

Apparel Production Management System

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“The project is submitted in partial fulfillment of the requirement of the Diploma in Software Engineering of National Institute of Business Management.”

Declaration

“I certify that this project does not incorporate without acknowledgement, any material previously submitted for a Diploma in any institution and to the best of my knowledge and belief, it does not contain any material previously published or written by another person or myself except where due reference is made in the text. I also hereby give consent for my project report, if accepted, to be made available for photocopying and for interlibrary loans, and for the title and summary to be made available to outside organizations.”

Date: 15/06/2023

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Preamble

Abstract

Hameedia is a prominent menswear brand in Sri Lanka that has been providing stylish and high-quality clothing for 71 years. Despite its success, the company currently relies on a manual production system that presents several obstacles. One major issue is the time-consuming and error-prone nature of setting targets for employees, which are based on manual attendance records. This manual approach also lacks real-time visibility into the production process, making it difficult for management to efficiently balance production lines and provide customers with timely updates on their orders. Furthermore, the manual system leaves room for errors caused by customers' measurement or specification mistakes, which can disrupt the entire production team. To address these challenges, this thesis proposes the implementation of an apparel management system for Hameedia. The system aims to automate various processes and provide real-time visibility into production, offering a comprehensive solution to optimize resource allocation, improve productivity, and enhance customer satisfaction. By adopting this software solution, Hameedia will be able to track progress, set employee targets, and balance production lines more effectively. The system will assign tasks based on employee skills and performance, leading to an optimized and efficient production process. Additionally, the proposed system will ensure timely order completion, reduce costs, and enhance customer satisfaction. This thesis highlights the significance of the proposed apparel management system as a means to overcome the challenges faced by Hameedia's managers and supervisors. By embracing automation and real-time visibility, Hameedia can achieve higher levels of efficiency, productivity, and customer satisfaction, solidifying its position as a leading brand in the fashion industry.

Acknowledgment

Aside from the efforts of the team, many more individuals must be encouraged and guided for any project to succeed. We would like to take this chance to express our gratitude to everyone who helped us complete this project successfully. The cooperation, coordination, and coordinated efforts of many knowledge sources are essential to the success of any inter-disciplinary endeavor. We will always be appreciative to our supervisor, Ms. Chandula, for being willing to offer us wise advice and direction as we worked on this project. She was willing to share her vast expertise and always offered guidance, which helped us completely understand the project and all of its manifestations as well as carry out the responsibilities that were assigned to us. Last but not least, we would like to convey our appreciation for the help and motivation that our family, friends, and coworkers gave us while we were working on this project.

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Chapter 1: Introduction

1.1 Introduction of the Organization

Hameedia was established in 1949 and has become a leading menswear brand that is synonymous with style and quality. Since its inception 71 years ago, the company has achieved phenomenal growth and today, the brand Hameedia is a household name across Sri Lanka and is rapidly gaining popularity around the world. Hameedia has established itself as a leader in providing high quality custom tailored and ready-made clothing options for men, to help them dress their very best on every occasion.

1.2 Organization Structure

Hameedia's organizational structure includes a board of directors, executive leadership team, and departments such as HR, design and production, sales and marketing, finance and accounting, IT, customer service, and store operations. The board sets strategic direction while the leadership team handles day-to-day operations. Other departments manage employees, create clothing lines, promote products, handle finances and technology, provide customer support, and manage physical stores.

1.3 Current Operations in Organization

Hameedia's operations included designing, manufacturing, and distributing its clothing products, as well as providing after-sales services such as alterations and repairs. The company was also known for its custom-tailored suits and had a separate department dedicated to this service.

1.4 Users and Responsibilities Organization

Customers purchase Hameedia's products either through physical stores or the company's website, providing accurate information and payment. The sales staff assists customers in selecting and purchasing products and maintaining the store. The design team creates new product designs that are unique and appealing, while the production team manufactures the products according to design specifications and ensures that quality standards are met. The marketing team promotes the company's products, manages social media accounts, and creates advertising campaigns. The management team oversees the company's operations, makes strategic decisions, manages finances, sets goals, and ensures that employees are performing their duties effectively, resulting in a successful and profitable company.

1.5 Problem Definition

Currently, the manual system lacks an automated system to monitor the production process. As a result, setting targets for employees is done manually, which is time-consuming and prone to errors. These targets are based on attendance, which is recorded manually. The lack of visibility into the production process makes it difficult for management to efficiently balance production lines and keep customers informed about the status of their orders. Additionally, the current manual system also makes the entire employee team vulnerable to mistakes made by a single customer. A mistake in measurements or specifications made by a customer during the manual order process can lead to errors in the production process, ultimately affecting the entire team.

1.6 Project Objectives

The project objective is to implement an apparel management system for Hameedia that automates processes and provides real-time visibility into the production process. The system aims to optimize resource allocation, improve productivity and efficiency, and increase customer satisfaction. The primary goal is to help Hameedia achieve higher efficiency, productivity, and customer satisfaction.

1.7 Proposed Solution

By analyzing the above-mentioned problems, our team was tasked with finding solutions to overcome the problems faced by the managers and supervisors and possibly finding solutions for future endeavors. With these objectives in mind, we have decided to implement a software solution, which is our apparel management system, that automates the processes of tracking progress, setting employee targets, and balancing production lines. By providing real-time visibility into the production process, the system will help management manage the workflow efficiently and productively. The system will improve productivity by assigning tasks based on each employee's skill set and performance, resulting in an optimized and effective production process. Additionally, the system will balance production lines by allocating resources effectively, resulting in higher productivity and lower costs. The improved resource allocation will help to ensure that all orders are completed on time, leading to increased customer satisfaction. Overall, the proposed solution will help Hameedia achieve higher efficiency, productivity, and customer satisfaction, making it a valuable addition to their operations.

1.8 Chapter summary

This chapter proposes an apparel management system as a software solution to address the challenges faced by managers and supervisors in tracking progress, setting employee targets, and balancing production lines. The proposed solution aims to automate these processes and provide real-time visibility into the production process, optimizing production by allocating resources effectively, assigning tasks based on employee skills and performance, and ensuring timely completion of orders. By doing so, the solution has the potential to increase efficiency and productivity, reduce costs, and improve customer satisfaction, making it a valuable addition to Hameedia's operations.

Chapter 2: Methodology

2.1 Introduction

The purpose of this methodology section is to provide a clear and concise explanation of the approach we will take to develop and implement the proposed software solution. The methodology will describe the overall process, activities, and tools we will use to ensure the success of the project. Our methodology is designed to provide a flexible and iterative approach that allows for adaptation to changing requirements and stakeholder feedback.

2.2 Data Collection Methods

- Interview
- Questionnaires
- Observation
- Document analysis

2.3 Software Process Model

Agile was chosen as the software process model for the apparel production management system because of its iterative and flexible approach. This model emphasizes collaboration and communication between the development team and stakeholders, allowing for quick adaptation to changes in market demands and customer needs. Additionally, Agile's focus on continuous improvement and frequent releases of working software is well-suited for a fast-paced environment such as the apparel production industry.

2.4 Software Development Tools

- Java NetBeans
- MySQL
- Figma
- Wamp Server

2.5 Testing Strategies

White box testing the testing can be done at system, integration, and unit levels of software development. It involves testing a series of predefined inputs against expected or desired outputs so that when a specific input does not result in the expected output, you have encountered a bug. This strategy will be used as all the group members will be running the program after every build and analyze the errors and fix the bugs.

Black box testing is a type of testing in which the functionality of the software is unknown. The testing is carried out without the solution's internal knowledge. This is implemented as the software solution will be given to a parallel team that will test the software without having any ideas on the development process.

Acceptance Testing is where a system is tested for acceptability by the end user. The purpose of this test is to evaluate the system's compliance with the business requirements and assess whether it is acceptable for delivery into production. This is achieved after the software is implemented on the Hameedia Production side, and the manager will have the ability to notify the team of any errors in the solution.

2.6 Implementation Plan

Parallel implementation

Parallel implementation is an effective implementation plan for the apparel production management system because it allows for multiple components to be developed and tested simultaneously, rather than one after the other. This can lead to faster deployment and testing of the system, as well as early identification and resolution of potential issues. Overall, parallel implementation can save time and effort compared to a sequential implementation plan, which can be slower and more prone to delays.

2.7 Chapter Summary

This chapter concludes the strategies and methodologies that are being used in the process of developing the software solution and the reasons for using these methodologies over other accepted strategies. These strategies proved efficient and informative in the relevant phases and the client satisfaction was observed to be positive in collecting data. The development model is also accepted according to the modulars and would be a fast-paced process in the development sector.

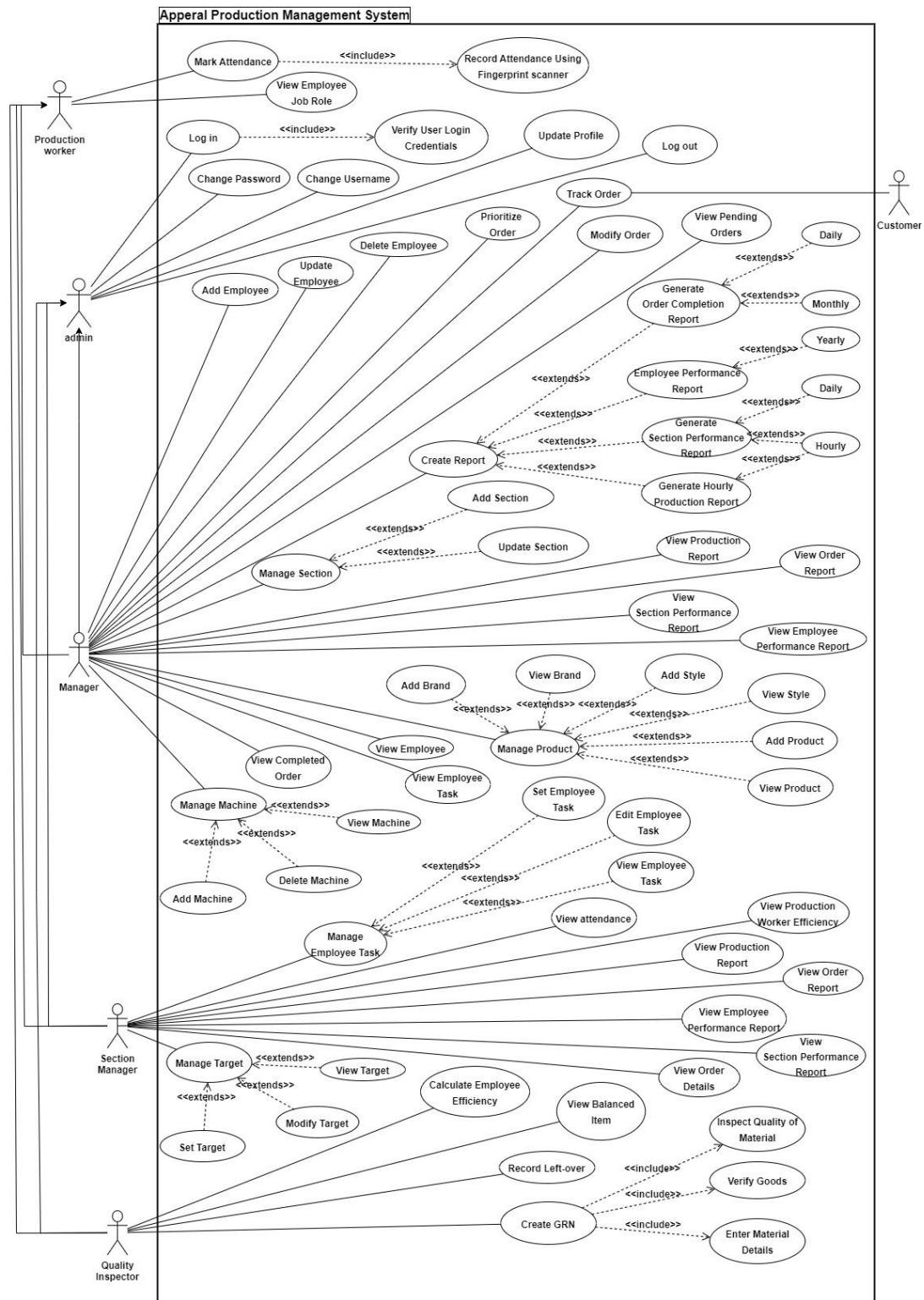
Chapter 3: Analysis

3.1 Introduction

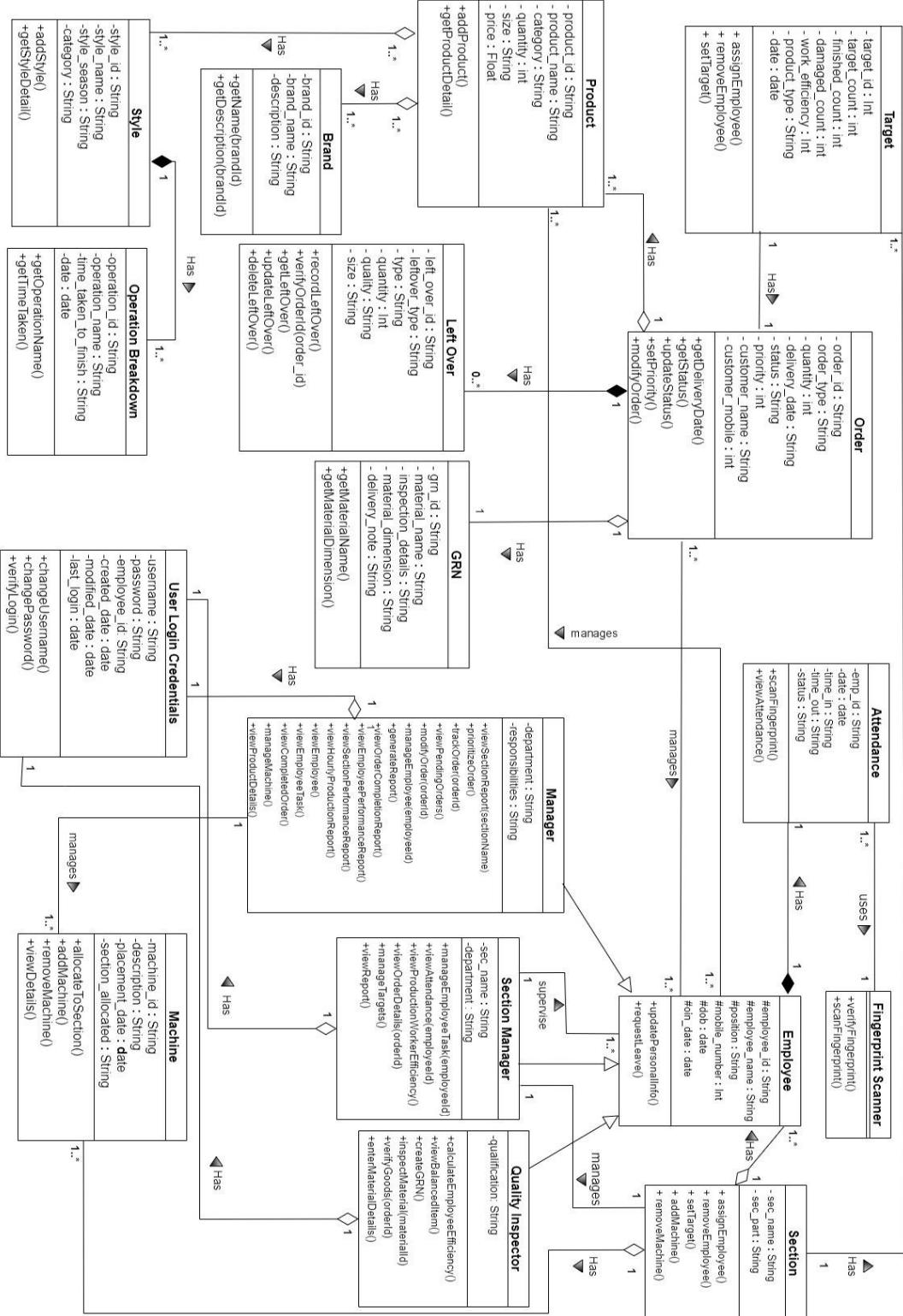
This chapter focuses on the analysis of the proposed software solution. This mainly elaborated on the UML diagrams, the class diagram, and the database entity relationship diagram. These diagrams depict the nature of the solution and its accessibility. This also shows which entities and data would be saved after fully developing the software solution.

