

Bright Brightness Shop System Documentation

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1 System Vision

1.1 Client Business Description

1.1.1 Who is the client (company)?

- The client is Mr. Msane, who operates a medium-sized company in the cleaning products industry.

1.1.2 In which field is the company based?

- The company is based in the cleaning products field.

1.1.3 How long have they been in the marketplace?

- The company has several years of experience in the marketplace, indicating a well-established presence.

1.1.4 How big is the company?

- The company is medium-sized, with multiple branches, indicating a significant scale of operations.

1.1.5 What are their daily work processes?

- Daily operations include managing cleaning products inventory, processing customer purchases, and ensuring compliance with relevant regulations.

1.1.6 What are the key services or products they offer?

- The company offers various cleaning products.

1.1.7 Who are their main customers or clients?

- Their primary customers are individuals and businesses seeking cleaning products.

1.1.8 What are their main business goals or objectives?

- The main business goals are to efficiently manage cleaning products inventory, provide high-quality customer service in processing purchases, and maintain strict compliance with relevant regulations.

1.1.9 What challenges do they face in their industry?

- Significant challenges include managing inventory accurately, ensuring timely restocking of cleaning products, maintaining compliance with stringent regulations, and providing excellent customer service in a competitive market.

1.1.10 What are their competitive advantages?

- Their established market presence, multiple branches, and several years of experience in the industry provide a strong competitive advantage. Additionally, their focus on compliance with regulations and efficient inventory management likely sets them apart from competitors.

1.2 Problem Description

Best Brightness Pongola Shop faces several operational challenges that hinder its efficiency, customer satisfaction, and overall business performance. The primary issues identified include:

1.2.1 Inefficient Inventory Management

Current System: The shop relies on manual processes for tracking inventory, leading to errors and discrepancies in stock levels.

Problems:

- **Stockouts and Overstocks:** Frequent stockouts result in lost sales, while overstocks tie up capital and storage space.
- **Inaccurate Stock Data:** Inconsistent and inaccurate inventory records hinder effective decision-making and reorder processes.
- **Manual Updates:** Manual entry and updates are time-consuming and prone to human error.

1.2.2 Limited Customer Management

Current System: Customer information is recorded manually, making it difficult to track purchase history and preferences.

Problems:

- **Lack of Personalized Service:** Inability to track customer preferences and purchase history results in a lack of personalized services and targeted promotions.
- **Inefficient Loyalty Programs:** Difficulty in managing loyalty programs and providing incentives to repeat customers.

1.2.3 Inadequate E-commerce Presence

Current System: The shop lacks an online platform, limiting sales to in-store customers only.

Problems:

- **Missed Sales Opportunities:** The absence of an online store restricts the shop from tapping into the growing market of online shoppers.
- **Limited Market Reach:** Without an e-commerce platform, the shop's market reach is confined to the local area.
- **Customer Inconvenience:** Customers prefer the convenience of online shopping and home delivery, which the shop currently cannot offer.

1.2.4 Lack of Integration Between Systems

Current System: Different aspects of the business (inventory, sales, customer management) are managed independently, leading to a lack of integration.

Problems:

- **Data Silos:** Disparate systems create data silos, making it difficult to get a holistic view of the business.
- **Inefficient Processes:** Manual data transfer between systems leads to inefficiencies and potential data loss or corruption.
- **Inconsistent Data:** Lack of integration results in inconsistent data across different systems, affecting decision-making.

1.2.5 Limited Reporting and Analytics

Current System: The shop relies on basic reporting capabilities, providing limited insights into business performance.

Problems:

- **Inadequate Business Insights:** Limited ability to analyze sales trends, customer behavior, and inventory performance.
- **Reactive Decision-Making:** Inability to generate real-time reports leads to reactive rather than proactive decision-making.
- **Manual Report Generation:** Time-consuming manual process to generate reports, leading to delayed insights.

1.2.6 Impact on Business

The identified problems have significant impacts on Best Brightness Pongola Shop, including:

- **Reduced Sales and Profitability:** Inefficient inventory management and lack of online presence result in lost sales and reduced profitability.
- **Customer Dissatisfaction:** Limited ability to offer personalized services and the inconvenience of no online shopping option affect customer satisfaction and loyalty.

- **Operational Inefficiencies:** Manual processes and lack of integration lead to operational inefficiencies and higher labor costs.
- **Poor Decision-Making:** Limited reporting and analytics capabilities hinder data-driven decision-making, affecting the shop's ability to adapt to market changes.

