on a daily basis for each item sale. They have a set of requirements for what kind of interface it should have, the capabilities, shortcuts and more. They will scan a barcode for the item and the POS should bring up all information for the item.

**Manager**The manager will use the POS system to provide approvals for returns, refund and exchanges. They will also use the system to take out monthly reports, sales records and necessary analytics.

**Customer**

The customer will arrive at the POS and provide their item to be scanned and sold to them. The POS will bring up all information for the item and print an invoice for the customer.

## Operating Environment

The point-of-sale system will reside on the cashier’s counter which is going to use Windows 7. However, the software is set to work on all Windows released after Windows XP. It will reside as a separate application that may be launched, closed or minimized at will to allow multitasking.

It will also reside with a database system for the stock management functionality.

## Design and Implementation Constraints

The biggest constraint for implementation of the point-of-sale system is the low budget the shop is able to provide. This hinders development for the project as not enough staff and resources are allocated to produce a polished POS system in time.

In terms of hardware limitations, the computer system makes use of a 4GB RAM and only a 128GB HDD which is not fast enough to make use of the full capabilities of the project. Windows 7 is also not a very smooth operating system, comparative to the systems of today.

The program will be written in C++ meaning to allow only the Viaeyes team to make changes or updates to the system.

## User Documentation

* Quick Start Guide – To allow access to most fundamental functions of system
* Instruction Video – A complete video to show how everything works
* Helpline – A helpline will be provided in case of any ambiguities

## Assumptions and Dependencies

The POS system will depend upon FBR guidelines and regulations in order to maintain legitimacy and an officially approved system.

# External Interface Requirements

## User Interfaces

The graphical user interface will follow a blue color palette for the main design. Fitt’s Laws will be strictly followed throughout the system to ensure a user-friendly system.

Standard keyboard shortcuts will also be implemented.

## Hardware Interfaces

Full support is provided with Intel 3rd Generation and further CPUs, RAM is recommended to be higher than 4GB. The POS is compatible with input devices such as a barcode scanner, keyboard and a mouse. The output devices are a monitor and a printer.

## Software Interfaces

Full support is provided with the required Windows 7 and additionally the system is compatible with all Windows operating systems released after Windows XP. The system will work hand in hand with a database for stock manipulation.

## Communications Interfaces

Standard file transfer protocols will be used and verification systems are in place to ensure security of data and information.

# System Features

## User Management

**4.1.1 Description and Priority**

It is a high priority feature as user may have different uses/requirements. It allows for different users to access a system and have different permissions or access.

**4.1.2 Stimulus/Response Sequences**

The user will log into the system with their unique id and password. It will grant them access into the system depending on who is logging in i.e. the manager and cashiers.

**4.1.3 Functional Requirements**

REQ-1 The system shall log in with the id

REQ-2 The system shall allow logout at will

REQ-3 The system shall define user and their access depending on the manager or cashier

## Sales Handling

**4.2.1 Description and Priority** This is the highest priority feature. This is main reason the POS is being created to help in handling sales and creating an invoice. It will have a great benefit as it would speed up sales and more efficient.

**4.2.2 Stimulus/Response Sequences**

The cashier will scan the barcode of item using a scanner, the POS will look up the barcode in the system and bring all the information of the item to the screen. All information will be displayed and added into an invoice. After the last item is scanned, total bill will be calculated and a receipt will be generated and printed.

**4.2.3 Functional Requirements**

REQ-1 The system shall read the barcode of the garment

1.1 The system shall retrieve the name and price of the garment

1.2The system shall retrieve the color, size and make of the garment.

REQ-2 The system shall handle payment

2.1 The system shall handle payment in cash

2.2The system shall handle payment using credit card

REQ-3 The system shall print a receipt

3.1 The system shall print the company’s name, number, and address on the receipt

3.2 The system shall print the items’ descriptions on the receipt.

3.3 The system shall print the item’s size on the receipt.

3.4 The system shall print items’ item codes on receipt.

3.5 The system shall print cash taken and returned on receipt.

3.6 The system shall print the FBR code on the receipt.

3.7 The system shall print FBR POS service fee on the receipt.

3.8 The system shall print terms and conditions on receipt.

REQ-4 The system shall deduce stock of garment

4.1 The system shall subtract stock if the garment is sold

REQ-5 The system shall handle tax management

5.1 It should calculate the tax report by the end of the month

## Promotions and Discounts

**4.3.1 Description and Priority**

It is a medium priority feature to handle any special discounts or limited promotions. It allows a customer to avail a special discount depending upon the terms and conditions such as validity, date etc.