3.2 UML Diagram

Use Case Diagram of Proposed System

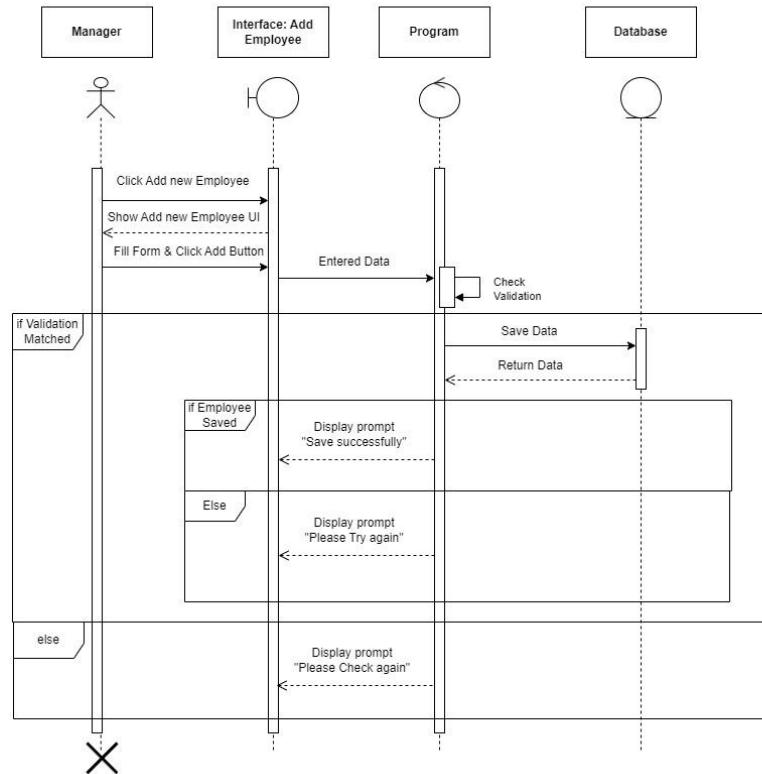


Class Diagram of Proposed System

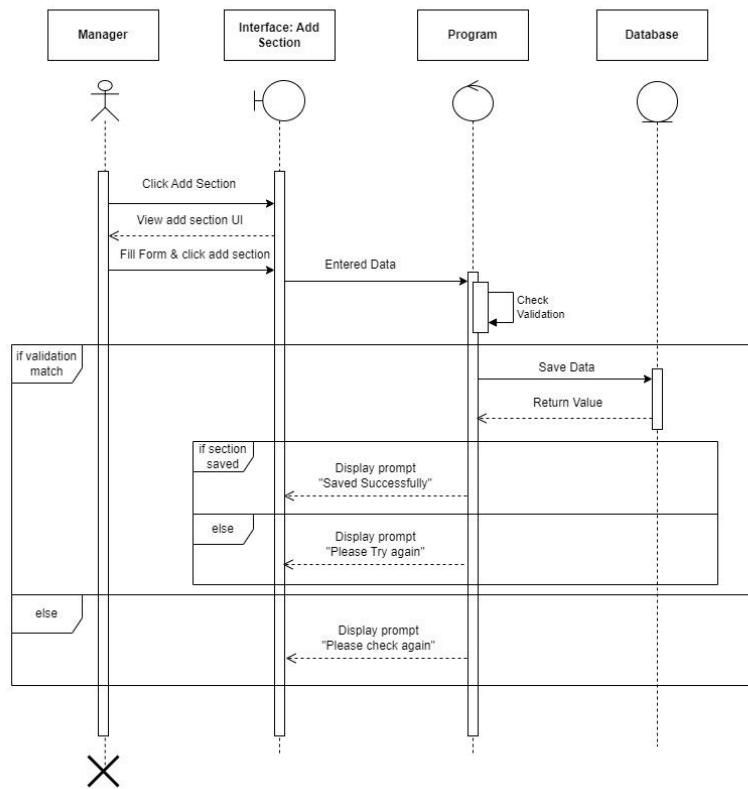


Sequence Diagrams (Each Use case) for Proposed System

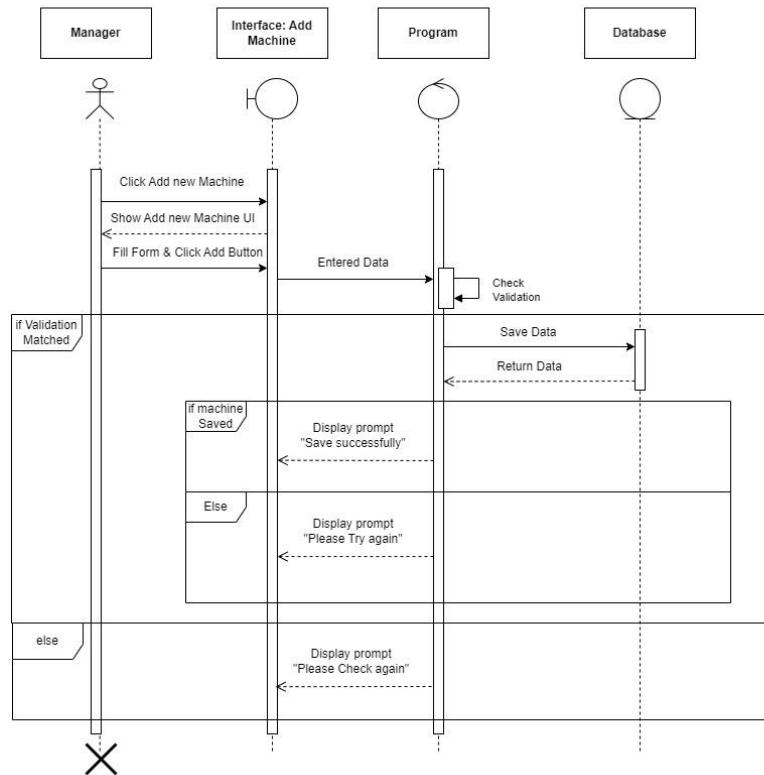
1. Add Employee



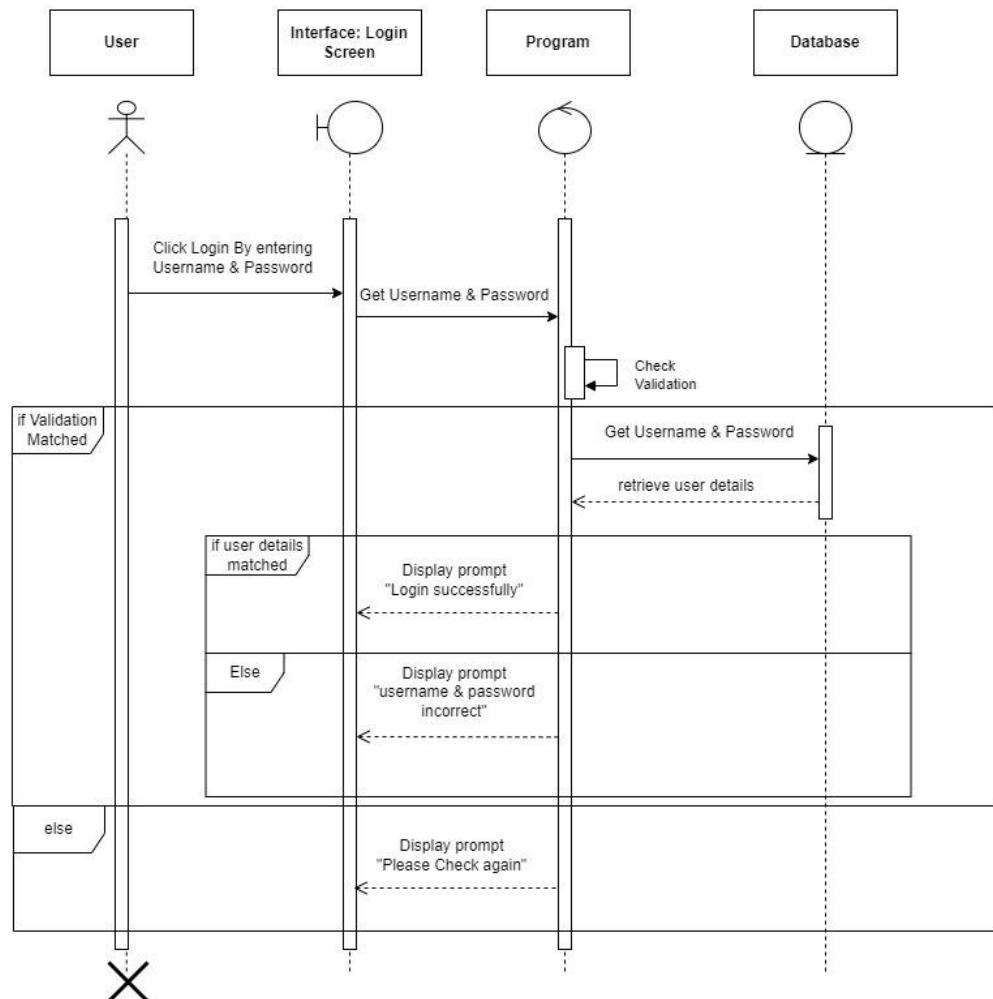
2. Add Section



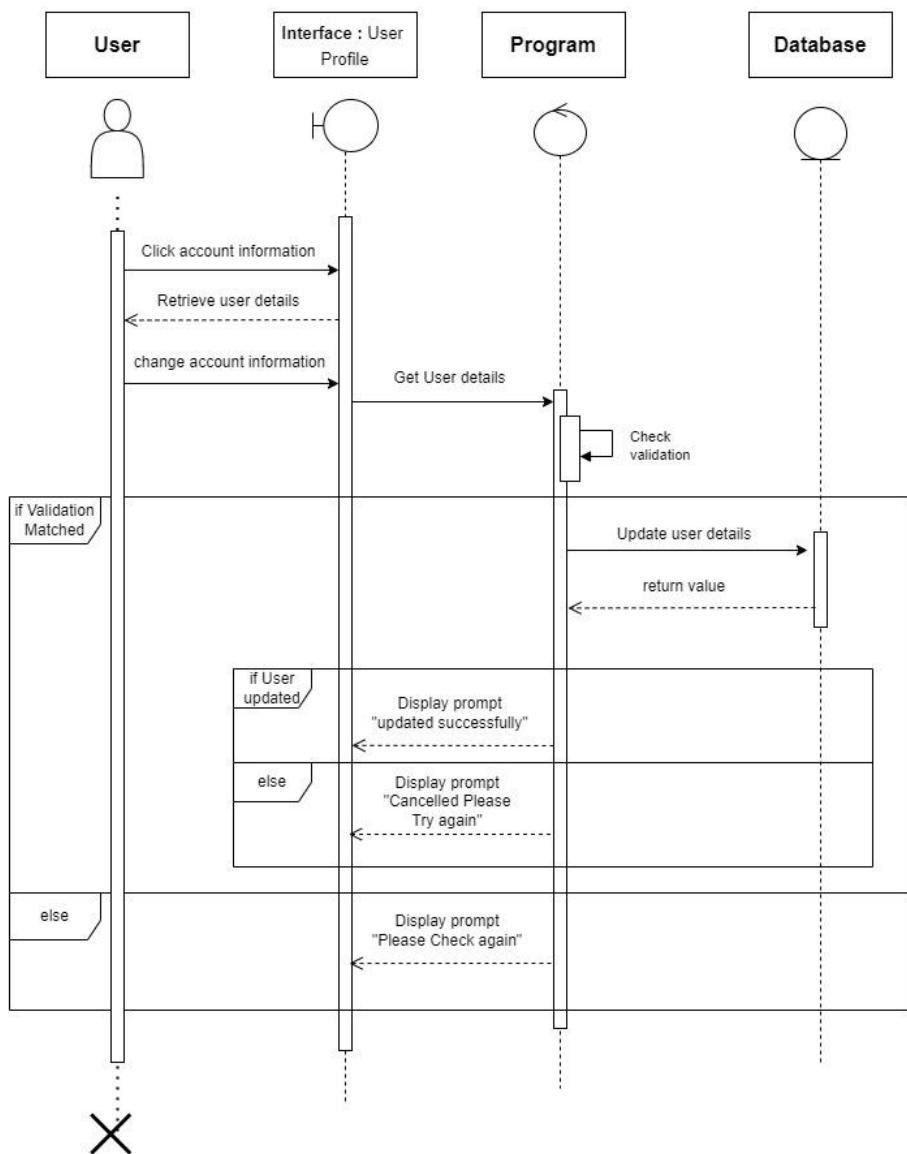
3. Add Machine



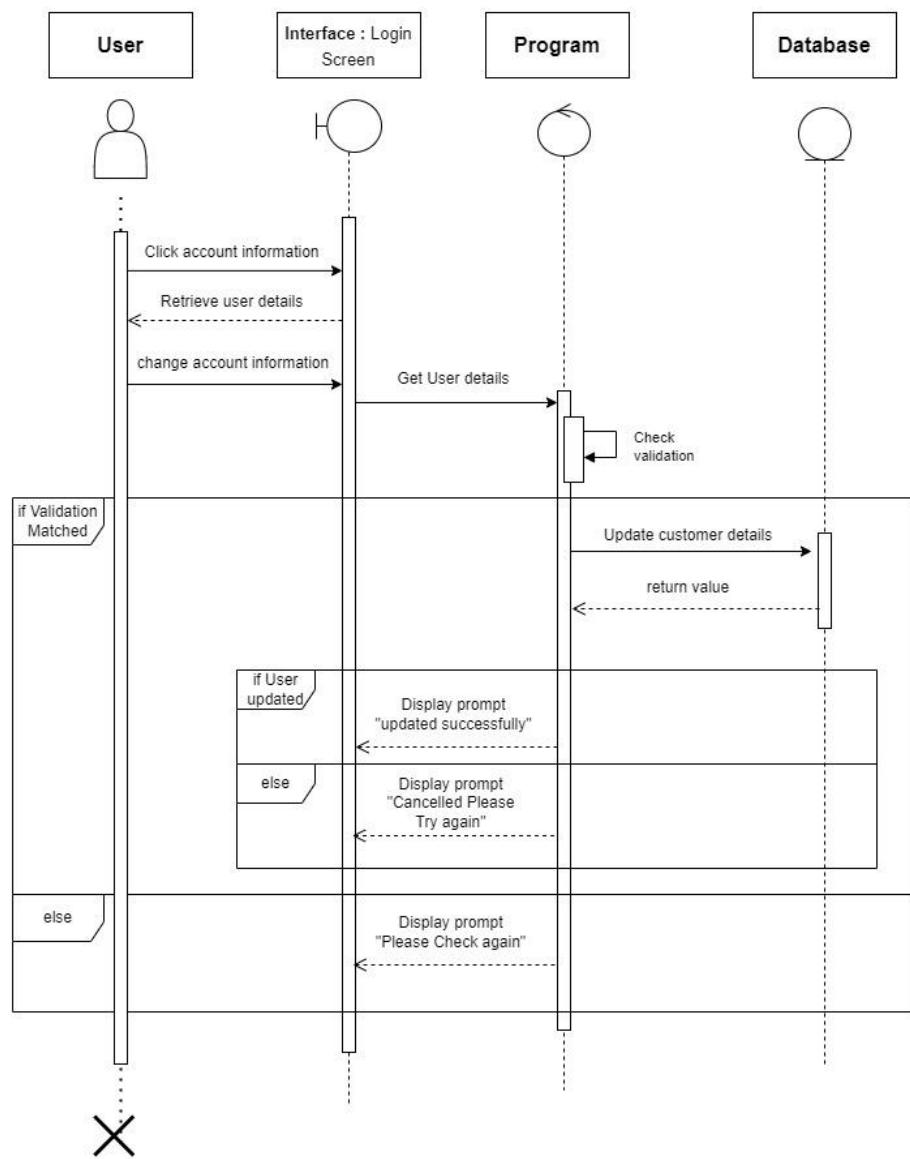
4. System Login



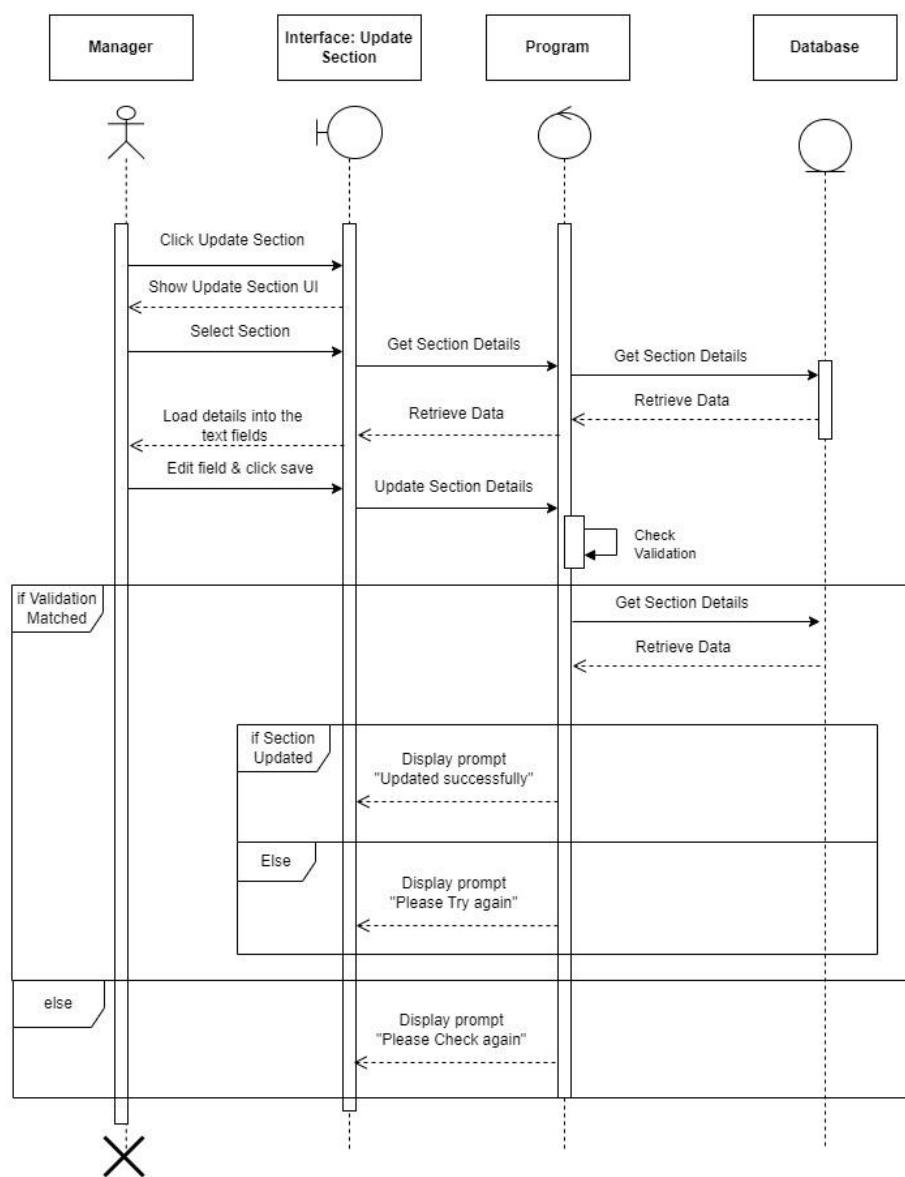
5. Update User Profile



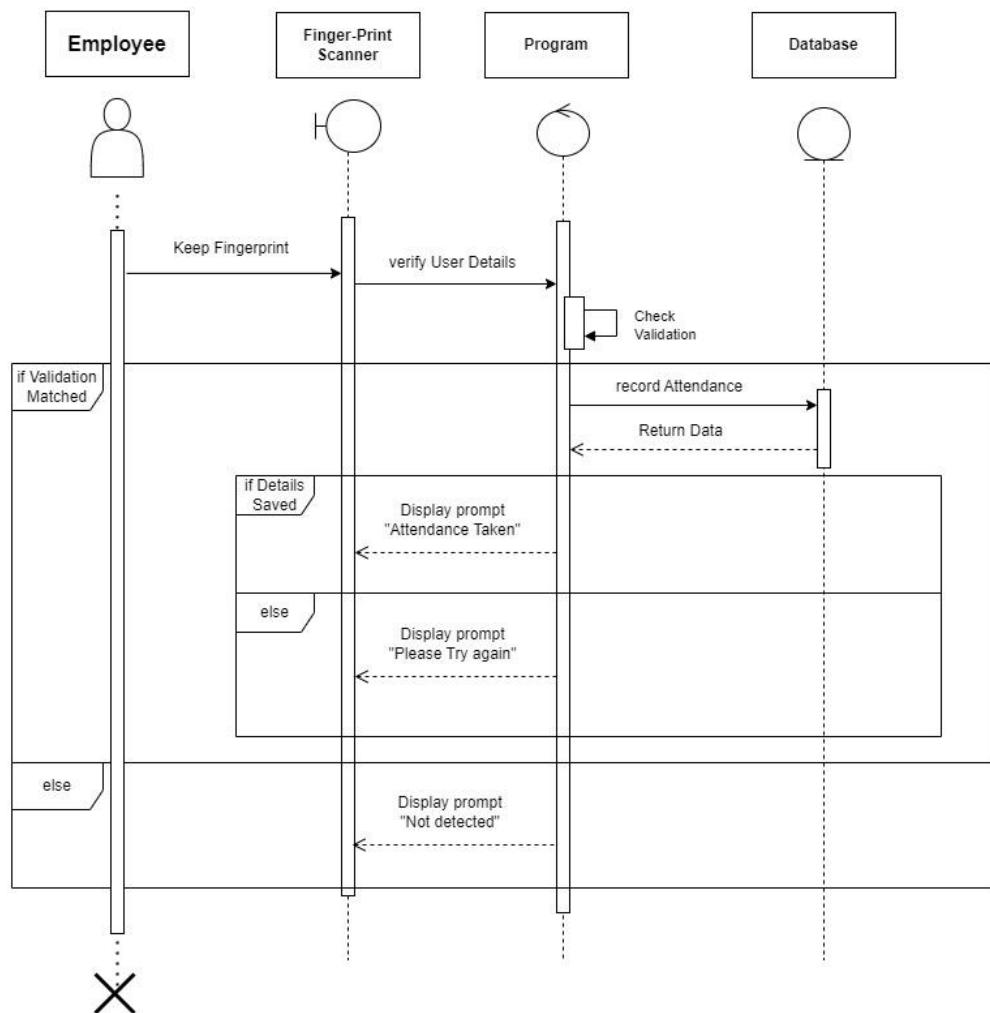
6. Update User Login



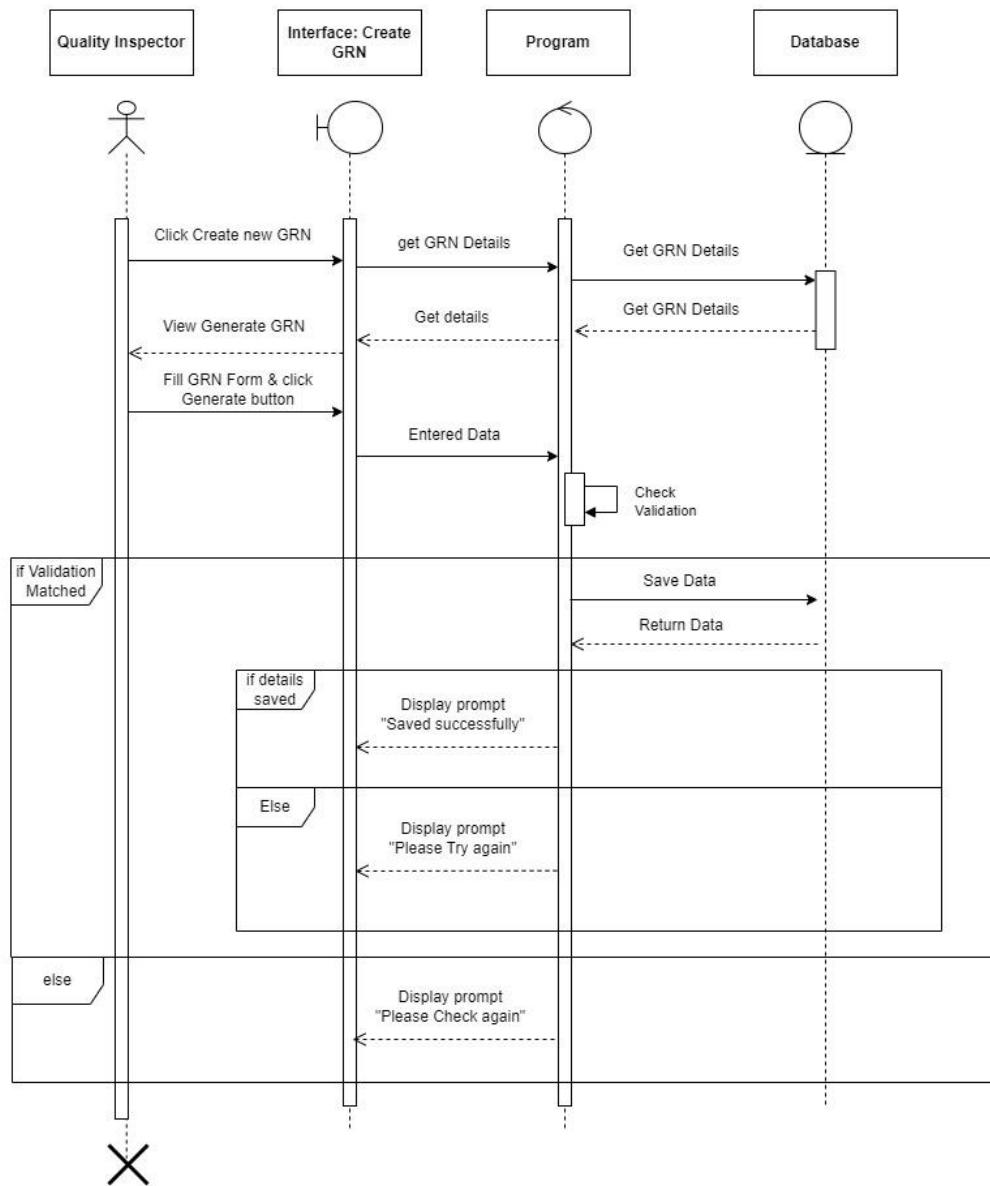
7. Update Section



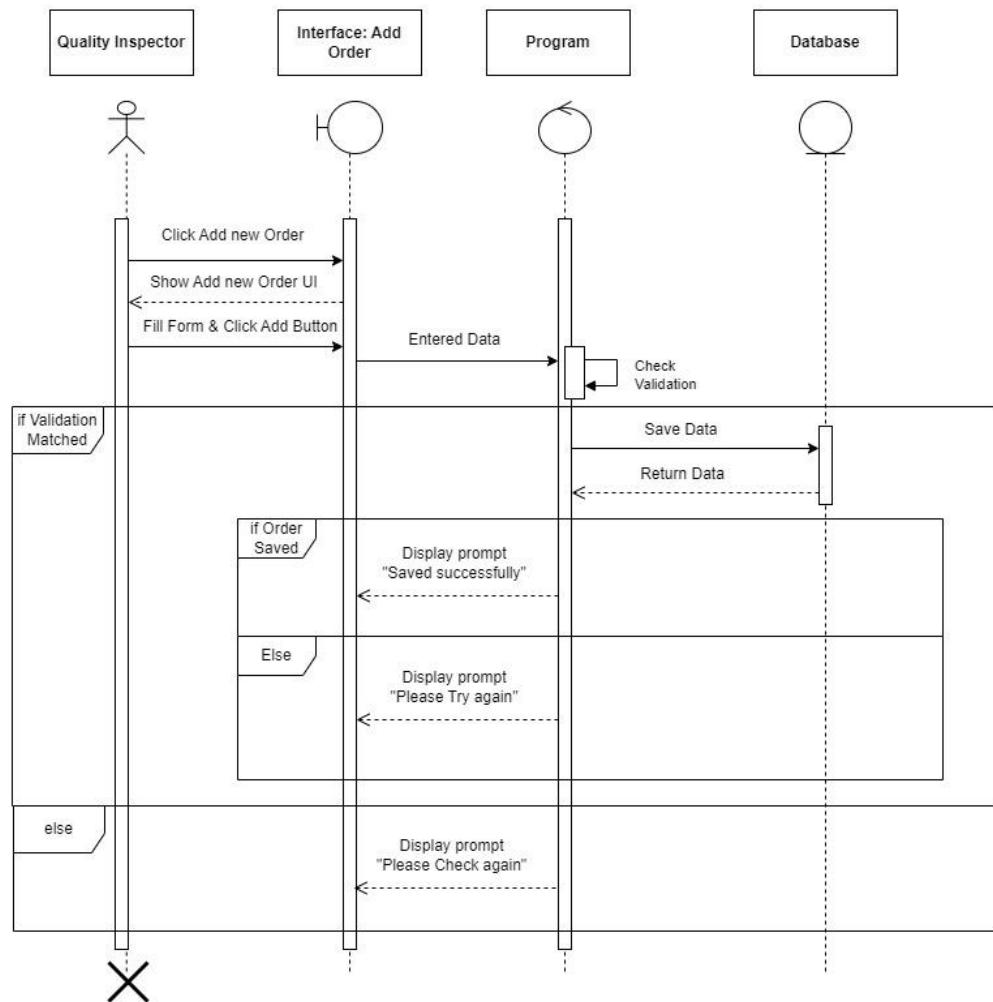
8. Mark Attendance



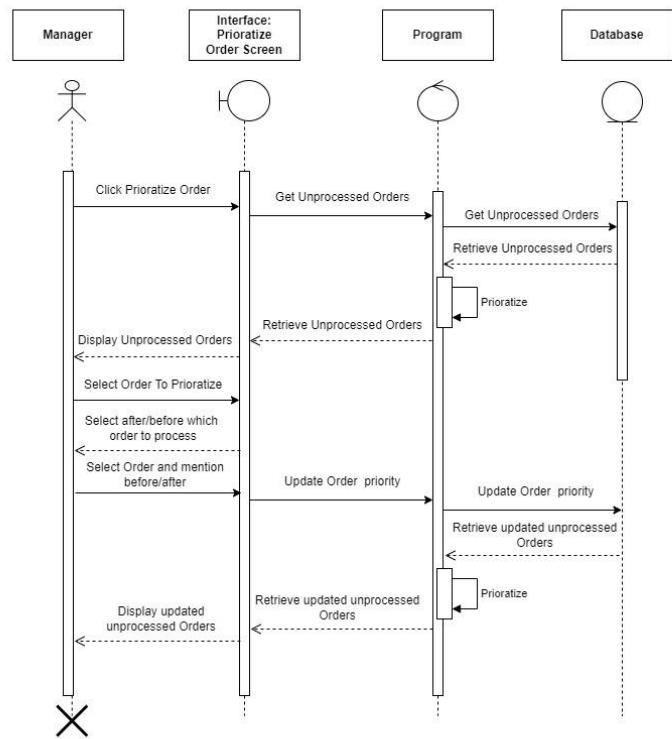
9. Create GRN



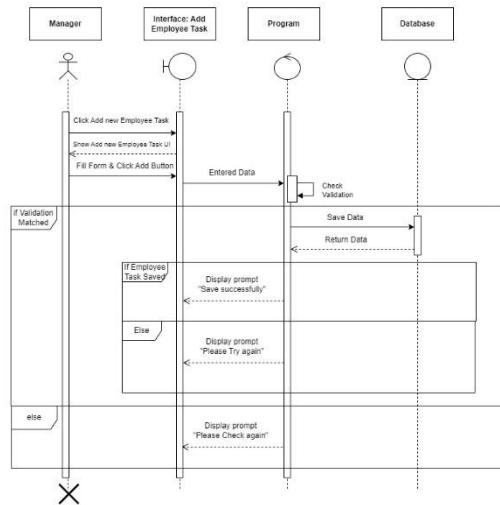
10. Add Order



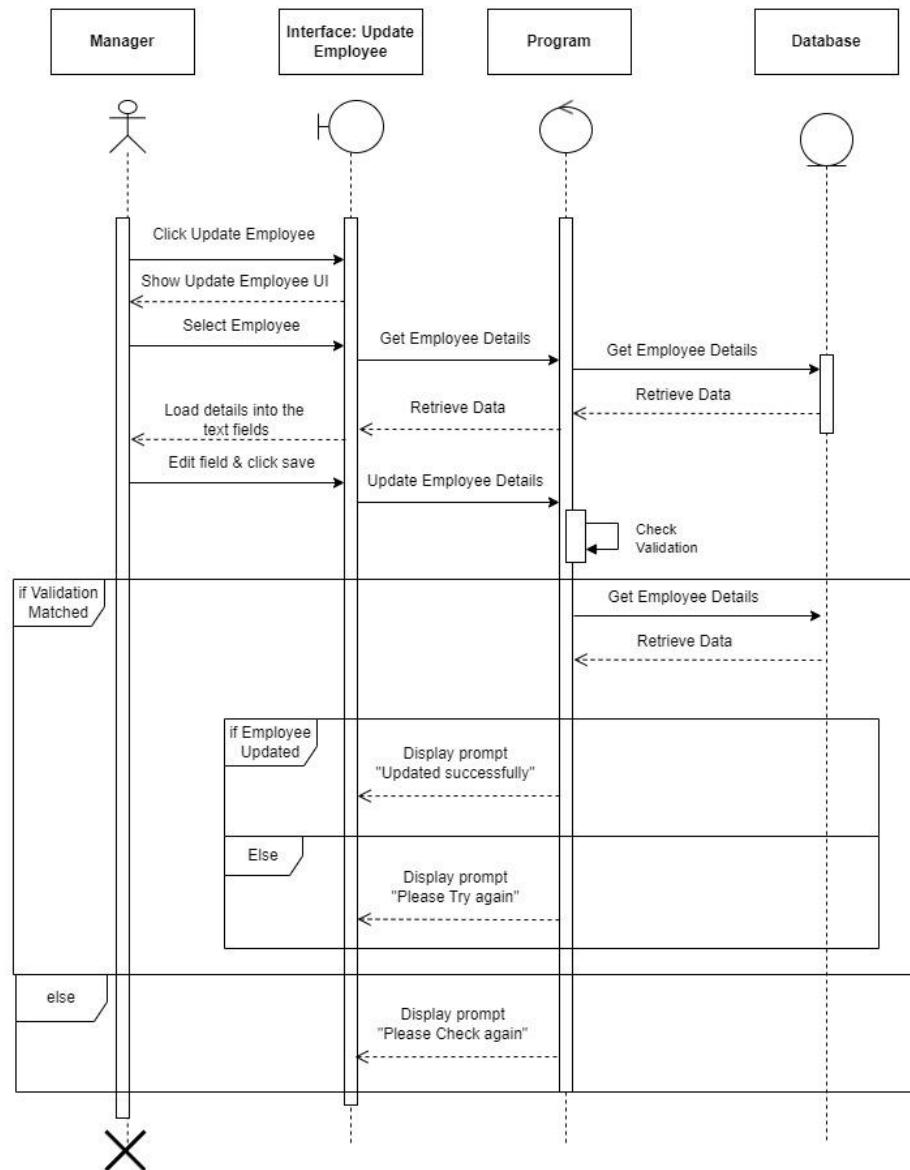
11. Prioritize Order



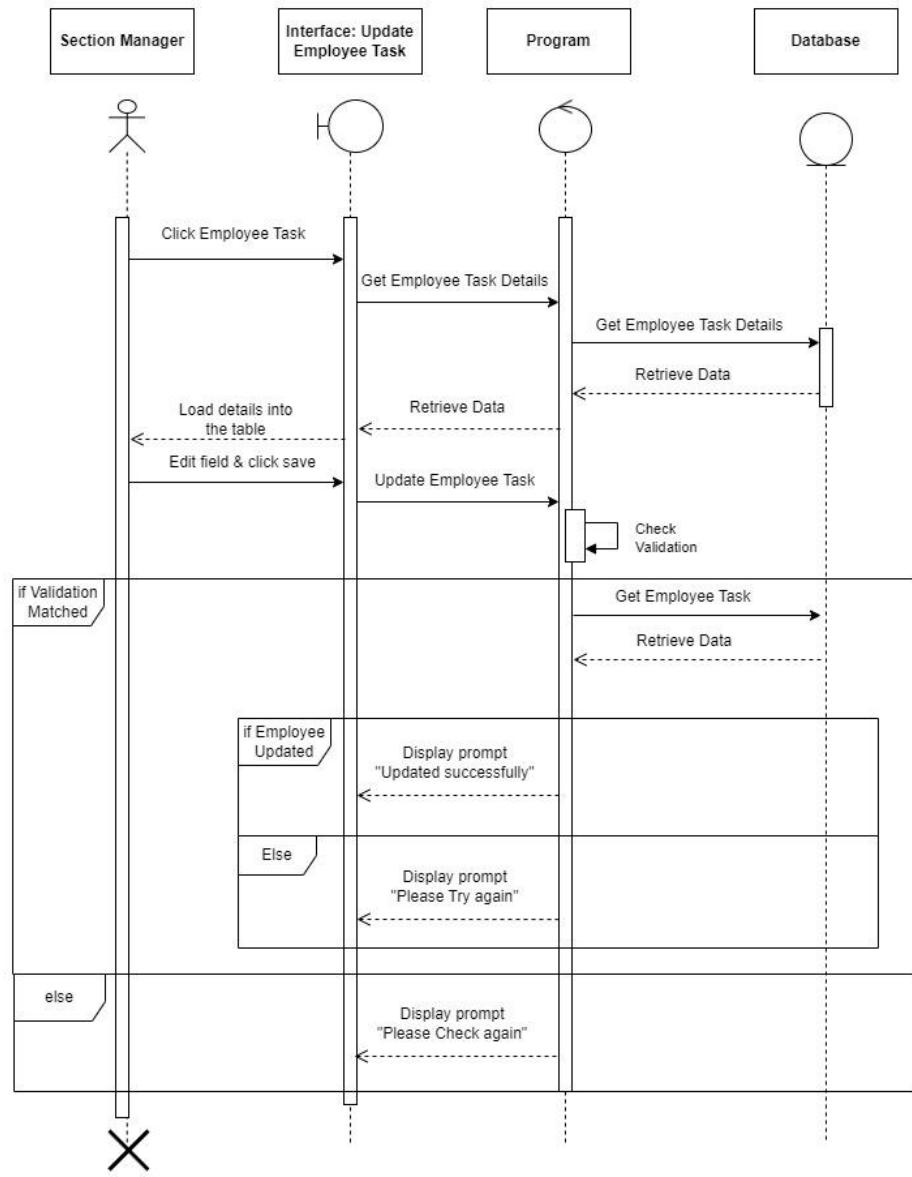
12. Add Employee Task



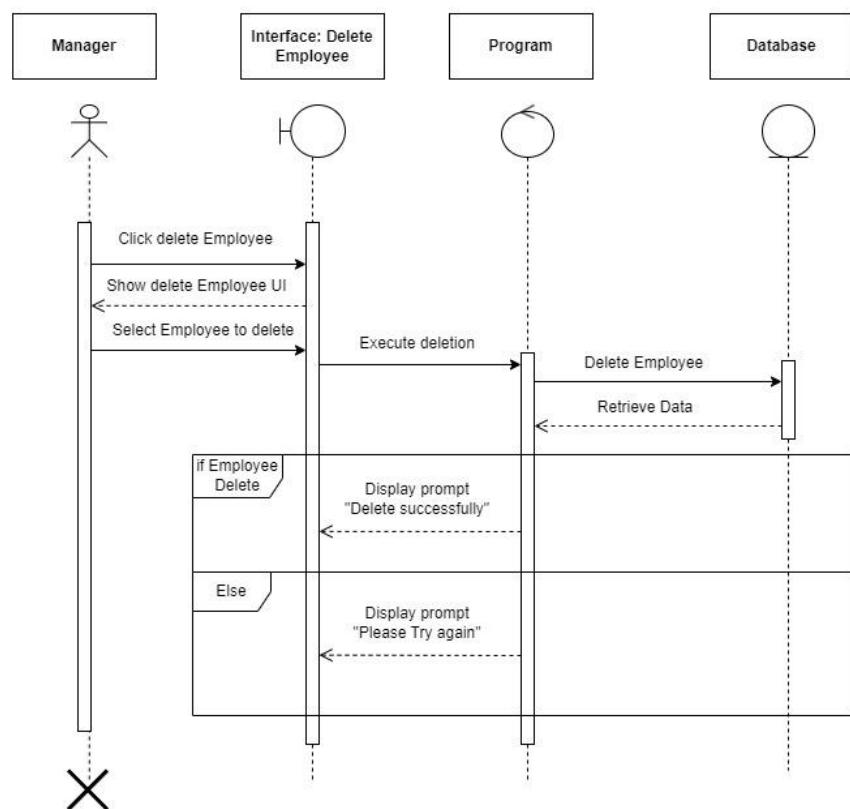
13. Update Employee



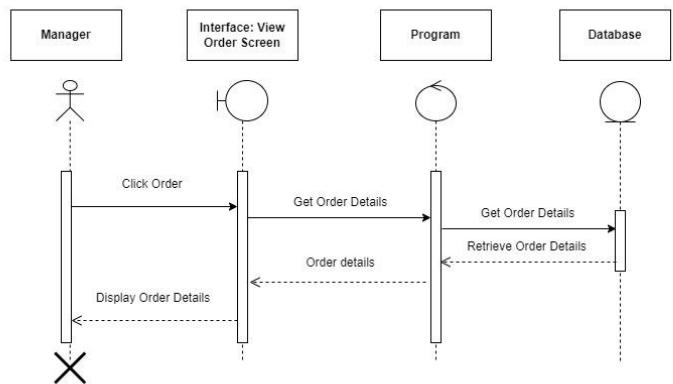
14. Update Employee Task



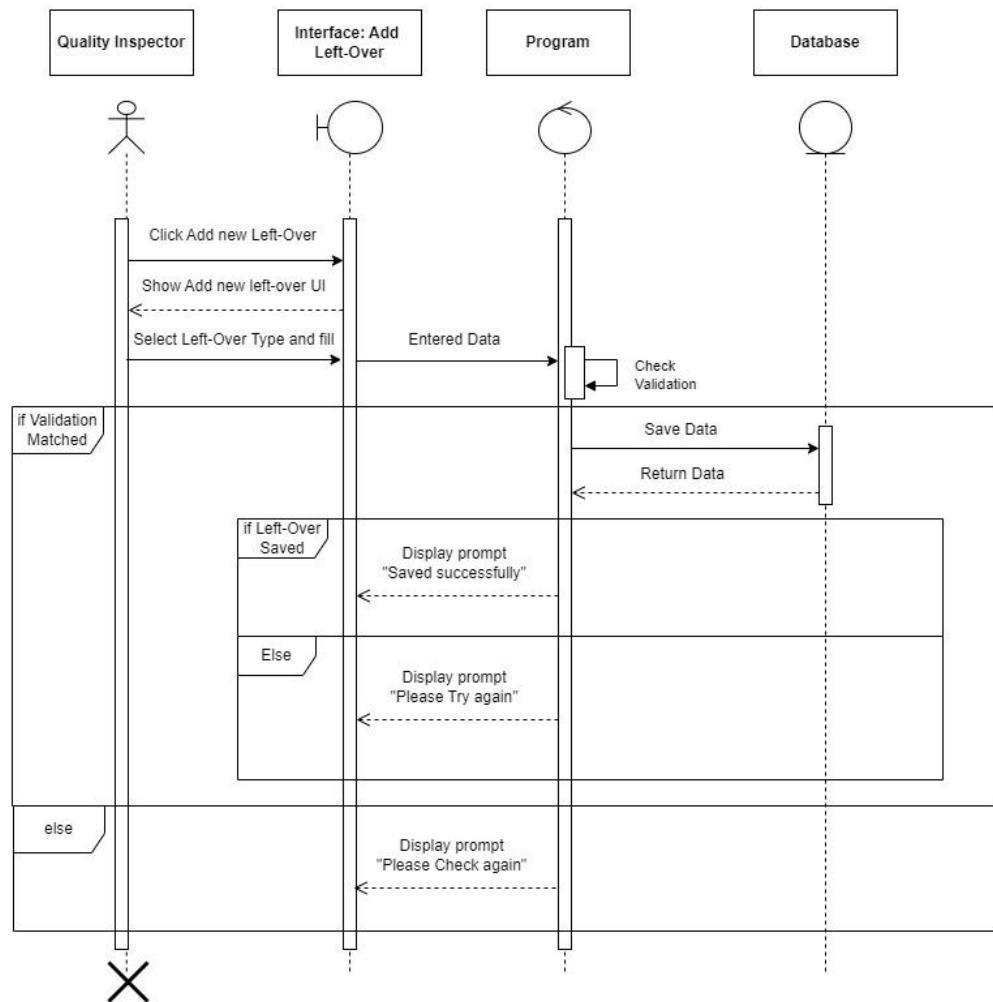
15. Delete Employee



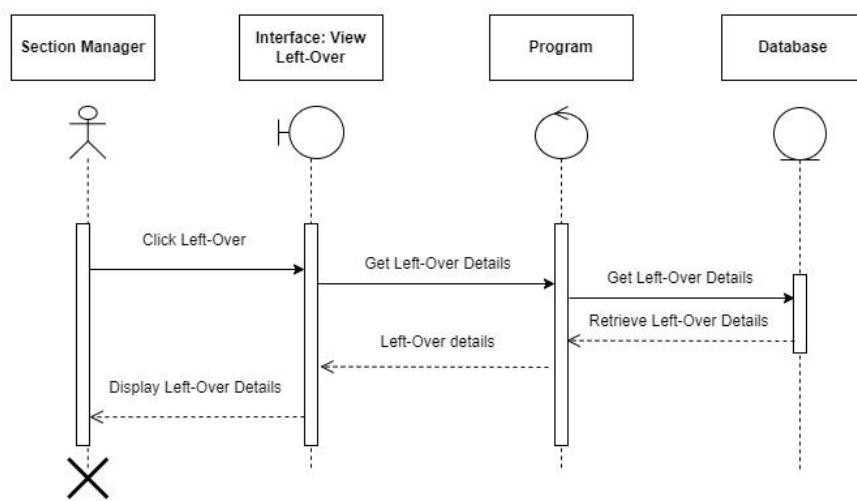
