Umm Al-Qura University
Technical
College of Computing
Computer Science and AI

Software Documentation and

Writing – CS3123
Department First Semester 2024

HungerStation application Final Report

Authors:
Toleen Al-Huthali
Huda Sleem
Manar Ahmed
Retaj Alhazmi

The Logo of the project

This project report is submitted to the Department of Computer Science at Umm Al-Qura University in partial

fulfillment of the requirements for the degree of Bachelor of Science in Computer Engineering/Computer Science/Information Systems.

Author(s): Toleen Al-Huthali
Address: In Makkah
E-mail: toleen.780@icloud.com

Author(s): Huda Sleem
Address: In Makkah
E-mail: Hudasleem4@gmail.com

Author(s): Manar Ahmed
Address: In Makkah
E-mail: manor.26.t@gmail.com

Author(s): Retaj Alhazmi
Address: In Makkah
E-mail: saniuxu7@gmail.com

University supervisor(s):
Dr.Hanadi O.Merdah
Computer science department

Dept. of Computer Science
Internet: http://uqu.edu.sa

Faculty of Computer and Information Systems Phone: +966 xxxxxxxxx
Umm Al Qura University Fax : +966 xxxxxxxxx Kingdom of Saudi Arabia

Abstract

This project upgrades the HungerStation app by adding a specialized section for dietary-specific foods, making it easier for users to find options like keto, gluten-free, and diabetic-friendly meals. The app's enhanced architecture supports cross-platform compatibility, secure payments, real-time order tracking, and personalized recommendations. Agile methodologies and extensive testing ensure a reliable, user-friendly experience, with security features like encryption and two-factor authentication. Future updates will add features like subscription services and integration with smart appliances, aiming to boost user satisfaction and engagement in food delivery.

This is to declare that the work under the supervision of Dr. Hanadi O.Merdah having the title "HungerStation Development" carried out in partial fulfillment of the requirements of the Bachelor of Science in Computer Science, is the sole property of Umm Al-Qura University and the respective supervisor and is protected under the intellectual property right laws and conventions.

It can only be considered/used for purposes like extension for further enhancement, product development, adoption for commercial/organizational usage, etc., with the permission of the University and respective supervisor.

This above statement applies to all students and faculty members.

Date: 08/1/2024

Author(s): Name: Toleen Al-Huthali. Signature: 

Name: Huda Sleem. Signature: 

Name: Manar Ahmed Signature: 

Name: Retaj Alhazmi Signature: 

Supervisor(s): Name: Dr.Hanadi O.Merdah

Signature: _____

To our beloved parents,
We dedicate this app to you with all our love and gratitude. We have worked hard, dedicated our time, and put in great effort to make you proud. Your support has always been our source of strength, and it has motivated us to create something that helps others. This achievement is a reflection of your belief in us.
With deepest appreciation,
Our team.

This project aims to enhance the HungerStation application by introducing a dedicated Dietary Food Section for users with specific dietary needs, such as keto, gluten-free, allergy-friendly, and diabetic diets. The initiative seeks to improve accessibility and overall user satisfaction while increasing engagement among health-conscious consumers. This document outlines the project's objectives, requirements, and proposed functionalities, along with an analysis of current limitations within the application. Key findings identify challenges, including a lack of tailored options and inefficient navigation. Proposed solutions include cross-platform development, real-time order tracking, and secure payment integration. These enhancements are expected to significantly improve the user experience and broaden the app's market appeal.

Keywords: Dietary Food Section, HungerStation, mobile application

Introduction:

HungerStation is one of the leading food delivery applications in the region, providing users with the convenience of ordering from a wide range of restaurants quickly and easily. With the ongoing evolution of healthy lifestyle trends and the growing awareness of the importance of nutritious food, it has become essential to introduce a new feature that caters to users who seek healthier dietary choices. This report aims to provide a detailed overview of the development of the HungerStation application, with a particular focus on the addition of a new "Healthy Food" section. The report will cover every aspect, including the application's functionalities, user interface improvements, and ultimately enhancing the user experience and adding significant value to the app.

Chapter 1

1.1 Purpose of the Project

The purpose of this project is to enhance the HungerStation app by introducing a new feature: a dedicated Dietary Food Section. This initiative aims to improve accessibility for users with specific dietary needs, such as those following keto, gluten-free, allergy-friendly, or diabetic diets, thereby increasing user satisfaction and engagement.