**4.3.2 Stimulus/Response Sequences**

The cashier will enter a coupon number if provided by a customer, the system will check validity of coupon and automatically apply a discount on the price of item.  
In other cases, if there is a sale going on at the shop a discount will be automatically added by the POS system.

**4.3.3 Functional Requirements**

REQ-1The system shall handle special promotions and discount

1.1 The system shall calculate the discount price

## Return and Refund

**4.4.1 Description and Priority**

It is a medium priority feature to handle any cases of return, refund and exchange. It allows a customer to return any item for any reason if it is under the terms and conditions.

**4.4.2 Stimulus/Response Sequences**

The cashier read barcode of item and bring up the date of sold item. If it follows the return policy of shop the cashier will allow customer to make the return. The system may allow a full refund and increase stock of the garment.

**4.4.3 Functional Requirements**

REQ-1The system shall handle the return and refund items

1.1 The system shall read the barcode and receipt

1.2The system shall increase stock if the garment is returned.

# Other Nonfunctional Requirements

## Performance Requirements

REQ-1The system shall be executing each function in less than ½ second  
 This will allow the system to have maximum performance and be as efficient as possible.

## Safety Requirements

REQ-1 The system shall only allow return or exchange an item if less than seven days have passed. This is a company policy. Items after seven days can no longer be exchanged or returned. The POS system should have a safety check to compare the current date and the date item was bought to ensure the policy is followed.

REQ-2 The system shall check the validity of special promotions and discounts. Validity of coupons and discounts must be checked by the system to ensure no financial losses are occurred and the prices of item are followed correctly.

## Security Requirements

REQ-1 The system shall allow users to enter items through item codes manually. In a case of clerical errors or incorrect barcode scan, the system shall allow codes to be entered manually. This will help overcome any fraudulent codes, incorrect invoices or items be sold without an invoice.

REQ-2 The system shall follow FBR standards for payments and the system shall automatically add Rs.1 POS service fees. This is done in order to ensure a secure transaction between customer and company and ensure that FBR standards have been followed and that the company is not fraudulent.

## Software Quality Attributes

**Correctness:** The POS system will perform the required task as per specification such as the implementation of an invoice generator, monthly reports and other functional requirements.

**Interoperability:** An example of interoperability is that the invoice generator should work hand in hand with the printing mechanism. Similarly, each component should work perfectly in sync with each other.

**Maintainability:** The program for the system should be written in functions and prototypes format. This will help to maintain the system and provide regular updates or fixes.

**Portability:** The portable nature of the software in an executable file such as an application means that it can stored in a USB flash drive and transferred to different computers easily.

**Usability:** The system will provide an easy user experience with the utmost satisfaction. It will be a complete build with complete efficiency.

## Business Rules

The cashier may only use the sales functions to make sales.  
The manager has access to every function and also the ability to generate monthly, daily reports on a regular basis regarding the sales trends and other analytics.

**Appendix A: Glossary**

POS: Point-Of-Sale

RAM: Random Access Memory, used to store working data and machine code

HDD: Hard Disk Drive, an electro-mechanical storage device

GB: Gigabyte, a unit to define storage

CPU: Central Processing Unit, the processor of a computer which performs basic arithmetic, logic, controlling, and input/output (I/O) operations.

USB: Universal Serial Bus, a data storage device

FBR: Federal Board of Revenue, a federal law enforcement agency of Pakistan that investigates tax crimes, suspicious accumulation of wealth, money-laundering make regulation of collection of tax.

Fitt’s Law: The amount of time required for a person to move a pointer to a target area is a function of the distance to the target divided by the size of the target. It is applied in user experience (UX) and user interface (UI) design.