16. View Order Details



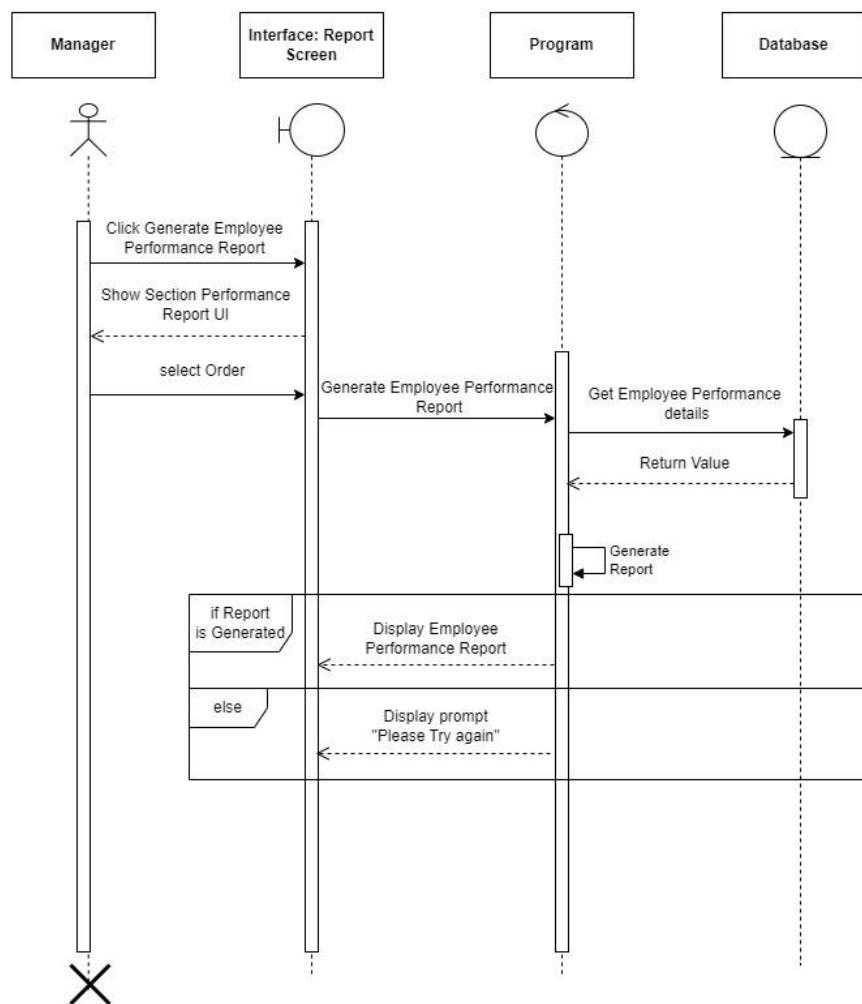
17. Create Left-Over



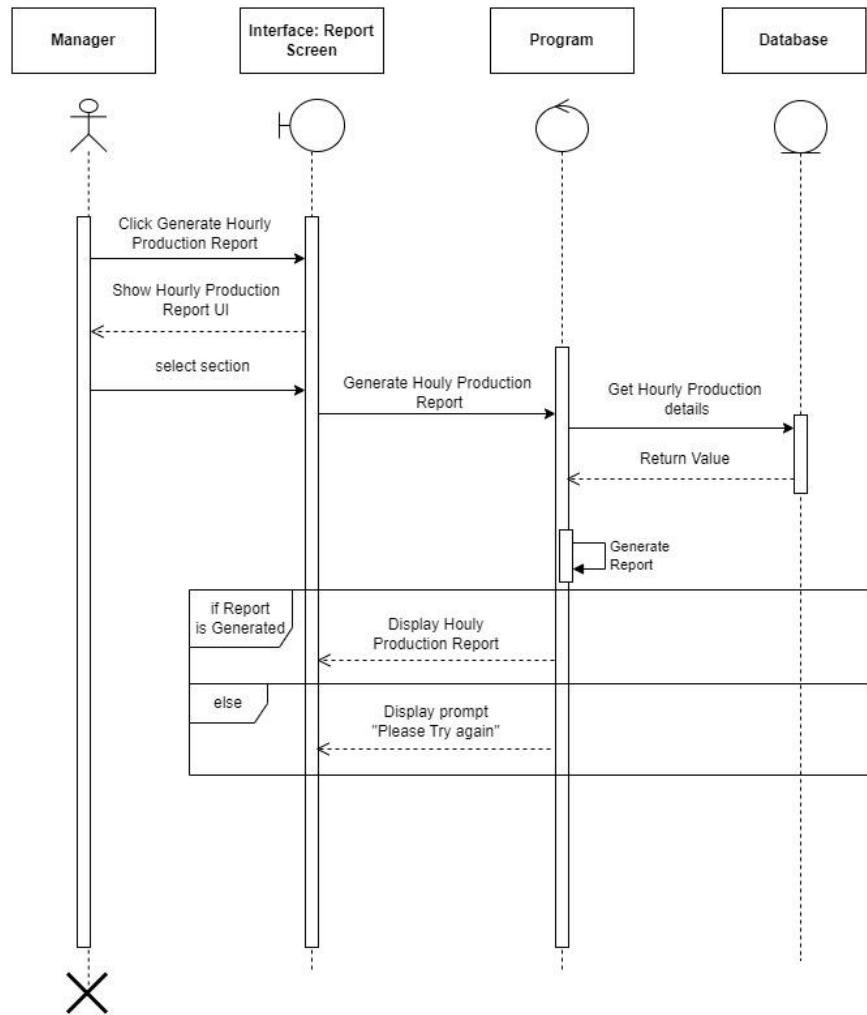
18. View Left-Over



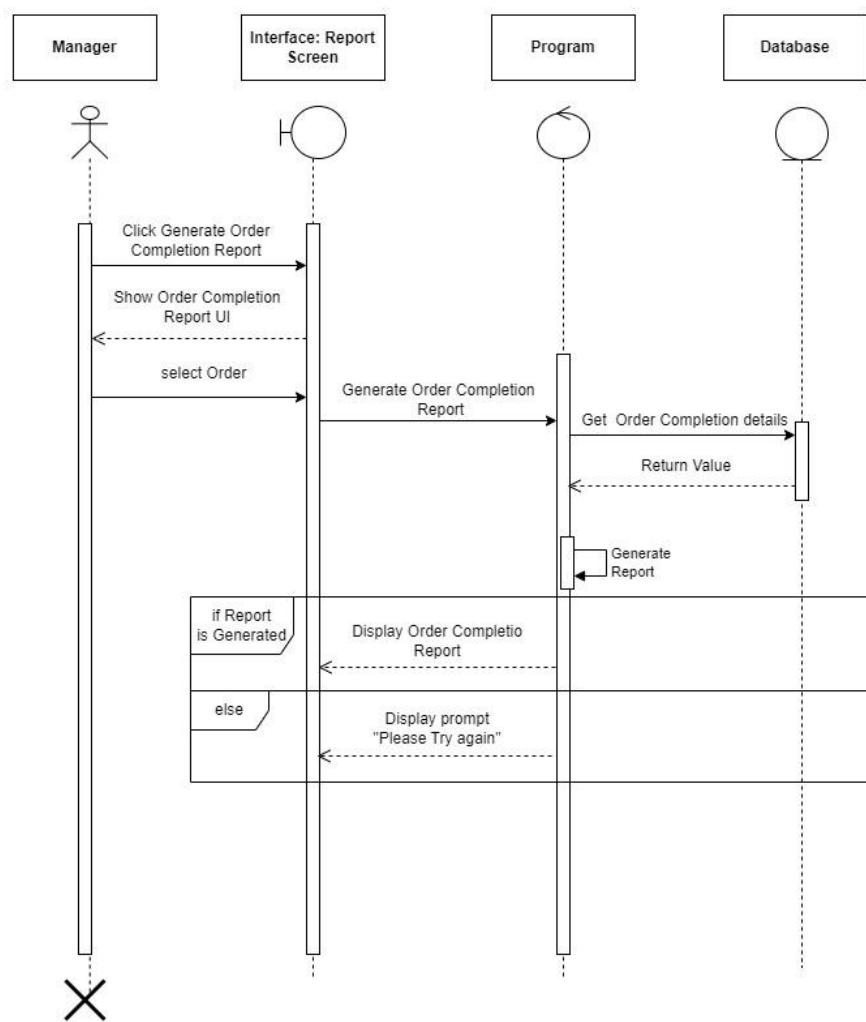
19. Generate Employee Performance Report



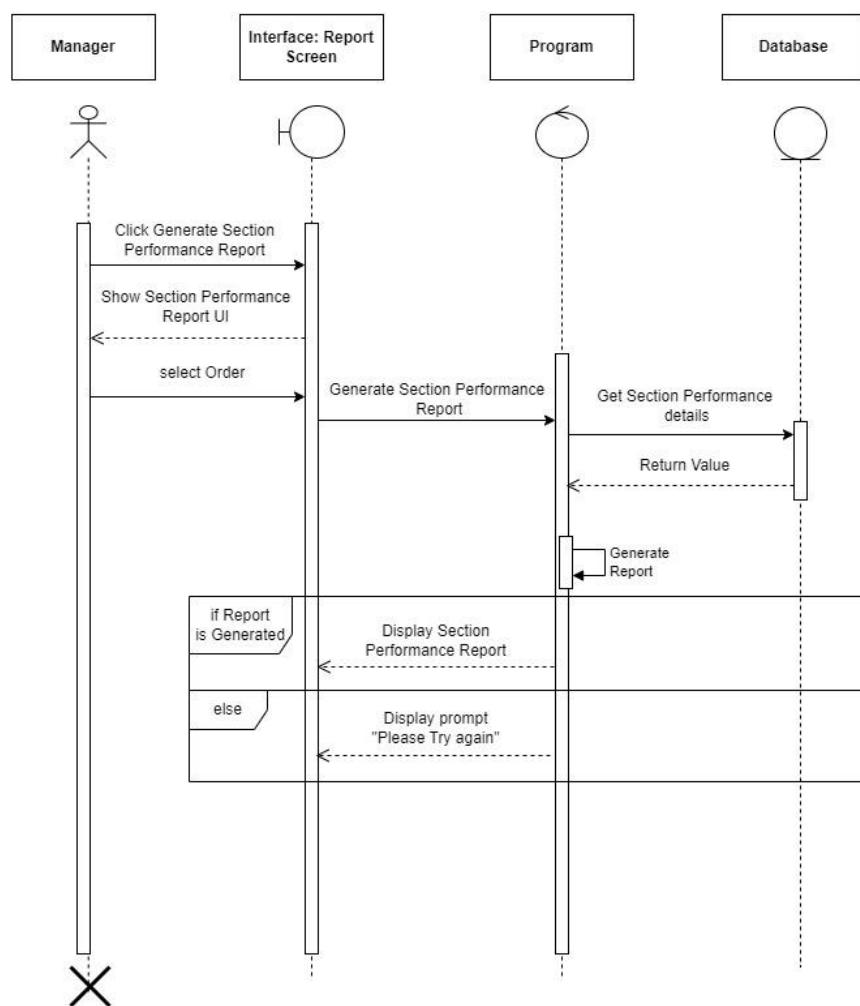
20. Generate Hourly Production Report



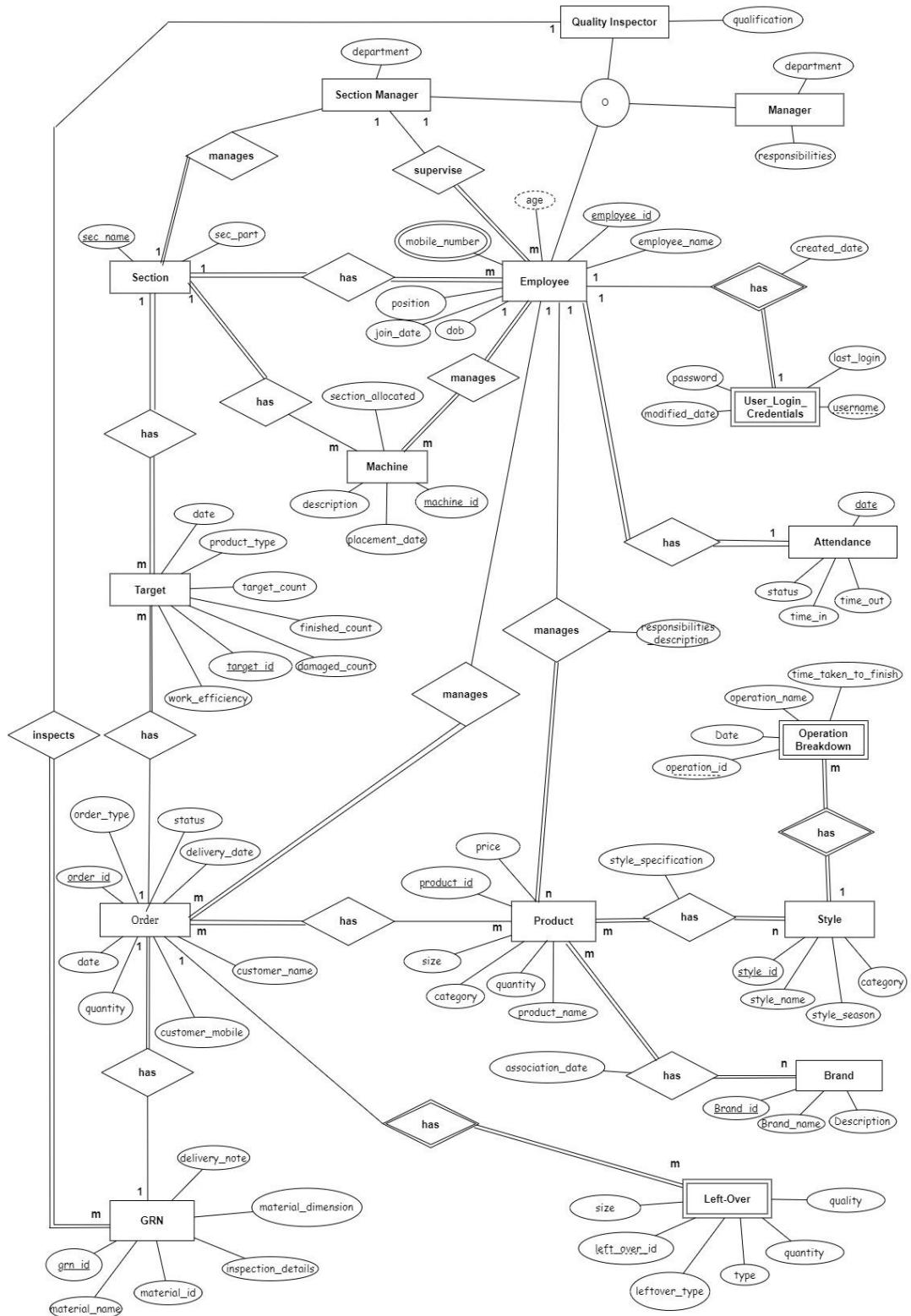
21. Generate Order Completion Report



22. Generate Section Performance Report



3.3 ER Diagram of the Proposed System



3.4 Chapter Summary

This chapter focuses on the analysis and systematic design of the proposed software solution. This chapter concludes the nature of the software to be developed, the processes available for the client and the accessibility of the solution. This chapter also depicts the uses of the solution and provides elaborate diagrams of how these uses are planned to be executed. By analyzing these diagrams, we were able to achieve a deeper understanding of the scenarios and validate the process as per the owners' preliminary requirements.

Chapter 4: Solution Design

4.1 Introduction

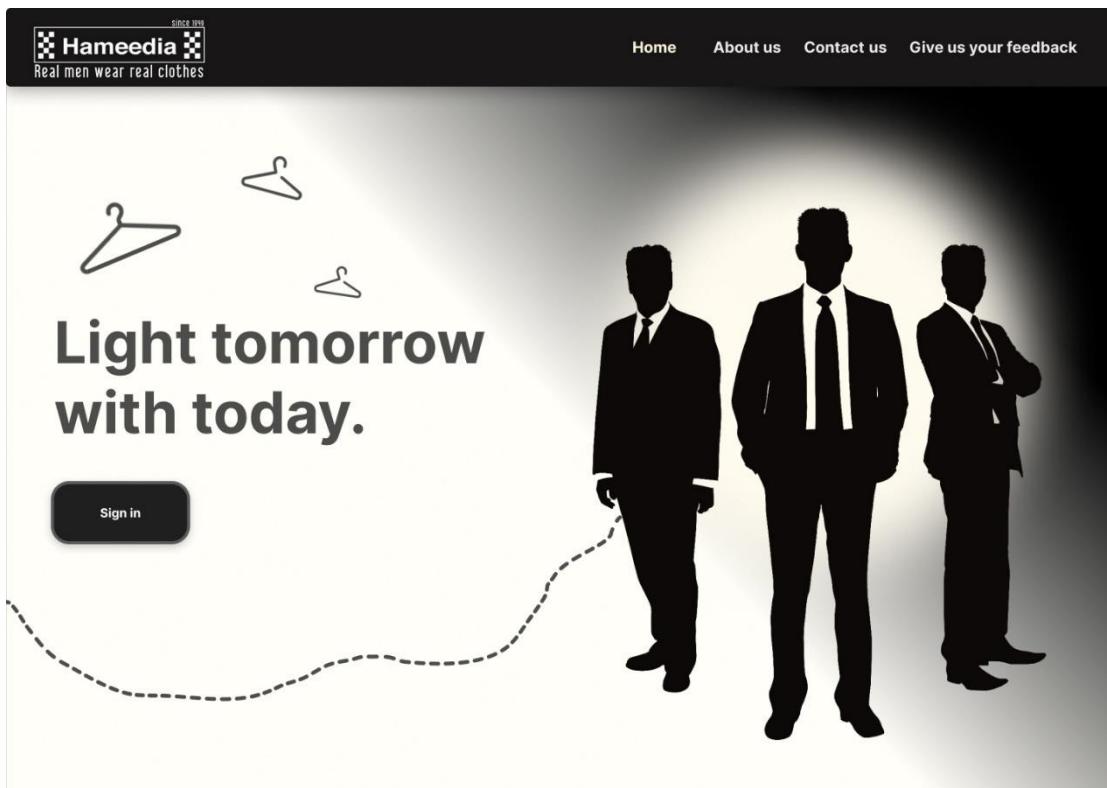
This chapter elaborates every single user interface that the users could have, designed to achieve user friendliness and easy access, and the eye-catching UI for the user along with the important and necessary information clearly visible without unwanted irritable features. And the database that would be used to handle the information whilst using this software solution.

4.2 Interface Design

Interface number: 1

Interface name: Hameedia homepage

Description: Home page for all the users before login in.



Interface number: 2

Interface name: About us

Description: Includes the information about the apparel production system for all the users before login in.

The screenshot shows the 'About us' section of the Hameedia website. At the top left is the Hameedia logo with the text 'SINCE 1949' above it and 'Real men wear real clothes' below it. To the right of the logo is a navigation bar with links: Home, About us, Contact us, and Give us your feedback. The main content area has a dark background with a central white box containing the 'About us' heading and descriptive text. There are two small decorative icons resembling stylized hangers or arrows in the top right corner of the content box. The overall design is clean and professional.