1.2.7 Objectives

The primary objective is to address these challenges by developing an integrated IT system that enhances inventory management, customer relationship management, and online sales capabilities. This will involve:

- Implementing a real-time inventory management system.
- Developing a customer management module with loyalty program features.
- Creating an e-commerce platform to expand market reach.
- Integrating all systems for seamless data flow and improved operational efficiency.
- Enhancing reporting and analytics capabilities for better business insights.

1.3 System Capabilities

Inefficient Inventory Management	<ul style="list-style-type: none"> • Real-time tracking of stock levels • Automated reorder alerts when stock falls below threshold • Accurate and centralized inventory data • Streamlined inventory updates through barcode scanning • Historical inventory data analysis
Limited Customer Management	<ul style="list-style-type: none"> • Comprehensive customer profiles including purchase history and preferences • Personalized service offerings based on customer data • Efficient management of loyalty programs and rewards • Automated tracking of customer interactions and feedback
Inadequate E-commerce Presence	<ul style="list-style-type: none"> • Fully functional online store for product browsing and purchasing • Integration with inventory system for real-time stock updates • Support for multiple payment gateways • Features for order tracking and home delivery
Lack of Integration Between Systems	<ul style="list-style-type: none"> • Centralized database for all business operations • Seamless data flow between inventory, sales, and customer management modules • Real-time synchronization of data across different systems
Limited Reporting and Analytics	<ul style="list-style-type: none"> • Advanced reporting capabilities for sales, inventory, and customer behavior • Real-time dashboard for key performance indicators (KPIs) • Customizable reports for detailed analysis • Data export options for further analysis in external tools

1.4 Business Benefits

Tangible Benefits	Intangible Benefits
Reduced inventory discrepancies	Enhanced brand reputation
Improved customer satisfaction through efficient service	Better compliance with regulations
Time savings for administrators and customers	Improved data accuracy and security
Increased sales through an online presence	Increased customer loyalty through personalized services and loyalty programs
Cost savings through automated inventory and sales processes	Better decision-making with advanced reporting and analytics

1.5 System Functional Decomposition

Subsystem	Use Case	Users/Actors
User Management	Register Account	Customer, Administrator
	Login/Logout	Customer, Administrator
Inventory Management	Upload Product	Administrator
	Update Product Details	Administrator
	Delete Product	Administrator
	View Product List	Customer, Administrator
Purchase Processing	Add Product to Cart	Customer
	View Shopping Cart	Customer
	Remove Product from Cart	Customer
	Checkout	Customer
Reporting	Generate Sales Report	Administrator
	Generate Inventory Report	Administrator
	View Purchase History	Customer