1.2 Purpose of this Document

This document serves as a comprehensive reference outlining the objectives, requirements, and proposed functionalities of the Dietary Food Section feature. It is designed to provide stakeholders with a clear understanding of the project scope and to facilitate effective communication and collaboration throughout the development process.

1.3 Overview of this Document

The document is structured to first present the project's goals and objectives, followed by an analysis of the existing HungerStation app. This analysis will highlight current limitations and challenges faced by users, establishing a foundation for the proposed enhancements that the Dietary Food Section will introduce.

1.4 Existing System

1.4.1 Existing System Description

HungerStation currently enables users to order food and groceries from local restaurants and stores. Users can browse menus, place orders for delivery or pickup, track their orders in real-time, and provide feedback on their experiences. However, the app lacks a specific feature to cater to individuals with dietary restrictions, limiting its usability for this important segment of the market.

1.4.2 Problems in the Existing System

Several critical issues have been identified within the existing HungerStation app:

Limited Dietary Options: Users with specific dietary needs often find it challenging to identify suitable menu items, resulting in frustration.
Inefficient Browsing: The absence of dedicated sections for dietary requirements complicates the process of finding appropriate food choices.
User Experience Deficiencies: Feedback indicates that the current app does not sufficiently address the needs of users seeking tailored dietary options, leading to lower satisfaction levels.

Chapter 2 – System Analysis

2.1 Data Analysis

The HungerStation system handles various types of data, including user information, order details, restaurant menus, and payment transactions. The analysis of this data is critical to ensure smooth operation and user satisfaction.

2.1.1 Data Flow Diagrams

• User Login and Registration: Input: User credentials (email, password) for login or registration data (name, phone, address). Process: Validate credentials or store new user information in the database. Output: Successful login or registration confirmation. • Order Processing: Input: Menu items selected by the user, delivery address, and payment details. Process: Validate order details, calculate total, confirm payment, and send order to the restaurant. Output: Order confirmation and delivery status. • Order Tracking: Input: Order status updates from the delivery system. Process: Retrieve real-time updates on order status and location. Output: Updated order status displayed to the user.

2.1.2 System Requirements

2.1.2.1 Clients, Customers, and Users

Clients (Restaurants and Groceries): They provide menus, manage orders, and handle deliveries. Customers: End-users who order food or groceries through the app. These include regular users, health conscious users, and families. Users(Delivery Personnel): Responsible for delivering orders placed through the app.

2.1.2.2 Functional and Data Requirements

Menu Browsing: Users should be able to browse through a list of restaurants and groceries. Ordering: Customers must be able to select items, place an order, and make payments electronically. Order Tracking: Users should track the progress of their order in real-time. User Reviews: After the delivery, users can leave ratings and reviews for both restaurants and delivery.

2.1.2.3 Non-Functional

2.1.2.3.1 Look and Feel Requirements

• The interface should be visually appealing with consistent color schemes, fonts, and user-friendly navigation. • Pages for different dietary preferences (e.g., Keto, gluten-free) must have a specialized design to enhance user experience.

2.1.2.3.2 Usability Requirements

• The system must be intuitive and easy to navigate for all types of users. Menus should be easy to browse, and filtering options should be easily accessible for health-conscious users. • The app should be usable on mobile devices (iOS and Android), with touch-friendly interfaces.

2.1.2.3.3 Security Requirements

• User Data Protection: Personal data (e.g., names, addresses, and payment information) must be protected through encryption and secure storage. • Authentication: User accounts should require strong passwords and offer features like two-factor authentication to enhance security.

2.1.2.3.4 Performance Requirements

• Scalability: The app must handle high traffic during peak hours without performance degradation. • Loading Speed: Menus, pages, and order details should load within a few seconds to enhance user satisfaction.