About us

Hameedia was established in 1949 and has become a leading menswear brand that is synonymous with style and quality.

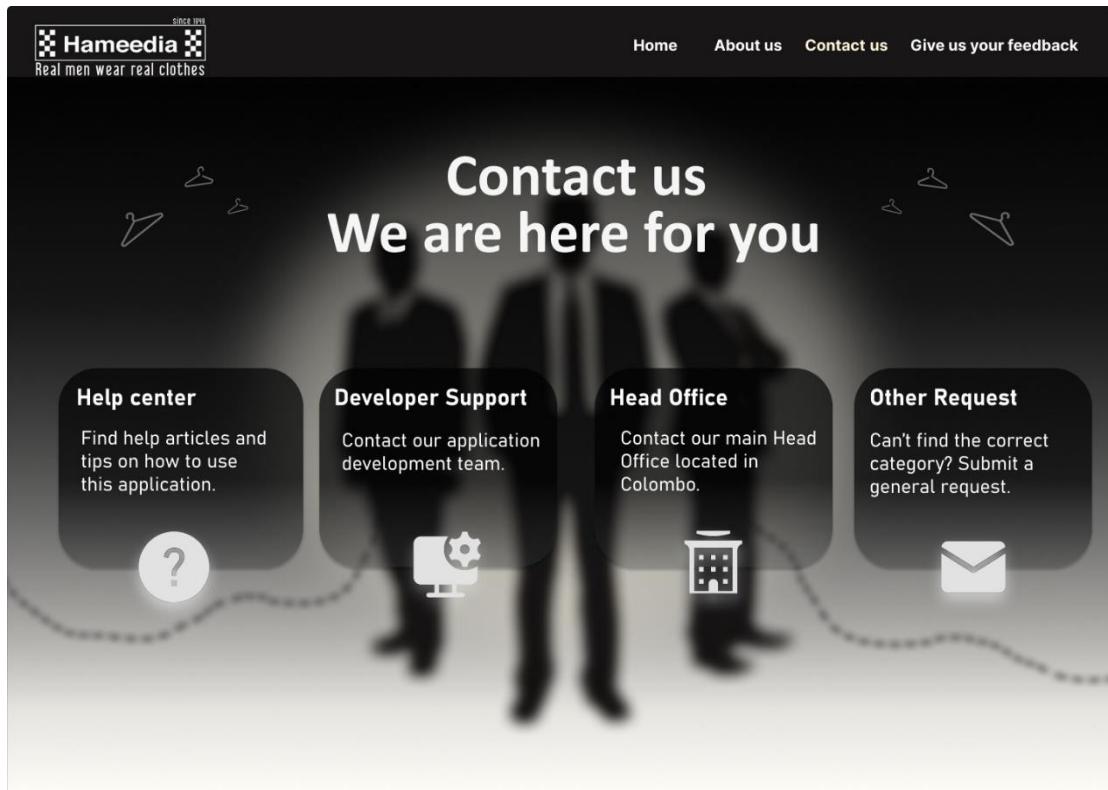
Since its inception 71 years ago, the company has achieved phenomenal growth and today, the brand Hameedia is a household name across Sri Lanka and is rapidly gaining popularity around the world.

Hameedia has established itself as a leader in providing high quality custom tailored and ready-made clothing options

Interface number: 3

Interface name: Contact us

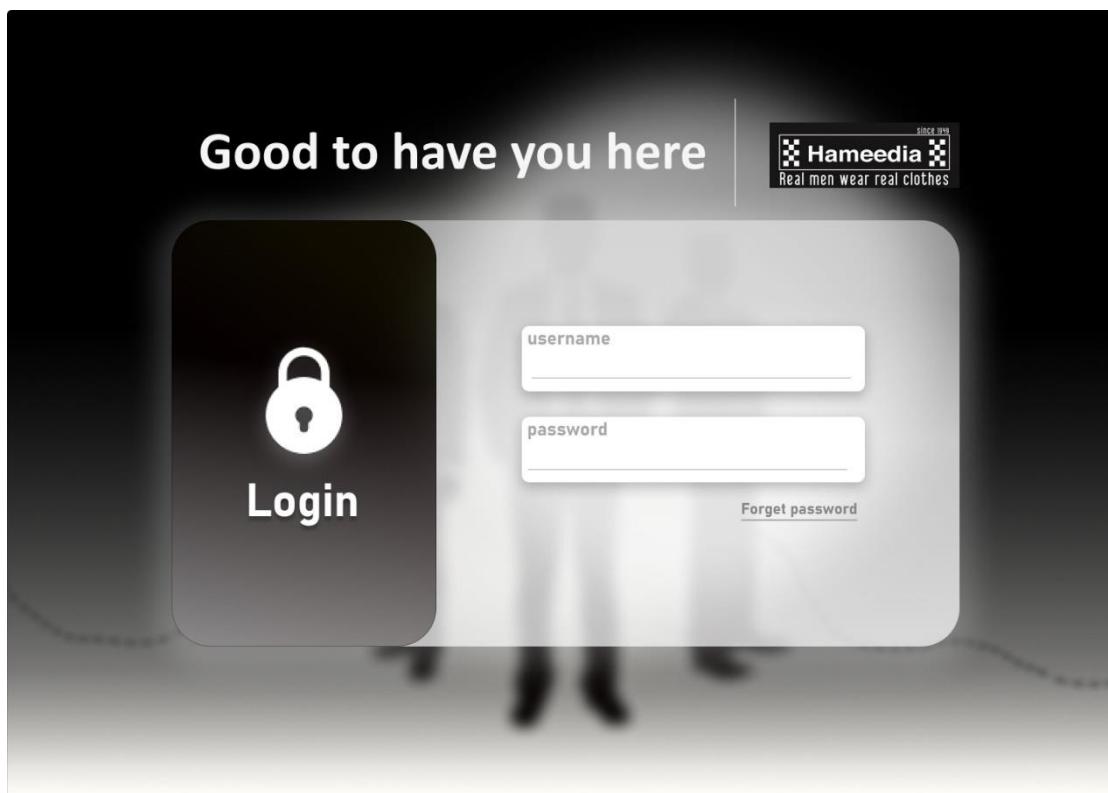
Description: Includes the contact information of the apparel production system for all the users.



Interface number: 4

Interface name: Login

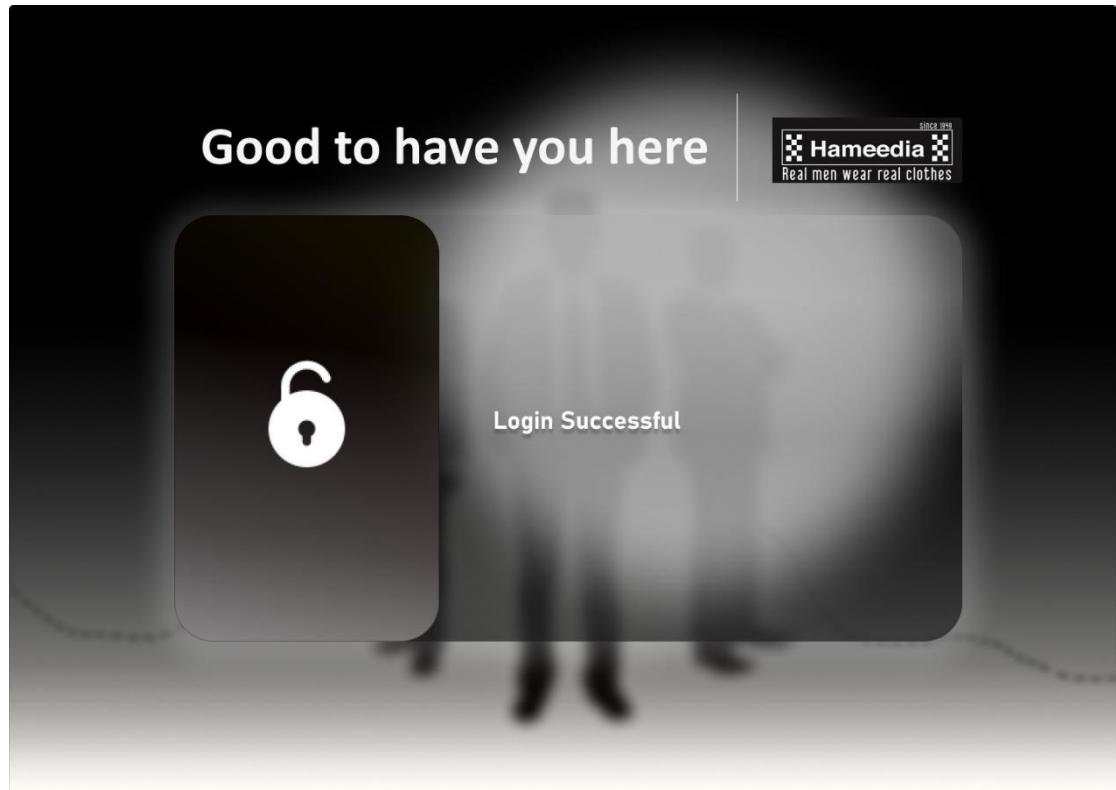
Description: Login page for all the users of the apparel production system



Interface number: 5

Interface name: Login Success

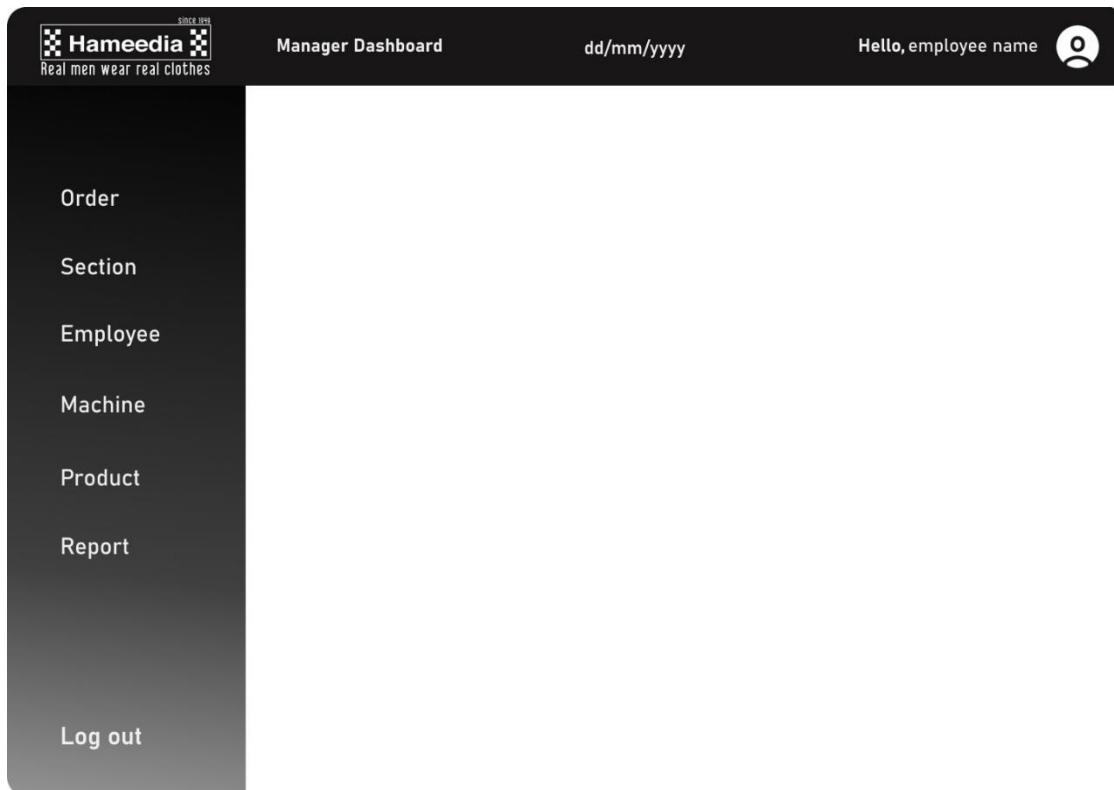
Description: It indicates the user is very to login



Interface number: 6

Interface name: Manager dashboard

Description: Dashboard for all users



Interface number: 7

Interface name: Manager profile

Description: Displays all the information of the users

The screenshot shows a web-based application for managing employee profiles. At the top, there is a dark header bar with the Hameedia logo ('Hameedia since 1948 Real men wear real clothes'), a 'Dashboard' link, a date input field ('dd/mm/yyyy'), and a user greeting ('Hello, employee name') with a profile icon.

The main content area is titled 'Update Profile'. It features a circular profile placeholder image on the left. The profile details are organized into two sections:

- Employee Information:** Employee Id (24), Name (Rimaz), Position (Quality Inspector), Date of birth (05/12/1998), Mobile (0773205456), and Join date (15/06/2023). An 'Update' button is located at the bottom right of this section.
- Password Management:** Username, New Password, Current Password, and Confirm Password fields. An 'Update' button is located at the bottom right of this section.

Interface number: 8

Interface name: Manager's order dashboard

Description: Display's all details related to order (status, progress)

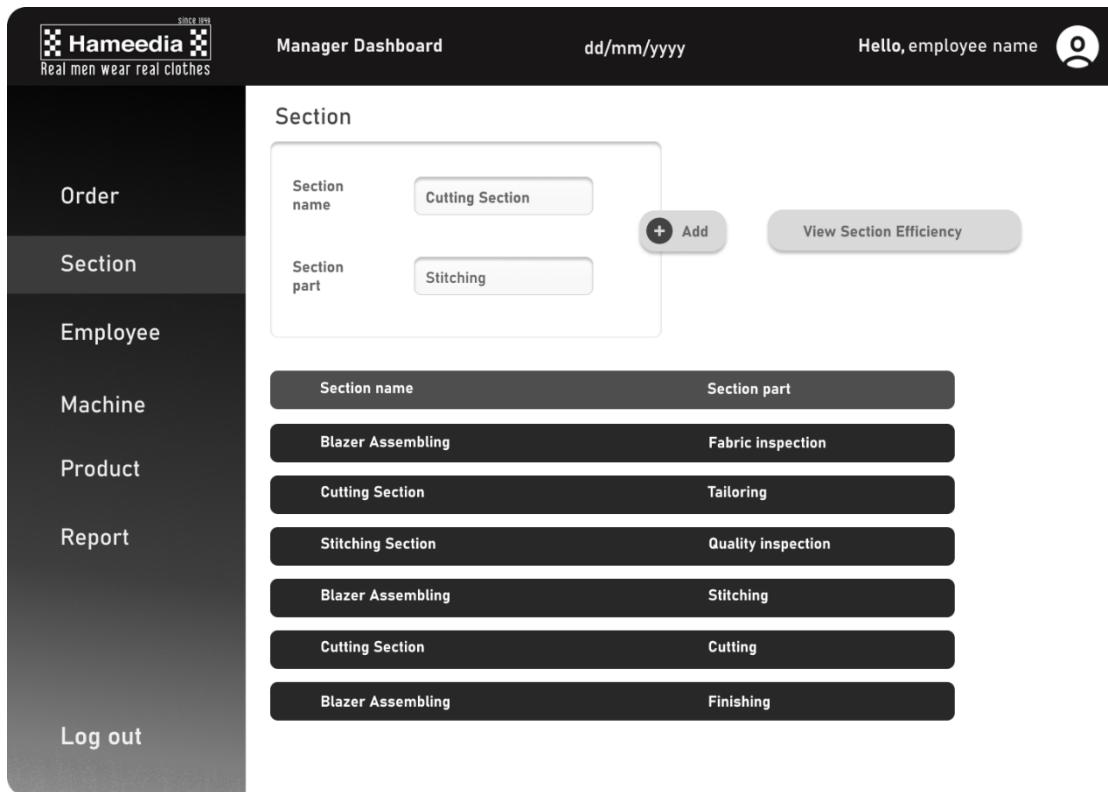
The dashboard features a sidebar with links: Order, Section, Employee, Machine, Product, Report, and Log out. The main area has a header with the Hameedia logo, the title 'Manager Dashboard', a date input field, and a user profile. It includes a 'Recent Activities' section with four cards: 'Total orders' (480), 'Orders on progress' (150), 'Orders Pending' (170), and 'Orders delivered to main stores' (160). Below this is an 'Order List' table with columns: Id, Priority, Order type, Quantity, Customer Name, Customer number, Date ordered, Date Delivered, and Status. The table contains seven rows of order data.

ID	Priority	Order type	Quantity	Customer Name	Customer number	Date ordered	Date Delivered	Status
D001	1	Regular	20	-	-	01/06/2023	15/06/2023	Green
D002	2	Regular	10	-	-	05/06/2023	17/06/2023	Green
D002	3	Regular	19	-	-	10/06/2023	-	Purple
D004	4	Custom	7	Azwar	0754562354	13/06/2023	23/06/2023	Green
D005	5	Regular	33	-	-	13/06/2023	23/06/2023	Green
D006	6	Custom	2	Sabique	0776456987	17/06/2023	-	Red
D007	7	Custom	13	Praveen	0773245651	20/06/2023	-	Purple

Interface number: 9

Interface name: Manager's section dashboard

Description: Manager can add section and the parts of the section.



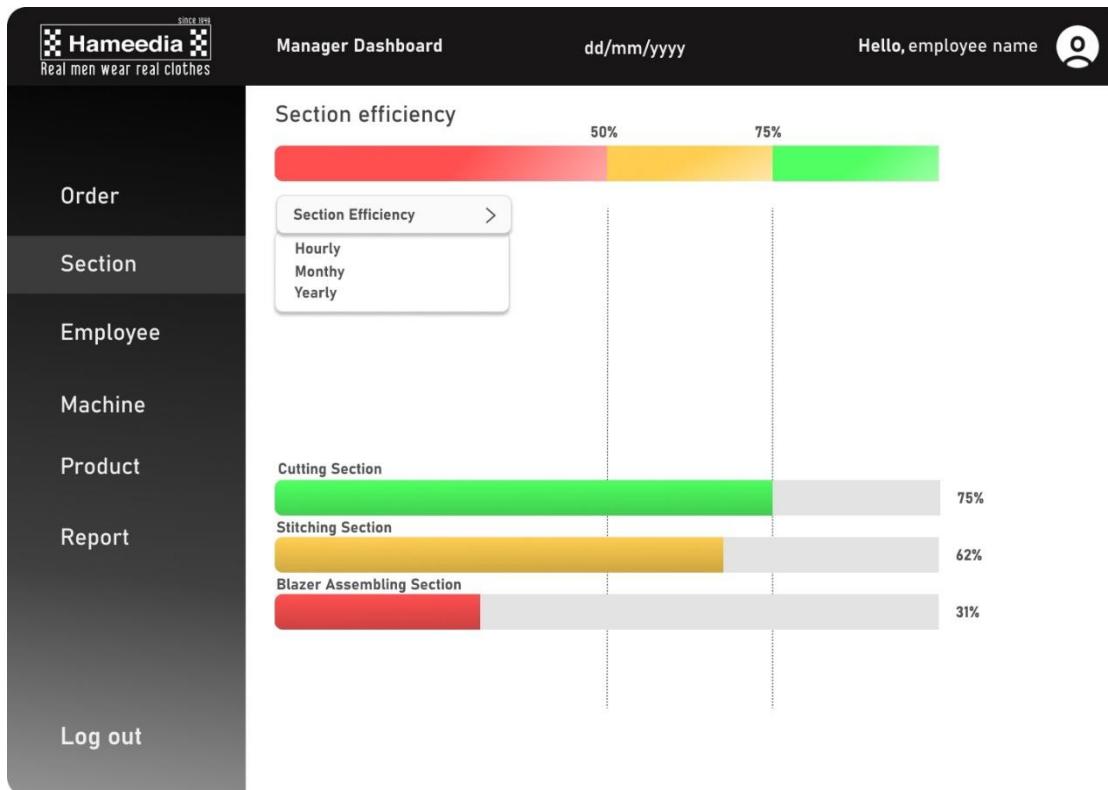
The screenshot shows the Manager Dashboard for Hameedia. The top navigation bar includes the Hameedia logo, 'Manager Dashboard', a date field 'dd/mm/yyyy', a greeting 'Hello, employee name' with a user icon, and a 'Logout' button. The left sidebar lists 'Order', 'Section' (which is selected), 'Employee', 'Machine', 'Product', 'Report', and 'Log out'. The main content area is titled 'Section' and contains a form to add new sections. It has fields for 'Section name' (set to 'Cutting Section') and 'Section part' (set to 'Stitching'), with an 'Add' button. Below this is a table listing existing sections and their parts:

Section name	Section part
Blazer Assembling	Fabric inspection
Cutting Section	Tailoring
Stitching Section	Quality inspection
Blazer Assembling	Stitching
Cutting Section	Cutting
Blazer Assembling	Finishing

Interface number: 10

Interface name: Manager's section efficiency dashboard

Description: Manager can view the overall efficiency all the section



Interface number: 11

Interface name: Manager's add employee dashboard.