1.6 Project Stakeholders

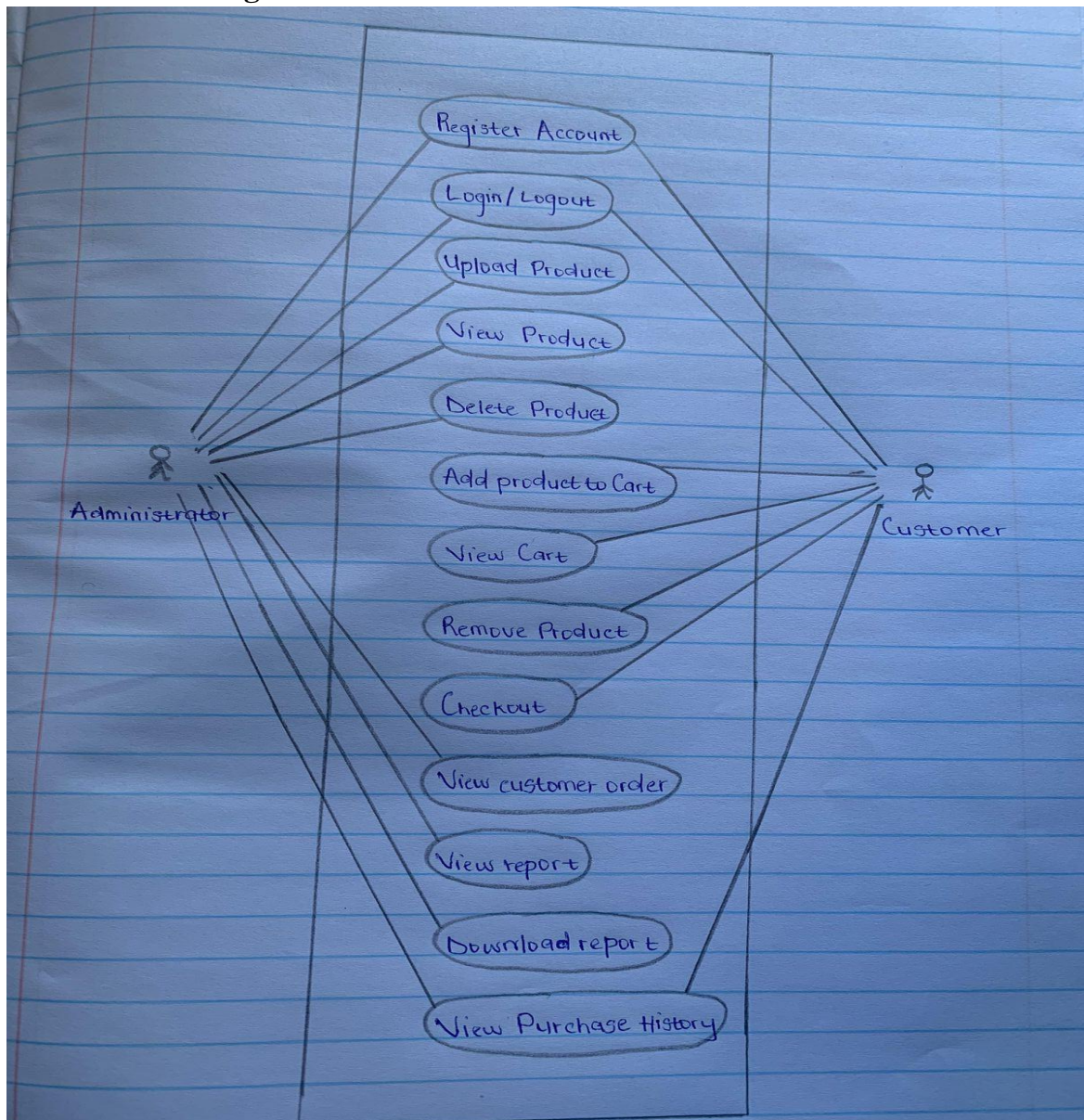
Stakeholder	Role
Mr. J Msane	Client, oversees overall project requirements
KM Ngcobo	Instructor, provides guidance and evaluation
Customers	End-users, interact with the system to purchase products
Administrators	Manage inventory and system updates
Development Team	Develop and implement the system
Sales Team	Interact with the system for sales processes