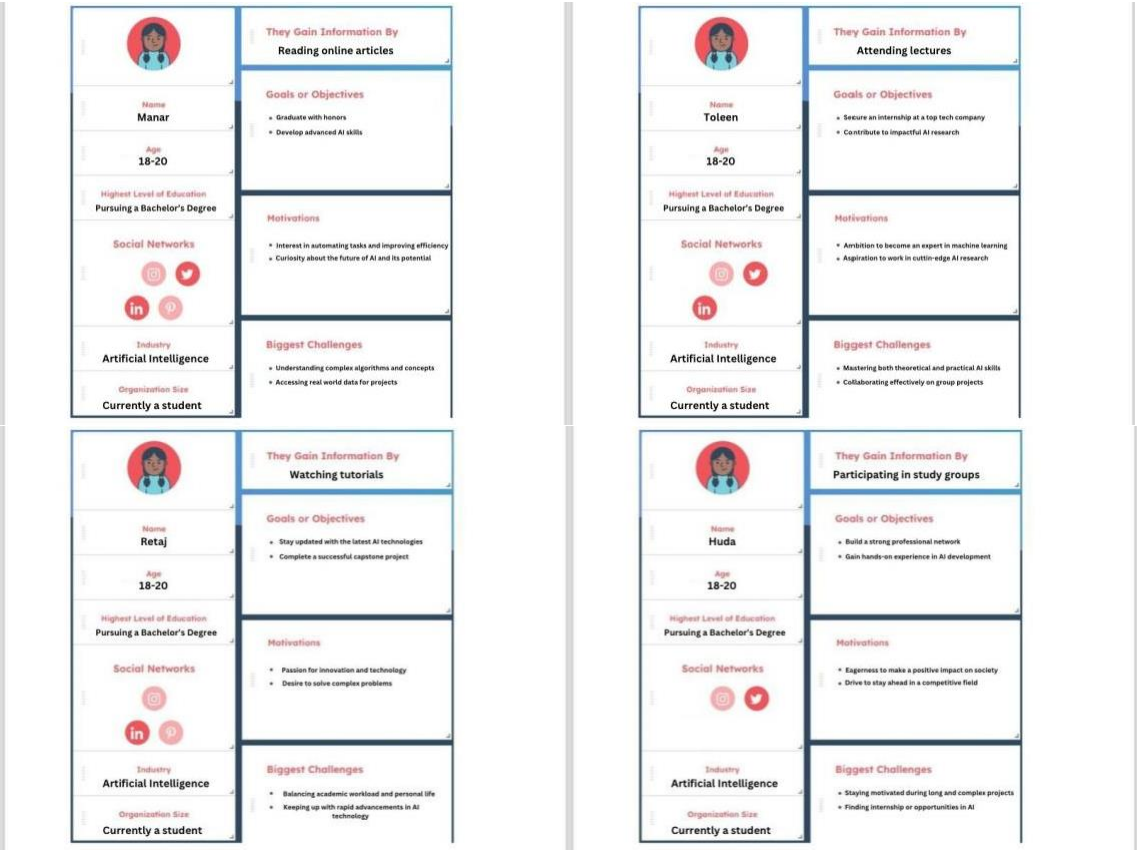
2.1.2.3.5 Portability Requirements

• HungerStation must run smoothly across various devices, including iOS and Android smartphones and tablets. The app should adapt to different screen sizes and operating systems. 2.1.3 Proposed Solutions Cross-platform Development: Implementing frameworks to build a single codebase that works on both Android and iOS. Real-time Tracking: Leveraging APIs such as Google Maps for accurate delivery tracking and status updates. Payment Integration: Secure integration with payment gateways to handle transactions and offer multiple payment options (credit card, cash on delivery).

2.1.4 Alternative Solutions

Native App Development: While building separate native apps for iOS and Android could offer slightly better performance, it would increase development time and costs. The decision to use cross-platform frameworks offers a good balance of performance and cost-effectiveness Simplified Payment Options: Implementing only cash on delivery or a single payment gateway could simplify the system, but this would limit user convenience. Offering multiple payment methods, including electronic options, ensures a wider appeal.

Chapter 3 – Design Considerations



3.1.1 Hardware and Software Environment

The app should be compatible with both iOS and Android platforms. The hardware requirements should include smartphones with at least 2GB of RAM and a modern processor. The software environment should utilize a responsive design framework to ensure usability on various screen sizes.

3.1.2 End User Characteristics

The target users are likely tech-savvy individuals aged 18-40, who prefer convenience in food delivery. They may have varying degrees of familiarity with mobile applications, so the interface should be intuitive and user-friendly.