Description: Manager can add new employee.

The screenshot shows the Manager Dashboard for Hameedia. The top navigation bar includes the Hameedia logo, 'Manager Dashboard', a date input field 'dd/mm/yyyy', a greeting 'Hello, employee name' with a user icon, and a 'Log out' button. On the left, a vertical sidebar lists 'Order', 'Section', 'Employee' (which is selected), 'Machine', 'Product', and 'Report'. Below the sidebar is a 'Log out' button. The main content area features a 'Recent Activities' section with three cards: 'On-Site Employees' (153), 'New Employees' (8), and 'Absence Employees' (10). Below this is an 'Employee List' section with buttons for 'Add Employee' and 'View employee by position >'. A detailed form for adding a new employee is displayed, containing fields for Id (E009), Name (Rimaz), Position (Quality Inspector), Age (24), Mobile (0773205456), Join date (15/06/2023), and Date of birth (05/12/1998). A large '+' Add button is located above the form.

Interface number: 12

Interface name: Manager view Employee dashboard.

Description: Manager can view all the details of the employee

The screenshot shows the Manager Dashboard for Hameedia. At the top, there is a navigation bar with the Hameedia logo, the text "Manager Dashboard", a date field "dd/mm/yyyy", a greeting "Hello, employee name" with a user icon, and a "Log out" button. On the left, a vertical sidebar lists menu items: Order, Section, Employee (which is currently selected), Machine, Product, Report, and Log out. The main content area is titled "Recent Activities" and displays three buttons: "On-Site Employees" (153), "New Employees" (8), and "Absent Employee" (10). Below this is the "Employee List" section, which includes buttons for "Add Employee", "View employee by position >" (with sub-options: Manager, Section Manager, Quality Inspector), and "View Employee Task". The employee list table has columns: Id, Name, Position, Join date, Date of birth, Age, and Mobile. The data is as follows:

Id	Name	Position	Join date	Date of birth	Age	Mobile
E001	Ahamed	Manager	06/05/2011	12/11/1985	38	0778955478
E002	Peter	Section Manager	03/07/2010	12/11/1989	34	0712545689
E003	Ruwan	Section Manager	19/07/2015	09/10/1991	32	0704589652
E004	Herath	Section Manager	25/09/2009	25/05/1990	33	0754562354
E005	Nilam	Quality Inspector	31/06/2008	23/09/1994	29	0778932156
E006	Sunil	Quality Inspector	09/12/2018	01/10/1982	41	0776456987
E007	Kamal	Quality Inspector	21/11/2021	29/01/1980	43	0773245651
E008	Ramesh	Production worker	12/05/2016	16/05/1986	39	0776525852

Interface number: 13

Interface name: Manager's add machine dashboard.

Description: Manager can add machine details of each section.

The screenshot shows the Manager Dashboard for Hameedia. The left sidebar has a dark background with white text and icons. It includes links for Order, Section, Employee, Machine (which is highlighted in grey), Product, Report, and Log out. At the top right, there is a user profile placeholder and a date input field labeled "dd/mm/yyyy". The main content area has a light gray background. At the top, it says "Recent Activities" and displays a yellow box with "Total Machines" and the number "110" next to a gear icon. Below this is a "Machine List" section with two buttons: "Add Machine" and "View machine by section >". A large rectangular form is centered, containing fields for adding a new machine. The fields are: "Id" (M008), "Section allocated" (Section 3), "Placement date" (15/06/2023), and "Description" (Single Needle Lock Stitch (Edge cutter)). There is also a small "Add" button with a plus sign above the Id field.

Interface number: 14

Interface name: Manager's view machine dashboard.

Description: Manager can view the details of the machine.

The screenshot shows the Manager Dashboard interface for Hameedia. The top navigation bar includes the Hameedia logo, the title "Manager Dashboard", a date input field "dd/mm/yyyy", a greeting "Hello, employee name" with a user icon, and a search bar. On the left, a vertical sidebar lists navigation options: Order, Section, Employee, Machine (which is selected), Product, Report, and Log out. The main content area displays "Recent Activities" with a "Total Machines" summary showing 110 machines and three gear icons. Below this is a "Machine List" section with a table and navigation buttons. The table headers are Id, Description, Section allocated, and Placement date. The data rows are as follows:

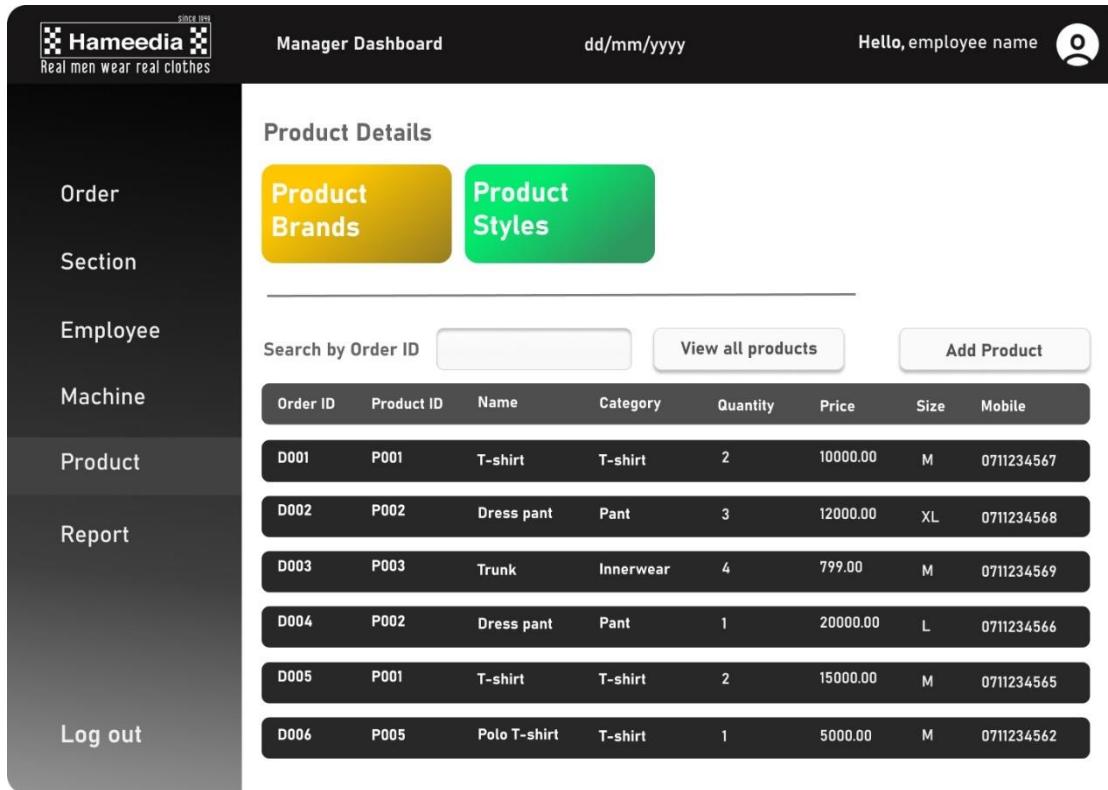
Id	Description	Section allocated	Placement date
M001	Single Needle Lock Stitch	Cutting Section	06/05/2011
M002	Fusing machine	Blazer Assembling section	05/01/2010
M003	Double Needle Lock Stitch	Cutting Section	06/01/2009
M004	Multi Needle Chain Stitch	Stitching Section	15/09/2012
M005	Button Stitching Machine	Stitching Section	19/12/2013
M006	Collar and cuff turning machine	Blazer Assembling Section	29/10/2015

Each row in the table has edit and delete icons on the right.

Interface number: 15

Interface name: Manager's view product details dashboard.

Description: Manager can view the details of the product



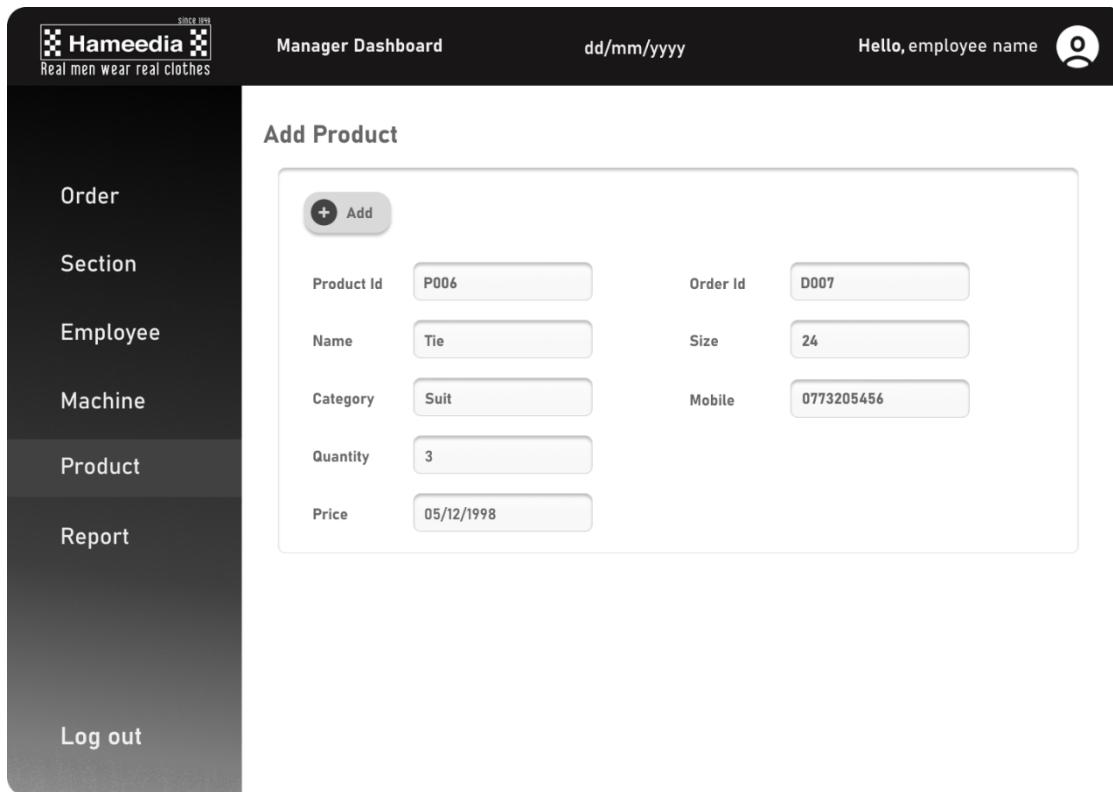
The screenshot shows a Manager Dashboard interface for Hameedia. The top navigation bar includes the Hameedia logo, 'Manager Dashboard', a date input field ('dd/mm/yyyy'), a greeting ('Hello, employee name'), and a user profile icon. A vertical sidebar on the left lists navigation options: Order, Section, Employee, Machine, Product (which is selected), Report, and Log out. The main content area is titled 'Product Details' and contains two buttons: 'Product Brands' (yellow) and 'Product Styles' (green). Below these buttons is a search bar labeled 'Search by Order ID' and three action buttons: 'View all products', 'Add Product', and a small 'X' icon. A table displays product details with columns: Order ID, Product ID, Name, Category, Quantity, Price, Size, and Mobile. The table contains six rows of data.

Order ID	Product ID	Name	Category	Quantity	Price	Size	Mobile
D001	P001	T-shirt	T-shirt	2	10000.00	M	0711234567
D002	P002	Dress pant	Pant	3	12000.00	XL	0711234568
D003	P003	Trunk	Innerwear	4	799.00	M	0711234569
D004	P002	Dress pant	Pant	1	20000.00	L	0711234566
D005	P001	T-shirt	T-shirt	2	15000.00	M	0711234565
D006	P005	Polo T-shirt	T-shirt	1	5000.00	M	0711234562

Interface number: 16

Interface name: Manager's add product dashboard

Description: Manager can add product details



The screenshot shows a Manager Dashboard interface for adding a new product. The left sidebar has a dark background with white text links: Order, Section, Employee, Machine, Product (which is highlighted), and Report. At the bottom of the sidebar is a Log out link. The main area has a light gray background. At the top, it says "Manager Dashboard" and "dd/mm/yyyy". On the right, it says "Hello, employee name" with a user icon. The central part is titled "Add Product" and contains a form with the following fields:

Add Product	
<input type="button" value="+ Add"/>	
Product Id	P006
Order Id	D007
Name	Tie
Size	24
Category	Suit
Mobile	0773205456
Quantity	3
Price	05/12/1998

Interface number: 17

Interface name: Manager's add & view brand dashboard

Description: Manager can add and view brand details

The screenshot shows the Manager Dashboard for Hameedia. The left sidebar has links for Order, Section, Employee, Machine, Product (which is selected), Report, and Log out. The main area has a header "Manager Dashboard" and a date field "dd/mm/yyyy". It also shows a greeting "Hello, employee name" with a user icon. A sub-header "Add new brand" is at the top of a form. The form contains fields for Id (B004), Name (Shirt), Description (150), and an "Add" button. Below this is a table titled "Brand Details" with columns: Product ID, Brand ID, Name, Description, and Association date. The table lists six rows of data, each with edit and delete icons.

Product ID	Brand ID	Name	Description	Association date
P001	B002	Signature	Formal wear	10/06/2022
P002	B001	Emerald	Casual wear	01/08/2021
P003	B003	Italiano	Party Wear	21/06/2020
P004	B004	Signature	Formal wear	10/10/2022
P001	B003	Emerald	Casual wear	11/09/2021
P002	B002	Emerald	Casual wear	19/12/2020

Interface number: 18

Interface name: Manager's add & view style dashboard

Description: Manager can add and view style details

The screenshot shows the Manager Dashboard interface for Hameedia. The left sidebar has links for Order, Section, Employee, Machine, Product (which is selected), Report, and Log out. The main area has a header "Manager Dashboard" and date input "dd/mm/yyyy". It shows a "Hello, employee name" message with a profile icon. A "Add new Style" form is open, showing fields for Id (S006), Name (Formal), Category (Casual), Season (Shirt), and Specification (Striped pattern). A "Add" button is present. Below this is a "Style Details" table with columns: Product ID, Style ID, Name, Category, Season, and Specification. The table contains six rows of data, each with edit and delete icons.

Product ID	Style ID	Name	Category	Season	Specification
P001	S001	Preppy	Casual	New year	Floral print
P002	S003	Streetwear	Casual	All seasons	Striped pattern
P003	S002	Formal	Formal	All seasons	Solid color
P004	S001	Casual	casual	Summer	Floral embroidery
P005	S005	Business	Business	All seasons	Striped pattern
P006	S004	classic	classic	Eid festival	Checked pattern

Interface number: 19

Interface name: Manager's operation breakdown dashboard

Description: Manager can add and update breakdown of the product

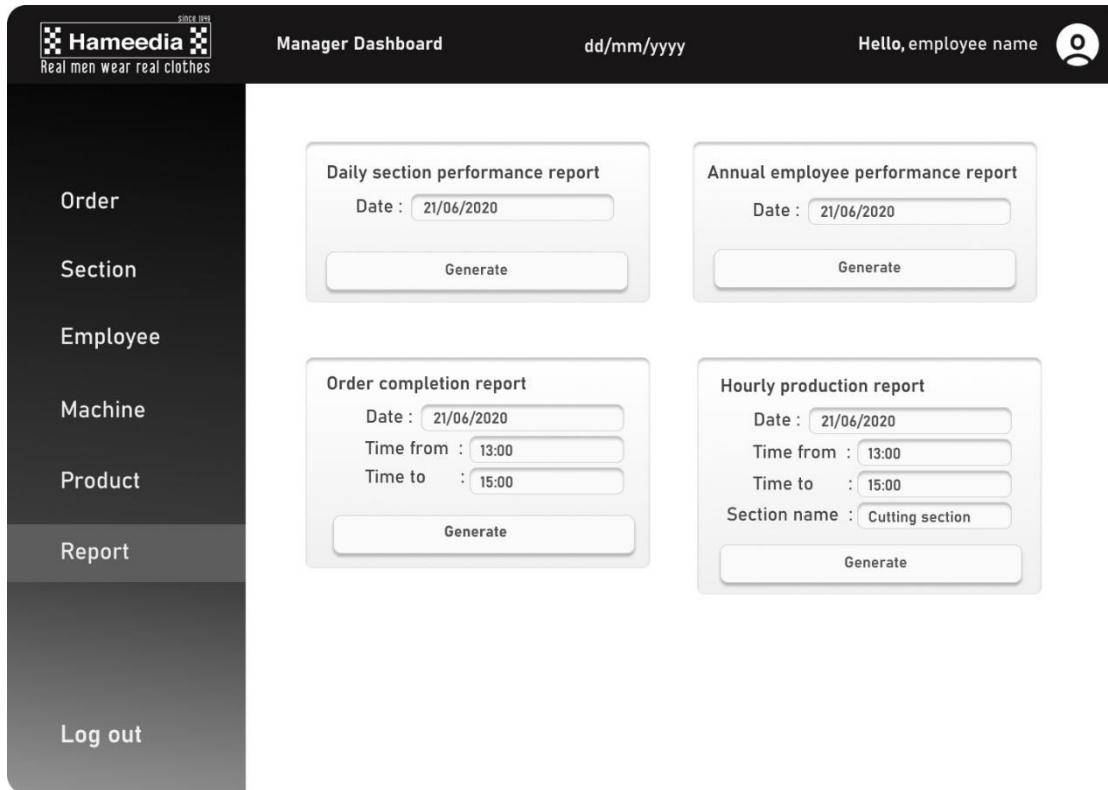
The screenshot shows a dark-themed Manager Dashboard. On the left, a sidebar lists navigation options: Order, Section, Employee, Machine, Product, Report, and Log out. The 'Product' option is currently selected and highlighted in light gray. The main content area has a title 'Operation Breakdown'. It contains several input fields: 'Operation Id' (Z007), 'Operation name' (PLKT Top Stitch), 'Time taken to finish' (45 min), and 'Date' (Shirt). Below these fields is a button with a plus sign and the word 'Add'. Underneath this is a section titled 'Style Details' containing a table with six rows of data. The table columns are: Style ID, Operation ID, Operation name, Time taken to finish, and Date. Each row includes edit and delete icons. The data in the table is as follows:

Style ID	Operation ID	Operation name	Time taken to finish	Date
S001	Z001	PLKT Press	20 mins	12/11/2022
S001	Z002	Front Lower panel GA	40 min	12/11/2020
S001	Z003	Front Dart Making	50 min	12/05/2022
S002	Z004	Front Yoke Attach	10 min	12/05/2019
S003	Z005	Yoke O/L	20 min	02/01/2022
S003	Z006	Yoke Top Stitch	30 min	30/11/2020

Interface number: 20

Interface name: Manager's generate report.

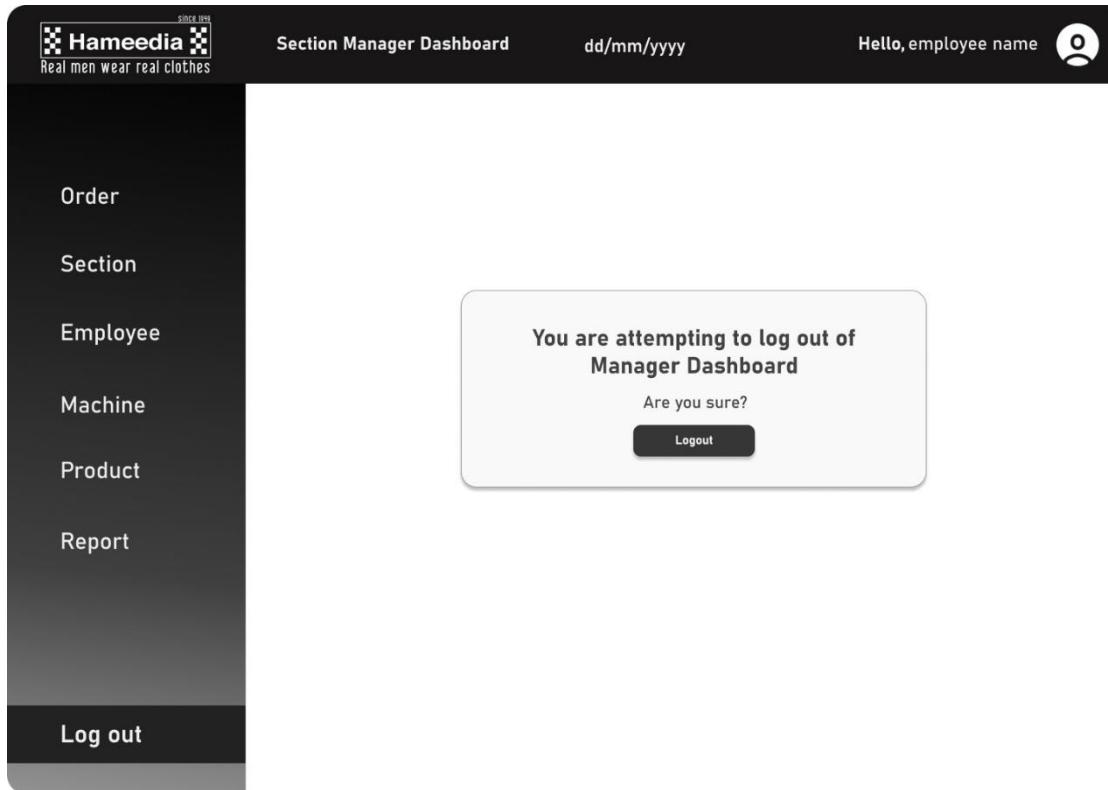
Description: Manager can generate 4 types of report



Interface number: 21

Interface name: Manager's logout dashboard

Description: Manager view if he needs to logout.