2 System Functional Requirements

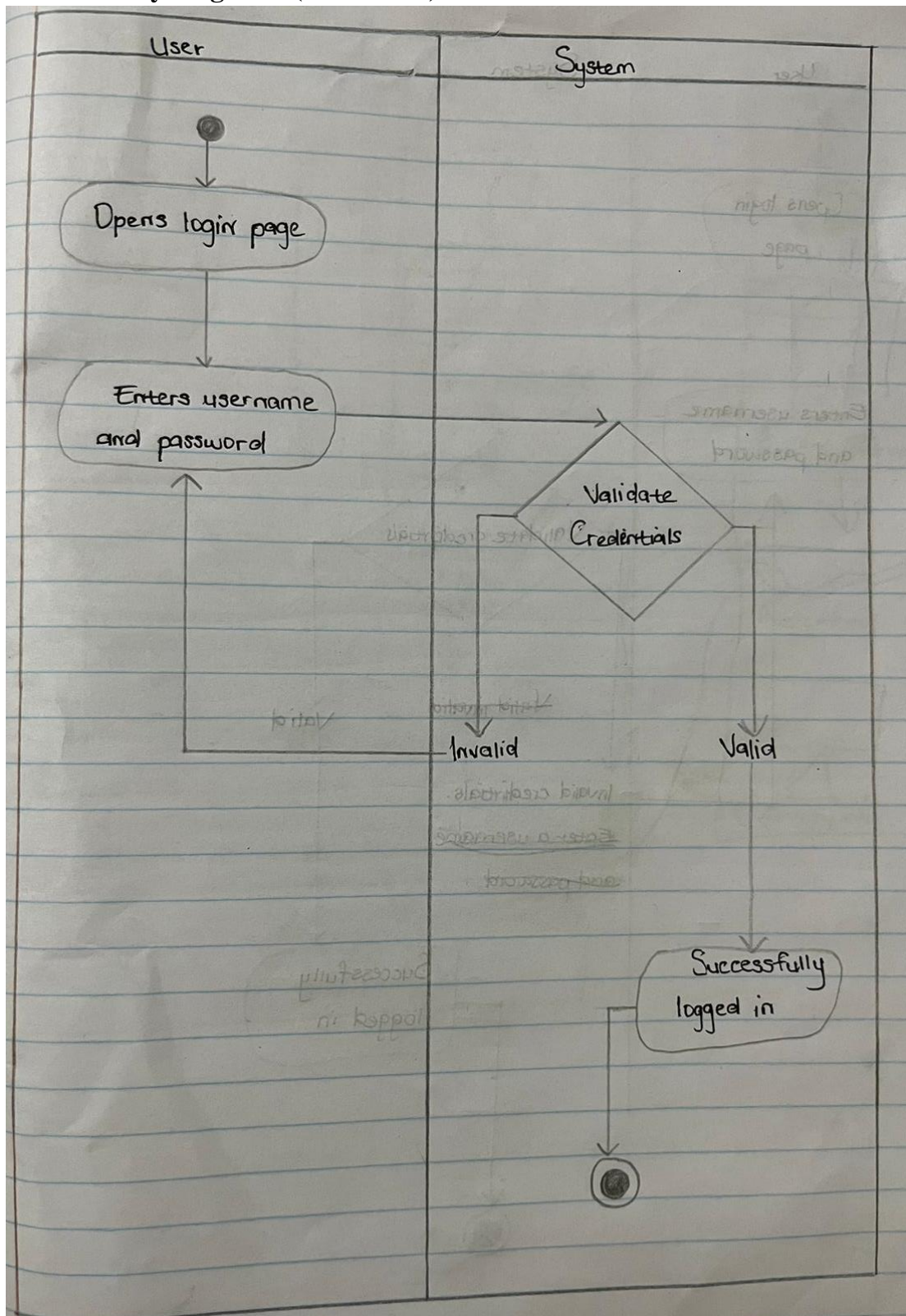
2.1 Use Case Brief Descriptions

Use Case	Description
Login	Customers and administrators can log in to the system
Browse Products	Customers can view and search for available products
Purchase Product	Customers can select products and make purchases
Upload Product	Administrators can add new products to the inventory
Update Stock Levels	Stock levels are updated in real-time upon purchase
Generate Reports	Administrators can generate sales and inventory reports
Register Account	Customers and administrators can register for an account
View Shopping Cart	Customers can view the contents of their shopping cart
Remove Product from Cart	Customers can remove products from their shopping cart
Checkout	Customers can proceed to checkout and complete their purchase
Generate Sales Report	Administrators can generate reports on sales data
Generate Inventory Report	Administrators can generate reports on inventory levels
View Purchase History	Customers can view their past purchases and order history

