

**ADAMA SCIENCE AND TECHNOLOGY**

**UNIVERSITY**

**Department of Computer Science and Engineering**

**Fundamentals of Software Engineering course (CSEg3201)**

**Software Requirement Specification Assignment**

**TITLE: Online Shopping**

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# Abstract

This document is a software requirement specification document made for a university project with the title Online Shopping. It was part of a semester project for the first semester of the academic year of 2023/2024 G.C.

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# Acknowledgment

Thanks to our FSE teacher for giving us this opportunity to do this project and for teaching and guiding us on how to do this project. Thanks to Alemu Tadesse for advising us and giving us feedback on the UML diagrams.

# Definitions and Abbreviations

## Definitions

## Abbreviations

|  |  |
| --- | --- |
| **ABBREVIATION** | **DESCRIPTION** |
| **FSE** | Fundamentals of Software Engineering |
| **SRS** | Software Requirements Specification |
| **API** | Application Programming Interface |

# Chapter1

## Introduction

We live in the modern age of computer technology. Even though the act of purchasing and online shopping does not have a long track record, it is the fastest growing and dominating business model and technology area. Companies like Amazon, Alibaba, eBay, and Walmart currently dominate the market. However, online shopping is not very common in our country, and we can understand the potential of this business in our country's case. It is significant to develop a proper system that could resolve the current online shopping drawbacks.

## Background of the Project

Online shopping is a form of electronic commerce that allows consumers to buy goods or services from sellers over the Internet using a web browser or a mobile app. Online shopping has become a popular and convenient way of shopping for millions of people around the world, especially with the development of various online platforms, payment methods, and delivery services. However, online shopping did not emerge overnight; it has a history that dates to the late 1970s.

The growth of online shopping was further boosted by the invention of the World Wide Web in 1990 by Tim Berners-Lee, who also created the first web browser. The World Wide Web made it possible for users to access information and resources from different servers and locations. In 1994, Netscape developed a security protocol called SSL (Secure Sockets Layer) that encrypted the data exchanged between web browsers and web servers, making online transactions more secure and reliable. In the same year, the first online marketplaces, such as Amazon.com and eBay, were launched, offering a wide range of products and services to online shoppers. Since then, online shopping has evolved and expanded to include various features, such as comparison shopping, social commerce, mobile commerce, and more.

Online shopping is still in its early stages in Ethiopia, but it is growing rapidly. The COVID-19 pandemic has accelerated the adoption of digital technologies, and the Ethiopian government is taking steps to support the development of e-commerce. A regulation called 'Electronic Transaction' that provides a legal framework for Electronic Commerce (E-commerce) and other related aspects including e-receipts is in the final approval process. The long-awaited Payment instrument Issuers directives that were expected to open the mobile money and fintech space for non-banks and MFIs are issued now. Ethio Telecom or any other local Fin-tech start-ups and companies can operate legally. This will definitively add to the dynamics of the Fintech landscape and hopefully provide more and better avenues for people to buy online.

There are a few e-commerce websites and apps in Ethiopia that are worth exploring. Shega is a website that provides a list of e-commerce websites and apps in Ethiopia. Addis Mercato is an online marketplace that offers a wide range of products from supermarkets and stores in town.

## Statement of the Problem

The main issues of online shopping in Ethiopia are **reliability**, **security**, **delivery**, and **a reserved 2-phase payment system**. The proposed software solution aims to address these issues by implementing the following features:

* **Accountability and legal processes**: The system should provide a mechanism for customers to file complaints and track their orders. The platform should also ensure that vendors comply with local laws and regulations.
* **Security issues related to personal information and theft and scam**s: The platform should be designed to protect users' personal information and prevent fraudulent activities such as identity theft and scams.
* **Delivery issues**: The system should provide customers with accurate delivery estimates and allow them to track their orders in real time. The platform should also ensure that products are delivered to the correct address.
* **Reserved 2-phase payment system:** Local payment methods such as CBE Birr, Amole, Tele birr, and M-Birr do not provide an API for a 2-phase payment system in which paid money is reserved until completion of item transaction either in success or failure. However, this can be solved by implementing the transaction system internally in which the users transfer money internally after making deposits to the organization's bank account from external sources through APIs and direct transfers and keeping track of account balance and transaction history locally.
* **Internet Issues:** The platform should be designed to be accessible to users with low bandwidth internet connections, as well as those who may not have access to high-end devices.

The proposed software solution should be user-friendly, secure, and scalable. The system should be able to handle many users and transactions simultaneously. The platform should provide a seamless shopping experience to customers, allowing them to browse through different categories of products, add items to their cart, and make payments securely. The system should also provide vendors with a platform to set up their online stores, manage their inventory, and track their sales. The platform should be accessible from desktop and mobile devices.

## Justification of the Project

It is best to make this project as no local system resolves the issues mentioned in the problem statement and the ones that do are not local and do not support local payment or delivery.

## 1.5 Objective of the Project

### 1.5.1 General Objectives

Generally, our objective is to create a desirable, competent, secure, and reliable local online shopping software system for use in Ethiopia.

### 1.5.2 Specific Objectives

Our specific objectives are:

* + To create a functional online shopping system within the given timeframe.
  + To incrementally and iteratively design and build the system.
  + To parallelly work on this project for maximum efficiency.
  + To continuously, analyze and improve requirements and this specification document.
  + To analyze, design, and implement features prioritized based on importance.

## 1.6 Scope and Limitations

### 1.6.1 Scope of the Project

In this project, we only focus on developing a country-local system.

### 1.6.2 Limitations of the Project

These are the limitations of this project:

* + The software system will not work internationally.
  + Internet access and a modern browser are required.
  + Less than one month to finish this project.

## 1.7 Feasibility Study

### 1.7.1 Technical Feasibility

### 1.7.2 Operational Feasibility

### 1.7.3 Economic Feasibility

## 1.8 Significance of the Project

This project is significant because:

* + It makes it easier to find the items we want to buy and their details using modern technology.
  + It is trustworthy and involves the least legal processes and worries to customers.

## 1.9 Beneficiaries of the Project

The beneficiaries of this project are:

* + Stakeholders who invest in this project.
  + Vendors who want to keep track of their stock and sell online.
  + Customers who want to purchase online and have items delivered.
  + Employees. i.e. Managers and couriers.

## 1.10 Methodology

## 1.11 Development Tools

### 1.11.1 Hardware and Software Tools

#### 1.11.1.1 Hardware Tools

* + Personal Computers: Laptops.
  + Peripherals: Wireless Mouse
  + Smart Phones: For communication and file sharing.

#### 1.11.1.2 Software Tools

* + WPS Office: for editing word documents.
  + VSCode: for coding and general text editing.
  + Draw.io: for designing modeling diagrams.
  + Microsoft Edge, Google Chrome: for testing and debugging webapp.

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