3.2 Architectural Strategies

3.2.1 Algorithm to be Used

Implementing a recommendation algorithm based on user preferences, order history, and popular items can enhance user experience. Machine learning can be utilized to improve suggestions over time.

© 2024 HungerStation development , Version no. 0.0

3.2.2 Reuse of Existing Software Components

Leveraging APIs for payment processing, location tracking, and user authentication can save development time and ensure reliability. Utilizing established libraries for UI components can also expedite the design process.

3.2.3 Project Management Strategies

Agile methodologies should be used to allow for iterative development and continuous feedback. Regular sprints and stand-up meetings can help keep the team focused and aligned.

3.2.4 Development Method

A combination of Scrum for project management and DevOps for deployment can streamline the development process, ensuring that features are delivered efficiently and reliably.

3.2.5 Future Enhancements/Plans

Future updates may include adding features like subscription services for regular users, loyalty programs, and integration with smart kitchen appliances for a seamless cooking experience. This comprehensive approach ensures that the HungerStation app is well structured, userfriendly, and adaptable to future needs.

Chapter 4 – System Design
4.1 System Architecture and Program Flow

4.1.1 Major Modules

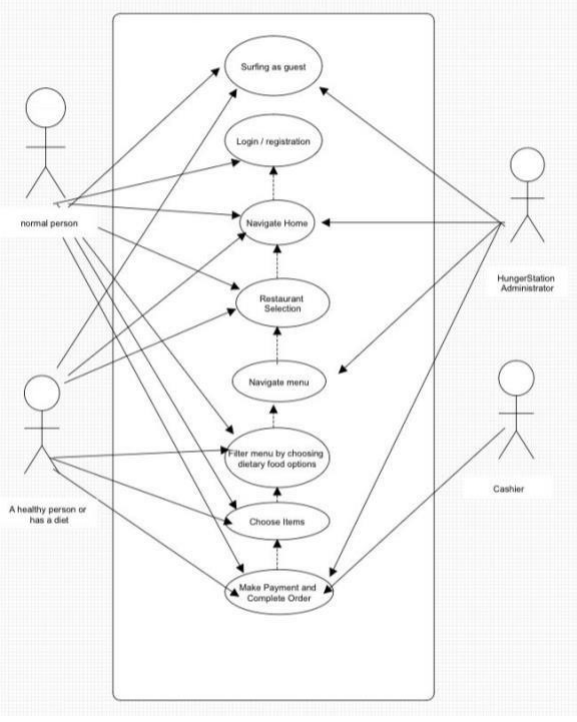
User Interface (UI):
• Represents the graphical interface that users interact with. It includes the application's main screen, available food menus, healthy meal details, and search and filter features. The interface provides a user friendly experience with an easy-to-navigate design that allows users to browse restaurants and choose meals effortlessly.

Recommendation System:
• Relies on customized algorithms to provide users with recommendations based on their dietary preferences, such as healthy meals or specific diet types (Keto, vegetarian, etc.). The system uses data from previous user orders and meal ratings to offer personalized suggestions.

Restaurant Management System:
• Manages a database containing information about all restaurants listed in the application. The system categorizes restaurants based on the healthy food options they offer, such as Keto meals, vegetarian options, and other healthy choices.

Payment System:
• Handles payment operations securely by supporting multiple payment methods, such as credit cards, digital wallets, and cash on delivery. The system ensures the encryption of sensitive information to protect user data.

Order Management System:
• Tracks orders from the moment they are placed until they are delivered, including stages such as order confirmation, preparation, shipping, and delivery to the customer. It also provides notifications to users about the status of their orders.



4.1.2 Submodules

Search and Filtering System:
• Allows users to search for specific restaurants or meals with the option to filter based on the type of healthy food or diet available, such as Keto or vegetarian meals

User Account Management:
• Includes account creation, login, saving favorites, tracking previous orders, and displaying order history. This system helps users personalize their experience within the app.

Ratings and Reviews:
• Enables users to add ratings and reviews for restaurants and meals, which helps improve the recommendation algorithms and provides objective evaluations for other users.