Interface number: 22

Interface name: Section Managers Target Dashboard

Description: Section Managers can add update the target related to his section

The dashboard features a sidebar with links: Target, Order, Attendance, Employee Task, Production Progress, Report, and Log out. The main area displays recent activities with three cards: Total Targets (90), Total Finished (8), and Total Damaged (45). Below is a target list table with columns: Id, Product type, Target count, Date, Finished, Damaged, and Work efficiency. The table contains six rows of data.

Id	Product type	Target count	Date	Finished	Damaged	Work efficiency
T001	Shirt	150	10/06/2023	21/06/2023	10	0711234568
T002	T-Shirt	200	10/06/2023	21/06/2023	6	0711234568
T003	Trouser	150	10/06/2023	21/06/2023	5	0711234569
T004	Blazer	100	10/06/2023	21/06/2023	7	0711234566
T005	T-Shirt	160	11/06/2023	22/06/2023	8	0711234565
T006	Trouser	100	11/06/2023	22/06/2023	6	0711234562

Interface number: 23

Interface name: Section Manager's Add target Dashboard

Description: Section Manager will set a target for the relevant that needs to be completed on that day.

The screenshot shows the 'Section Manger Dashboard' interface. On the left, a vertical sidebar lists navigation options: Target, Order, Attendance, Employee Task, Production Progress, Report, and Log out. The 'Target' option is selected. At the top right, there is a placeholder for 'dd/mm/yyyy' and a user profile icon labeled 'Hello, employee name'. The main content area features a 'Recent Activities' section with three cards: 'Total Targets' (90), 'Total Finished' (8), and 'Total Damaged' (45). Below this is a 'Target List' section containing an 'Add Target' button and a form for entering target details. The form fields include: Id (T007), Product type (Shirt), Target count (150), Date (10/06/2023), Damaged (10), Work efficiency (90%), and Finished (21/06/2023). A small 'Add' button is located above the form.

Interface number: 24

Interface name: Section Manager's order list Dashboard

Description: Section Manager can view all the details related to the list

The dashboard features a sidebar with links: Target, Order, Attendance, Employee Task, Production Progress, Report, and Log out. The main area displays recent activities with four cards: Total orders (480), Orders on progress (150), Orders Pending (170), and Orders Delivered to main stores (160). Below this is an Order List table with columns: Id, Priority, Order type, Quantity, Customer Name, Customer number, Date ordered, Date Delivered, and Status. The table contains seven rows of order data. A 'View Left-over' button is located at the bottom right.

ID	Priority	Order type	Quantity	Customer Name	Customer number	Date ordered	Date Delivered	Status
D001	1	Regular	20	-	-	01/06/2023	15/06/2023	Green
D002	2	Regular	10	-	-	05/06/2023	17/06/2023	Green
D002	3	Regular	19	-	-	10/06/2023	20/06/2023	Purple
D004	4	Custom	7	Azwar	0754562354	13/06/2023	23/06/2023	Green
D005	5	Regular	33	-	-	13/06/2023	23/06/2023	Green
D006	6	Custom	2	Sabique	0776456987	17/06/2023	27/06/2023	Red
D007	7	Custom	13	Praveen	0773245651	20/06/2023	30/06/2023	Purple

Interface number: 25

Interface name: Section Manager's view order leftover Dashboard

Description: Section Manager can view all the leftover of the relevant order.

The screenshot shows a dark-themed dashboard for Hameedia. At the top left is the Hameedia logo with the tagline "Real men wear real clothes". To the right is the title "Section Manager Dashboard" and a date input field "dd/mm/yyyy". Further right is a greeting "Hello, employee name" and a user icon. The main content area has a sidebar on the left with links: "Target", "Order", "Attendance", "Employee Task", "Production Progress", "Report", and "Log out". The main panel is titled "Left-over" and contains a table with the following data:

Order Id	Left-over Id	Left-over type	Type	Quality	Quantity	Size
D001	L001	Material	Silk	Damaged	2	4x2
D002	L002	Product	Shirt	Undamaged	6	M
D003	L003	Product	T-Shirt	Damaged	5	L
D004	L004	Material	Linen	Damaged	1	2x2
D005	L005	Product	Pant	Damaged	8	M
D006	L006	Material	Cotton	Undamaged	1	3x3

Interface number: 26

Interface name: Section Manager's view employee attendance Dashboard

Description: Section Manager can view all employee's attendance for the day

The dashboard features a sidebar with links: Target, Order, Attendance (highlighted), Employee Task, Production Progress, Report, and Log out. The main area displays recent activities with counts of 153 On-Site Employees and 10 Absent Employees. Below is an attendance list for July 15, 2023.

ID	Date	Time in	Time out	Status
E001	15/06/2023	-	-	● (Red)
E002	15/06/2023	8.33 am	5.30 pm	● (Green)
E003	15/06/2023	8.42 am	5.21 pm	● (Green)
E004	15/06/2023	8.50 am	5.01 pm	● (Green)
E005	15/06/2023	8.15 am	5.09 pm	● (Green)
E006	15/06/2023	-	-	● (Red)
E007	15/06/2023	8.23 am	5.10 pm	● (Green)

Interface number: 27

Interface name: Section manager's view Employee task dashboard

Description: Section manager can view all the tasks assigned by the section manager

The screenshot shows the 'Section Manager Dashboard' for Hameedia. The top navigation bar includes the Hameedia logo ('Real men wear real clothes'), the title 'Section Manager Dashboard', a date field 'dd/mm/yyyy', a greeting 'Hello, employee name' with a user icon, and a 'Logout' button.

The left sidebar menu has the following items: Target, Order, Attendance, Employee Task (which is currently selected), Production Progress, Report, and Log out.

The main content area displays 'Recent Activities' with a green box showing 'On-Site Employees' count '153' and a user icon. Below this is the 'Employee Task List' table:

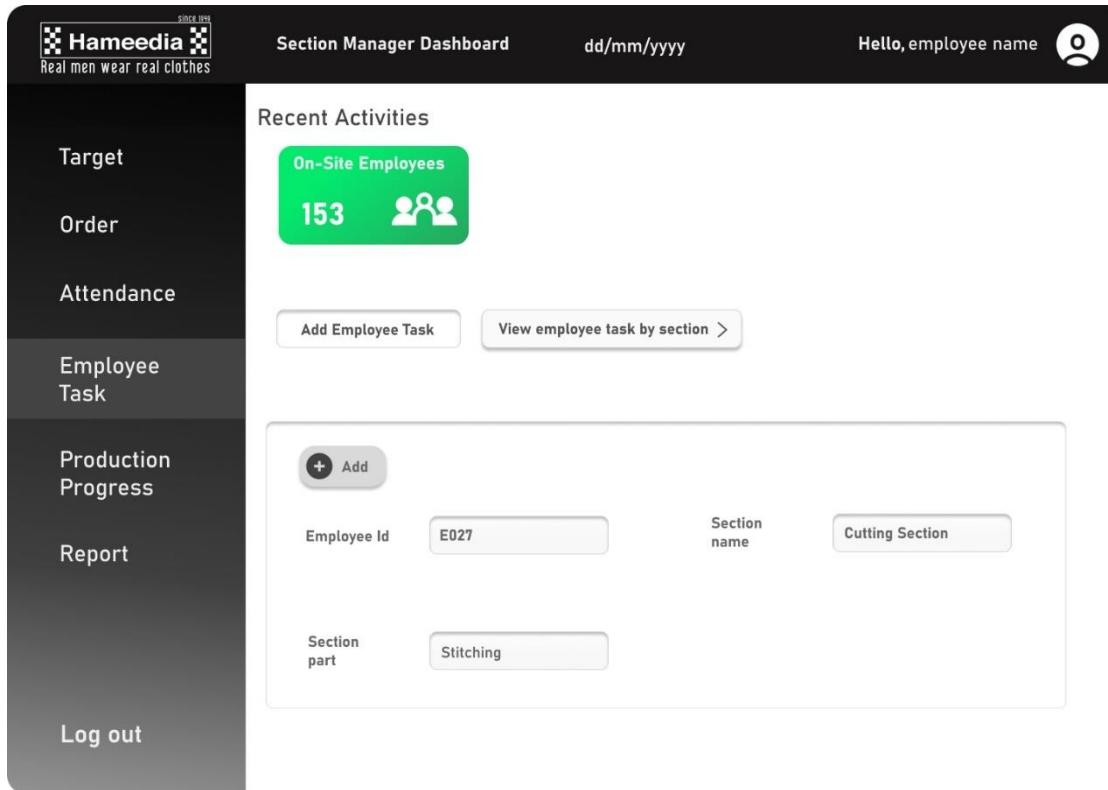
Employee Id	Section name	Section part
E001	Blazer Assembling	Fabric inspection
E002	Cutting Section	Tailoring
E003	Stitching Section	Quality inspection
E004	Blazer Assembling	Stitching
E005	Cutting Section	Cutting
E006	Blazer Assembling	Finishing

Actions for each row include a pencil icon for editing and a delete icon.

Interface number: 28

Interface name: Section Manager's add employee task

Description: Section manager assigns task for the employee of his section



Interface number: 29

Interface name: Section manager's section efficiency dashboard

Description: Section manager can view the efficiency achieved in his section

The dashboard features a sidebar on the left with links: Target, Order, Attendance, Employee Task, Production Progress (which is active), and Report. The main area displays 'Production progress' with a table showing data for three cutting lines across four time intervals.

Time	Section part	Damaged material	Hourly Achieved target	Achievement target	Efficiency
10.00 am	Cutting line 1	2	20	30	79%
10.00 am	Cutting line 2	3	27	30	81%
10.00 am	Custom cutting line	1	15	20	76%
12.00 pm	Cutting line 1	7	43	60	77%
12.00 pm	Cutting line 2	6	44	60	82%
12.00 pm	Custom cutting line	3	29	40	87%

Interface number: 30

Interface name: Section manager's generate report dashboard.

Description: Section manager can generate four types of report

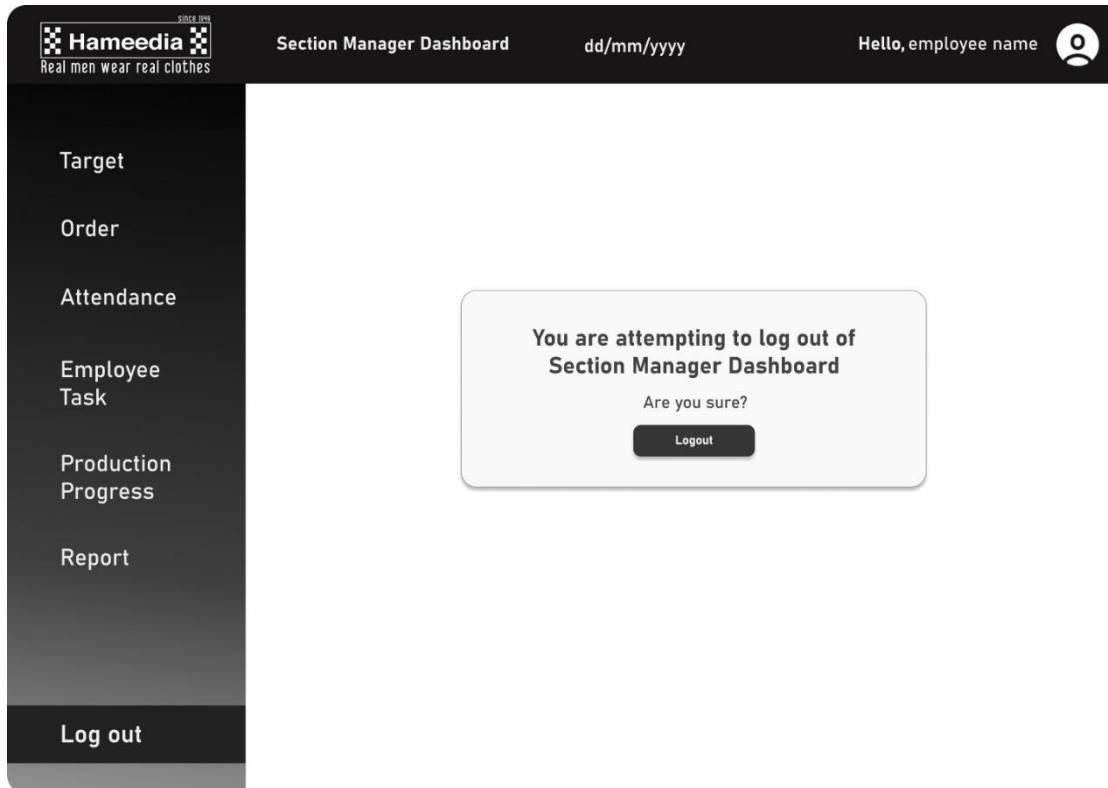
The image shows the 'Section Manager Dashboard' interface. At the top left is the Hameedia logo with the tagline 'Real men wear real clothes'. To the right are the dashboard title, date input field ('dd/mm/yyyy'), and a user profile placeholder ('Hello, employee name'). A sidebar on the left lists navigation items: Target, Order, Attendance, Employee Task, Production Progress, Report (which is highlighted in grey), and Log out. The main content area displays four report cards:

- Daily section performance report**: Date: 21/06/2020. View button.
- Annual employee performance report**: Date: 21/06/2020. View button.
- Order completion report**: Date: 21/06/2020; Time from: 13:00; Time to: 15:00. View button.
- Hourly production report**: Date: 21/06/2020; Time from: 13:00; Time to: 15:00; Section name: Cutting section. View button.

Interface number: 31

Interface name: Section Manager's Logout dashboard

Description: Section Manager logout portal



Interface number: 32

Interface name: Quality Inspectors add Hourly production progress of cutting section dashboard

Description: Quality Inspectors can update or add the production progress of the cutting section hourly.

The screenshot shows the Hameedia Cutting Section Quality Inspector Dashboard. The top navigation bar includes the Hameedia logo, the title "Cutting Section Quality Inspector Dashboard", a date field "dd/mm/yyyy", and a user profile "Hello, employee name". The left sidebar has menu items: Production Recording (selected), GRN, Order, Left-over, and Log out. The main content area is titled "Hourly production Recording". It displays a summary row with "Time" (1.00 pm), "Hourly Achieved target" (20), and dropdowns for "Section part" (Cutting line 1) and "No. of damaged material" (2). Below this is a table with columns: Time, Section part, Damaged material, Hourly Achieved target, Achievement target, and Efficiency. The table contains six rows of data, each with a edit icon:

Time	Section part	Damaged material	Hourly Achieved target	Achievement target	Efficiency
10.00 am	Cutting line 1	2	20	30	79%
10.00 am	Cutting line 2	3	27	30	79%
10.00 am	Custom cutting line	1	15	20	79%
12.00 pm	Cutting line 1	7	43	60	79%
12.00 pm	Cutting line 2	6	44	60	79%
12.00 pm	Custom cutting line	3	29	40	79%

Interface number: 33

Interface name: Quality Inspectors add Hourly production progress of sewing section dashboard

Description: Quality Inspectors can update or add the production progress of sewing section hourly.

The screenshot shows the Hameedia Stitching Section Quality Inspector Dashboard. The top navigation bar includes the Hameedia logo, the title "Stitching Section Quality Inspector Dashboard", a date field "dd/mm/yyyy", and a user profile "Hello, employee name". The left sidebar has menu items: "Production Recording" (selected), "GRN", "Order", "Left-over", and "Log out". The main content area is titled "Hourly Production Recording". It displays a summary row with "Time" (1.00 pm), "Hourly Achieved target" (20), and dropdowns for "Section part" (Tailoring line 1) and "No. of damaged material" (2). Below this is a table with columns: Time, Section part, Damaged material, Hourly Achieved target, Achievement target, and Efficiency. The table contains six rows of data:

Time	Section part	Damaged material	Hourly Achieved target	Achievement target	Efficiency
10.00 am	Tailoring line 1	2	20	25	89%
10.00 am	Tailoring line 2	3	27	29	92%
10.00 am	Custom Tailoring line	1	15	16	56%
10.00 pm	Embroidery	7	43	65	89%
10.00 pm	Trimming and pressing	6	44	75	95%
12.00 pm	Tailoring line 1	3	29	50	99%

Each row has an edit icon (pencil) at the end. A "Add" button is located below the table.

Interface number: 34

Interface name: Quality Inspectors add Hourly production progress of blazer assembling section dashboard.

Description: Quality Inspectors can update or add the production progress of blazer assembling section hourly.

The screenshot shows a web-based dashboard for quality inspectors. At the top left is the Hameedia logo with the tagline "Real men wear real clothes". To the right is the title "Blazer Assembling Section Quality Inspector Dashboard", a date input field "dd/mm/yyyy", and a user greeting "Hello, employee name" with a profile icon. On the far left is a vertical sidebar with menu items: "Production Recording" (selected), "GRN", "Order", "Left-over", and "Log out". The main content area is titled "Hourly Production Recording". It contains a form with fields: "Time" (1.00 pm), "Hourly Achieved target" (20), "Section part" (Stitching line 1), and "No. of damaged material" (2). A dropdown menu next to "Section part" lists "Stitching line 1", "Finishing part", and "Stitching line 2". Below the form is a table with columns: Time, Section part, Damaged material, Hourly Achieved target, Achievement target, and Efficiency. The table data is as follows:

Time	Section part	Damaged material	Hourly Achieved target	Achievement target	Efficiency
10.00 am	Stitching line 1	2	20	19	92%
10.00 am	Stitching line 2	3	27	26	95%
10.00 am	Finishing part	1	15	15	96%
12.00 pm	Stitching line 1	7	43	40	89%
12.00 pm	Stitching line 2	6	44	30	82%
12.00 pm	Finishing part	3	29	30	91%

Each row in the table has a edit icon (pencil) at the end. An "Add" button is located below the table.

Interface number: 35

Interface name: Quality Inspectors Create Good Receive Note dashboard.

Description: Quality Inspector can create GRN

The screenshot shows the Hameedia Cutting Section Quality Inspector Dashboard. The top navigation bar includes the Hameedia logo, the text "Cutting Section Quality Inspector Dashboard", a date input field "dd/mm/yyyy", a greeting "Hello, employee name", and a user profile icon. On the left, a vertical sidebar lists menu items: Production Recording, GRN (which is selected and highlighted in grey), Order, Left-over, and Log out. The main content area is titled "Generating GRN". It contains a form with fields: GRN Id (G007), Material Id (M007), Material name (Cotton), Quantity (0711425367), Delivery Note (Delivered), Authorized by (Quality Inspector), and Inspection details (Good). A "Generate GRN" button with a plus sign is located at the bottom right of the form. Below this, a table titled "Left-over" lists six rows of GRN data:

GRN Id	Material Id	Material name	Material dimension	Delivery note	Inspection details
G001	M001	Cotton	5x3	Delivered	Good
G002	M002	Linen	2x2	Not Delivered	-
G003	M003	Cotton	3x3	Delivered	Good
G004	M004	Poplin	3x2	Delivered	Good
G005	M005	Silk	4x2	Delivered	Bad
G006	M006	Polyester	8x8	Delivered	Good

Interface number: 36

Interface name: Quality Inspectors Create order dashboard.