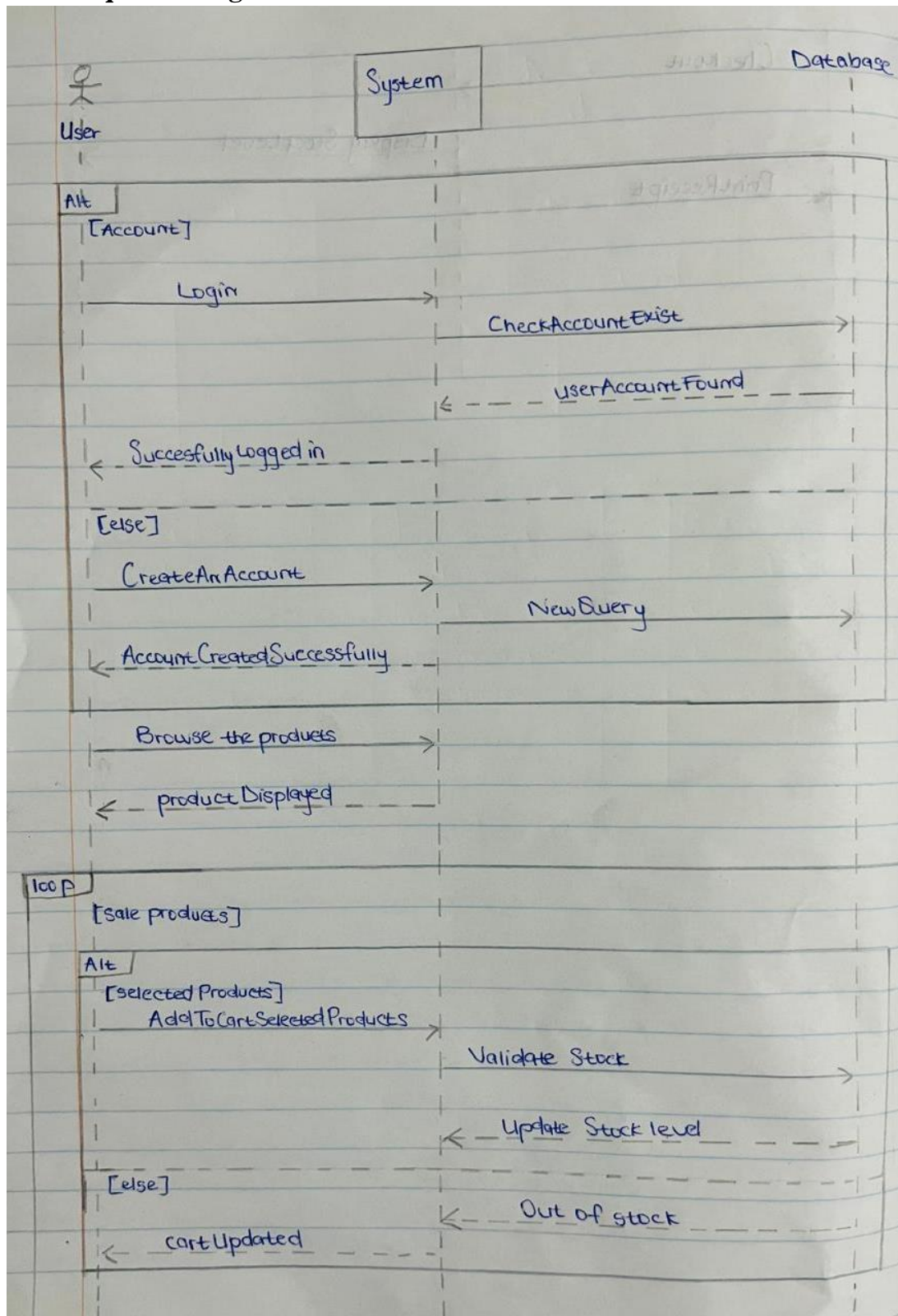
2.2 Use case diagrams

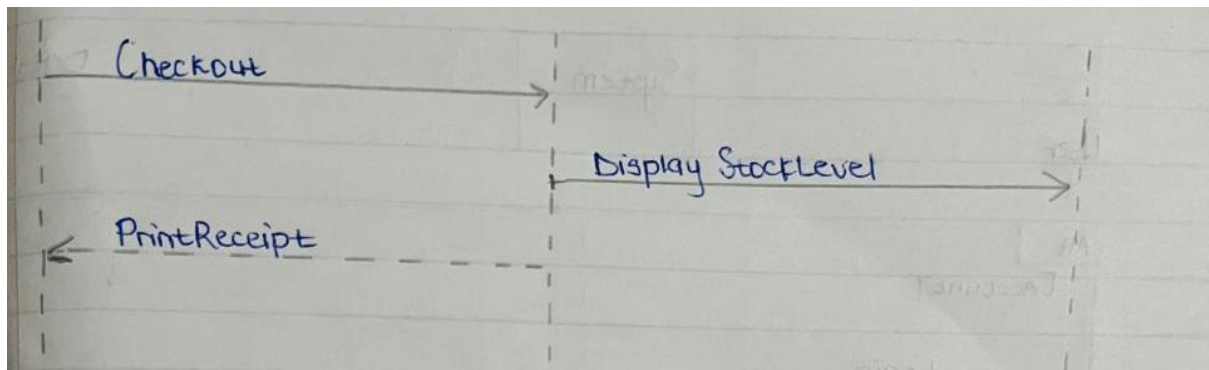


2.3 Activity diagrams (workflows)

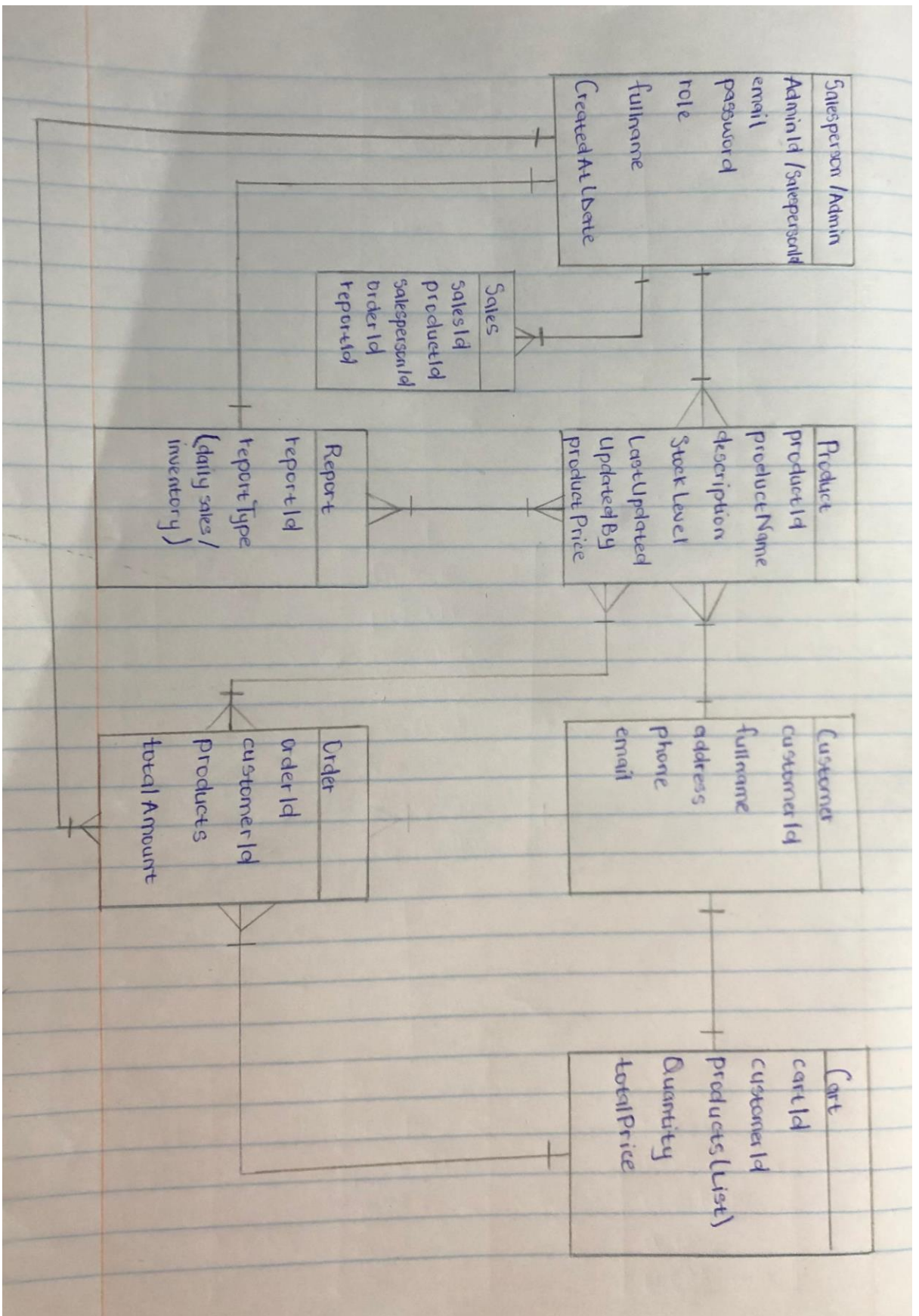


2.4 Sequence diagrams





3 System object classes



4 Evidence of information gathering

Students may use any form of information gathering techniques when investigating system requirements. For each technique adopted and used, evidence to be attached here. For example, if some interviews were conducted with users, attach interview session showing all the details of the interview: date and time, interviewee, list of questions etc... If surveys distributed, attach as sample of a survey used. If company visited with an aim of observing, attach pictures of users in action. If company documents reviewed, attach samples

4.1.1 Surveys

- **Survey Form:** [[Brightness survey \(google.com\)](https://docs.google.com/forms/d/e/1FAIpQLSdjvap4It8HjVVz249eAQeTYelum1xLBtFqE3WZozzFWvR9sA/viewform?usp=sf_link)]
- **Sample Responses:**
https://docs.google.com/forms/d/e/1FAIpQLSdjvap4It8HjVVz249eAQeTYelum1xLBtFqE3WZozzFWvR9sA/viewform?usp=sf_link
- **Summary:** Key findings include a need for real-time stock updates and improved customer feedback systems.

Attachments Checklist:

- Survey form