Description: Quality Inspector creates order received into the system.

The screenshot shows the Hameedia Cutting Section Quality Inspector Dashboard. The top navigation bar includes the Hameedia logo, the section name "Cutting Section Quality Inspector Dashboard", a date input field "dd/mm/yyyy", a greeting "Hello, employee name", and a user profile icon. On the left, a vertical sidebar lists navigation options: Production Recording, GRN, Order (selected), Left-over, and Log out. The main content area is titled "Order Recording" and contains a form with fields: Order Id (D007), Priority (M007), Order type (Cotton), Quantity (0711425367), Customer Name (Delivered), Customer name (Quality Inspector), Date Ordered (Good), Date Delivered (Good), and Status (Pending). A "Record Order" button is located at the bottom right of the form. Below this is a table listing previous orders:

ID	PRIORITY	ORDER TYPE	QUANTITY	CUSTOMER NAME	CUSTOMER NUMBER	DATE ORDERED	DATE DELIVERED	STATUS
D001	1	Regular	20	-	-	01/06/2023	15/06/2023	Green
D002	2	Regular	10	-	-	05/06/2023	17/06/2023	Green
D002	3	Regular	19	-	-	10/06/2023	20/06/2023	Purple
D004	4	Custom	7	Azwar	0754562354	13/06/2023	23/06/2023	Green
D005	5	Regular	33	-	-	13/06/2023	23/06/2023	Green
D006	6	Custom	2	Sabique	0776456987	17/06/2023	27/06/2023	Red

Interface number: 37

Interface name: Quality Inspector's leftover of order dashboard

Description: Quality Inspector can record all the leftover of order

The screenshot shows a web-based application interface for a Quality Inspector. At the top, there is a header with the Hameedia logo, the text "Quality Inspector Dashboard", a date input field "dd/mm/yyyy", and a user greeting "Hello, employee name" with a profile icon.

The left sidebar contains navigation links: "Production Recording", "GRN", "Order", "Left-over" (which is currently selected), and "Log out".

The main content area is titled "Left-over Recording". It features a form with fields for "Order Id" (D004), "Left-over Id" (L007), "Left-over type" (Material), "Type" (Poplin), "Quantity" (2), "Quality" (Damaged), and "Size" (3x3). A button labeled "+ Add record" is located at the bottom right of this form.

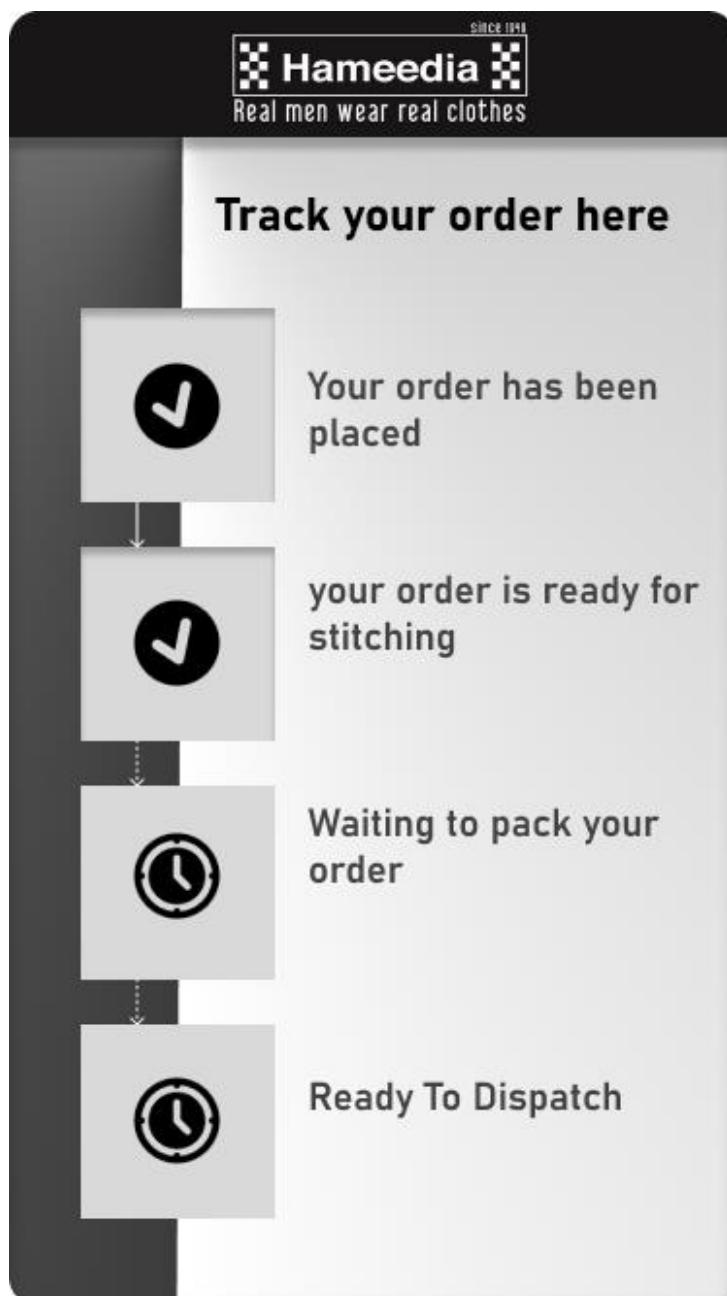
Below the form is a table listing previous records:

Order Id	Left-over Id	Left-over type	Type	Quality	Quantity	Size	Action	
D001	L001	Material	Silk	Damaged	2	4x2		
D001	L002	Product	Shirt	Undamaged	6	M		
D002	L003	Product	T-Shirt	Damaged	5	L		
D003	L004	Material	Linen	Damaged	1	2x2		
D004	L005	Product	Pant	Damaged	8	M		
D004	L006	Material	Cotton	Undamaged	1	3x3		

Interface number: 38

Interface name: Customers Track Order UI

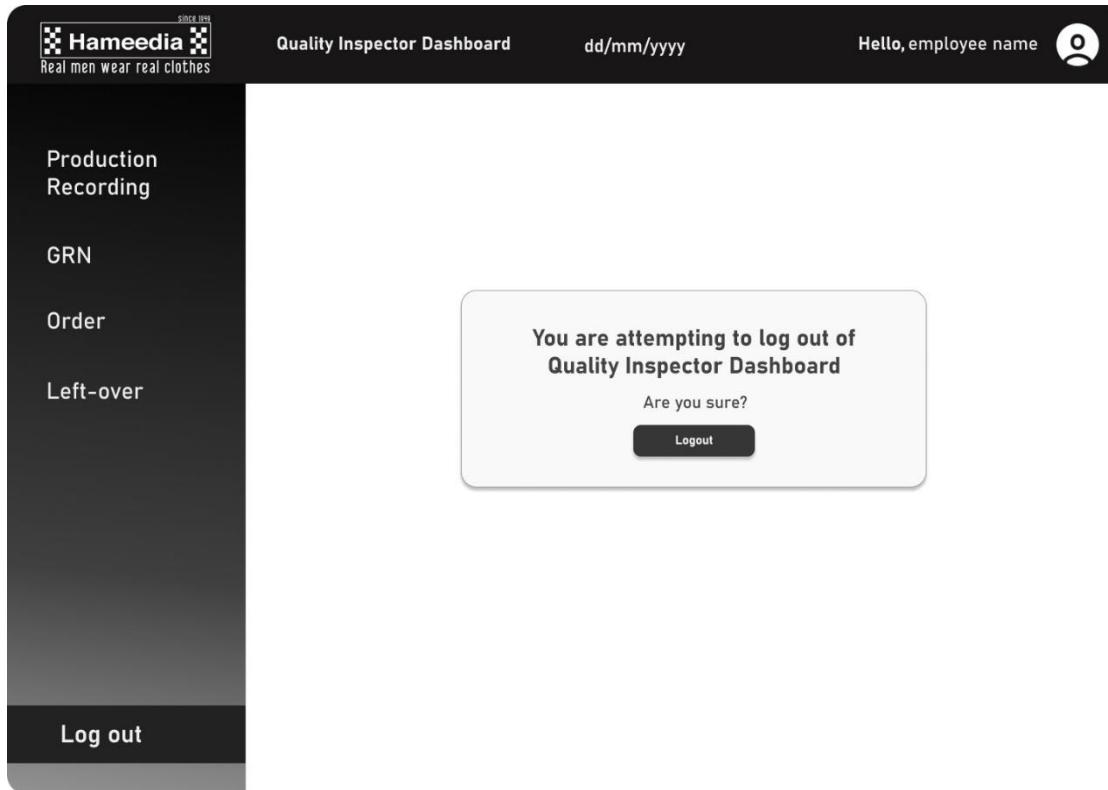
Description: Customer will be given a link and they will be directed to this interface to track order



Interface number: 39

Interface name: Quality Inspector's logout dashboard

Description: Quality Inspector's logout portal.



4.3 Database Design

Table number: 1

Table Name: Employee

Primary key: employee_id

Foreign key: sname

Field Name	Data Type	Data Size	Description
employee_id	Text	5	Employee id
employee_name	Text	30	Employee name
join_date	Date	-	Employee join date
dob	Date	-	Date of birth
position	Text	30	Employee position
age	Number	3	Employee age
sname	Text	5	Section name
Record Size	73		

Table number: 2

Table Name: Employee_Mobile

Primary key: emp_id, mobile_number

Foreign key: emp_id

Field Name	Data Type	Data Size	Description
emp_id	Text	5	Employee id
mobile_number	Number	10	Mobile Number
Record Size	15		

Table number: 3

Table Name: User_Login_Credential

Primary key: username, emp_id

Foreign key: emp_id

Field Name	Data Type	Data Size	Description
username	Text	5	Username
password	Text	30	Password
last_login	Date	-	Last login date
modified_date	Date	-	Last modified date
created_date	Date	-	Created date
emp_id	Text	5	Employee id
Record Size	40		

Table number: 4

Table Name: Attendance

Primary key: date, emp_id

Foreign key: emp_id

Field Name	Data Type	Data Size	Description
date	Date	-	Attendance date
time_in	Date	-	Attendance time in
time_out	Date	-	Attendance time out
status	Text	20	Attendance status
emp_id	Text	5	Employee id
Record Size	25		

Table number: 5

Table Name: Section

Primary key: sec_name

Foreign key: emp_id

Field Name	Data Type	Data Size	Description
sec_name	Text	5	Section name
sec_part	Text	30	Section part
emp_id	Text	5	Employee id
Record Size	40		

Table number: 6

Table Name: Machine

Primary key: machine_id

Foreign key: sname,mach_id

Field Name	Data Type	Data Size	Description
machine_id	Text	5	Machine id
description	Text	30	Machine description
section_allocated	Text	20	Allocated section
placement_date	Date	-	Machine placement date
sname	Text	5	Section name
mach_id	Text	5	Machine id
Record Size	65		

Table number: 7

Table Name: Target

Primary key: target_id

Foreign key: sname, ord_id

Field Name	Data Type	Data Size	Description
target_id	Text	5	Section name
target_count	Text	30	Section part
finished_count	Date	-	Last login date
damaged_count	Date	-	Last modified date
product_type	Text	5	Product type
work_efficiency	Number	5	Work efficiency
sname	Text	5	Section name
ord_id	Text	5	Order id
Record Size		55	

Table number: 8

Table Name: Order

Primary key: order_id

Foreign key: emp_id, grnid

Field Name	Data Type	Data Size	Description
order_id	Text	5	Order id
order_type	Text	30	Order type
delivery_date	Date	-	Order delivery date
status	Text	20	Order status
quantity	Number	5	Order quantity
date	Date	-	Order date
priority	Number	5	Priority
customer_name	Text	30	Customer name
customer_mobile	Number	10	Customer mobile
emp_id	Text	5	Employee id
grnid	Text	5	GRN id
Record Size	115		

Table number: 9

Table Name: Product

Primary key: product_id

Foreign key: pkg_id

Field Name	Data Type	Data Size	Description
product_id	Text	5	Product id
product_name	Text	30	Product name
price	Number	5	Product price
size	Text	5	Product size
category	Text	15	Product category
quantity	Number	5	Quantity
pkg_id	Text	5	Package id
Record Size	70		

Table number: 10

Table Name: Employee_Manages_Product

Primary key: emp_id, prod_id

Field Name	Data Type	Data Size	Description
emp_id	Text	5	Employee id
prod_id	Text	5	Product id
responsibilities_description	Text	30	Responsibilities Description
Record Size	40		

Table number: 11

Table Name: Product_Has_Style

Primary key: prod_id, sty_id

Field Name	Data Type	Data Size	Description
prod_id	Text	5	Product id
sty_id	Text	5	Style id
style_specification	Text	30	Style Specification
Record Size	40		

Table number: 12

Table Name: Product_Has_Brand

Primary key: prod_id, brnd_id

Field Name	Data Type	Data Size	Description
prod_id	Text	5	Product id
brnd_id	Text	5	Brand id
association_date	Text	30	Association Date
Record Size	40		

Table number: 13

Table Name: Left Over

Primary key: left_over_id

Foreign key: ord_id

Field Name	Data Type	Data Size	Description
left_over_id	Text	5	Left over id
leftover_type	Text	30	Left over type
type	Text	15	Type
quantity	Number	5	Quantity
quality	Text	30	Quality
size	Text	15	Size
Record Size	100		

Table number: 14

Table Name: Package

Primary key: package_id

Foreign key: prod_id

Field Name	Data Type	Data Size	Description
package_id	Text	5	Package id
quantity	Number	5	Quantity
package_type	Text	15	Package type
prod_id	Text	5	Product id
Record Size	30		

Table number: 15

Table Name: Brand

Primary key: brand_id

Field Name	Data Type	Data Size	Description
brand_id	Text	5	Brand id
brand_name	Text	15	Brand name
description	Text	30	Brand description
Record Size	50		

Table number: 16

Table Name: Style

Primary key: style_id

Field Name	Data Type	Data Size	Description
style_id	Text	5	Style id
style_name	Text	15	Style name
style_season	Text	15	Style season
category	Text	15	Style category
Record Size	50		

Table number: 17

Table Name: Operation Breakdown

Primary key: sty_id, operation_id

Foreign key: sty_id

Field Name	Data Type	Data Size	Description
operation_id	Text	5	Operation id
operation_name	Text	15	Operation name
time_taken_to_finish	Number	5	Time taken to finish
price	Number	5	Price
date	Date	-	Date
sty_id	Text	5	Style id
Record Size		35	

Table number: 18

Table Name: GRN

Primary key: grn_id

Foreign key: emp_id

Field Name	Data Type	Data Size	Description
grn_id	Text	5	GRN id
material_id	Text	5	Material id
material_name	Number	30	Material name
material_dimension	Text	15	Material dimension
Inspection_details	Text	30	Inspection details
delivery_note	Text	30	Delivery note
emp_id	Text	5	Employee no
Record Size	120		

4.4 Report Layout Design

Report layout number: 1

Report layout name: Order Completion Report

Description: Includes all completed order details of that particular order



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Order Completion Report

Order ID : D002
Order Type : Regular
Order Date : 05/06/2023

Items	Completion On	Order Quantity	Cut Quantity	Extra Cut Quantity @3%	Issued to Sewing Section	Stitched Quantity	Garments Damaged in Stitching	Quantity Issued to finishing department	Finished Quantity	Rejected / Damaged garment in finishing	Packed Quantity	Shipping Quantity	Excess Quantity
itm-76	6 feb	1000	1030	30	1030	1025	15	1023	1018	10	1017	1012	15
itm-98	21 jan	350	361	11	361	358	8	387	359	8	360	354	4
itm-33	18 aug	850	876	26	879	860	20	877	869	6	865	863	13

Breakdown of Packed Quantity of itm-33

Color	S	M	L	XL	XXL	Total/Color
Red	2	10	6	5	7	30
Navy	3	5	12	2	3	25
White	5	8	10	4	5	32
Total	10	23	28	11	15	87

Report layout number: 2

Report layout name: Section Performance Report

Description: Includes all sections performance for the month

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Section Performance Report

Report Date : 01/06/2023

	Overall Efficiency	Total Hours Worked	Idle Time	Defect/Quality rate	Total Overtime Worked	Employee Absent Hours
Cutting Section	74%	545 hours	1.2 hours	5%	60	30
Stitching Section	75%	876 hours	42 minutes	10%	80	20
Suit Assembling	81%	1059 hours	50 minutes	9%	70	15

Section targets and achieved targets

A chart comparing Achieved target (grey bars) and Total target (black bars) for three sections: Cutting section, Stitching section, and Blazer assembling section. The Y-axis represents the value from 0 to 250.

Section	Achieved target	Total target
Cutting section	115	150
Stitching section	217	250
Blazer assembling section	179	200

Report layout number: 3

Report layout name: Employee Performance Report

Description: Includes all Employees performance and other related data for providing annual bonuses.

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Employee Performance Report

Employee Performance Report For The 2022

Employee ID	Hours Worked	Holidays	No pay Leave Days	Work Efficiency
E001	100	3	5	79%
E002	85	4	2	82%
E003	75	6	5	65%
E004	60	2	3	72%
E005	95	1	3	83%
E006	122	2	1	85%
E007	88	2	2	75%
E008	93	3	1	81%
E009	102	2	4	83%

Top Performer of the Year:.....

Average Efficiency

Report layout number: 4

Report layout name: Hourly Production Report

Description: Includes all sales information for the selected month.

since 1949		Hourly Production Report						
		Section name : Sewing Section						
Operation name	Operator	Time				Time		
		10:00	11:00	12:00	13:00	14:30	15:30	16:30
1	PLKT PRESS	LALITH	10	15	20	35	25	21
2	FRONT LOWER PANEL GA	KUMARA	25	23	25	25	20	25
3	FRONT DART MAKING	KASUN	25	24	22	21	19	29
4	FRONT YOKE ATTACH	AHAMMED	22	21	21	21	21	26
5	YOKE O/L	BANDARA	30	23	25	29	15	15
6	YOKE TOP STICH	VIDUSHAN	15	15	45	23	15	19
7	PLKT TOP STICH	KAMAL	17	12	12	23	23	25
8	PLKT RUN STICH	AJITH	12	40	50	10	21	29
		KASUNI	23	56	21	20	19	21
		DASUN	23	45	52	60	20	26
9	PLKTEDGE STICH	MENDIS	20	20	20	13	16	29
		SURYA	15	16	10	25	12	30
10	FRONT PLKT FINISH	VIRAJ	18	19	78	10	15	19
		KAMALI	15	15	15	62	15	24

Overall this sections efficiency is = 79% (yesterdays 81%)

Chapter 5: Conclusion

In conclusion, our team has successfully developed a software solution for the Apparel Production Management System to address the specific challenges faced by Hameedia. The previous manual-based system lacked automation and efficiency in handling apparel production orders received from the main store. Through interviews and requirements gathering, we designed a tailored solution that meets the unique needs of Hameedia's apparel production process. By implementing this software solution, we have significantly improved the production workflow and operational efficiency. The system allows for seamless order processing, tracking, and monitoring of production progress, ensuring timely delivery of orders. It provides real-time visibility into the production process, enabling effective resource allocation and optimized production line balancing. While the current solution successfully fulfills the requirements of Hameedia's apparel production operations, there is room for further enhancements. Future improvements may include integrating advanced analytics for production forecasting, optimizing material and inventory management, and expanding the system to support multiple production facilities or branches. Despite initial challenges faced during the project, such as the fuel crisis impacting information gathering, we successfully adapted and conducted online interviews to ensure a comprehensive understanding of Hameedia's requirements. As we proceed to the implementation phase, we remain dedicated to identifying any potential issues, providing ongoing support, and collaborating with Hameedia's team for continuous improvement. Overall, the Apparel Production Management System has been successfully implemented, addressing the specific needs of Hameedia's apparel production process. This solution offers increased efficiency, improved production planning, and enhanced customer satisfaction. It can serve as a scalable and adaptable system for other apparel production companies, empowering them to optimize their production operations and achieve greater success.

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Appendix

Meeting Date	Students Indices(participated)	Supervisor comments	Signature of the supervisor
10th of May 2023	68, 3032, 33, 49	Have to get a better idea of the system	<u>S. J. S.</u>
16th of May 2023	68, 32, 33, 49	use case should be corrected.	<u>Gregor</u>
31st of May 2023	68, 32, 33, 49	use case, ER, class should be altered.	<u>S. J. S.</u>
2/6/23	04/33/55/58	only usecase, and class shown.	<u>S. J. S.</u>
13/6/23	04/33/55/ 58	Small changes to be done in class dt.	<u>Gregor</u>