4.2 Detailed System Design 4.2.1

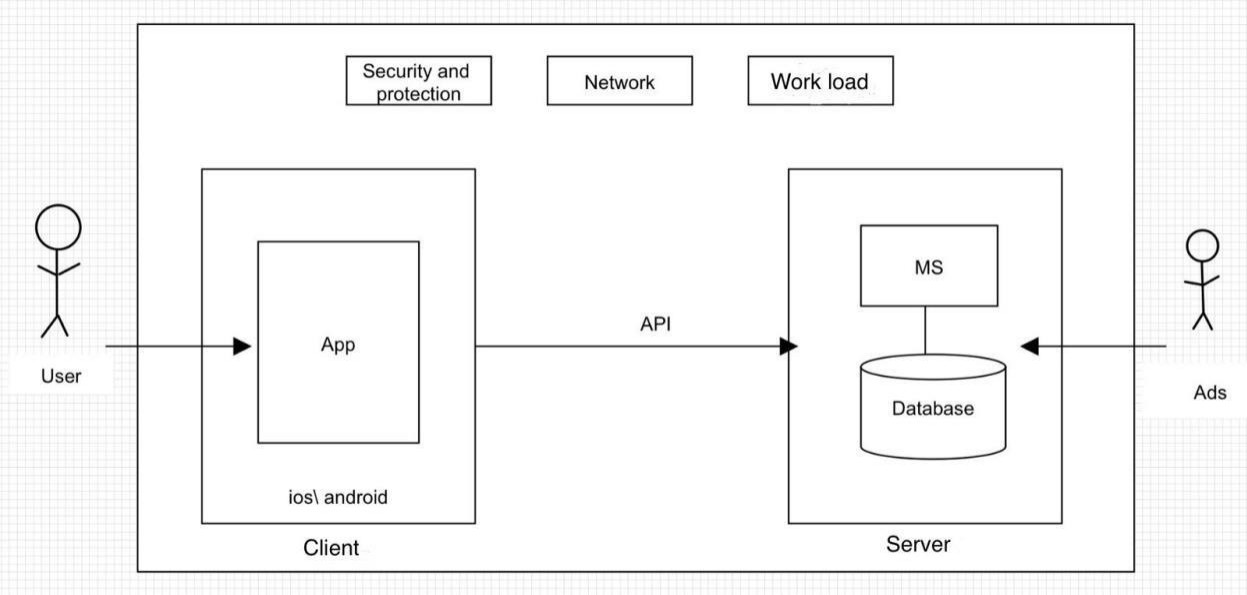
Detailed Component Description

Database:
• Includes comprehensive information about restaurants, food items, dietary options, and reviews. The data is continuously updated to ensure accurate information and valid options are available. The database is designed to support fast and efficient search and filtering operations.

Application Programming Interface (API):
• Acts as a mediator between the user interface, order management system, and the database. It ensures integration across different parts of the system, such as real-time data updates and accurate information display for users.

Recommendation System:
• Uses artificial intelligence and machine learning algorithms to analyze user preferences, order history, ratings, and favorite foods to provide personalized recommendations. The accuracy of recommendations improves over time due to continuous learning from user data.

Security and Data Protection:
• Includes an advanced system to protect sensitive information such as payment data and user details, using encryption technologies and security measures to ensure data safety.
You can further expand these sections with more details according to the project's requirements and specifications.



This architecture diagram illustrates the structure of the "HungryStation" application, which is a food ordering app from various restaurants. The purpose of this app is to facilitate the process of ordering meals from available restaurants, with the addition of a new feature, the "Healthy Food Filter," to enable users to easily find restaurants offering healthy meals. Below is an explanation of the diagram elements and their roles in this process:

1. User:
• Represents the person using the HungryStation app on their mobile device to order meals. The user can activate the Healthy Food Filter to find restaurants that provide healthy options.
2. Client:
• Represents the user's devices running the app, whether they are iOS or Android systems. The app performs searches and filters results based on the criteria set by the user.
3. App:
• The HungryStation application installed on users' devices. It sends requests to the server, such as searching for restaurants, ordering meals, and activating filters (e.g., the Healthy Food Filter). The app interacts with the API to send and receive data.
4. API (Application Programming Interface):
• Acts as a bridge between the app and the server. It receives search requests from the app and sends them to the server, returning the requested data, such as the list of restaurants matching the Healthy Food Filter.
5. Server:
• Contains the data processing logic and fulfills the app's requests. The server handles search requests, such as the Healthy Food Filter, by accessing the database or using microservices.
6. Database:
• Stores all information related to restaurants, menus, and meal classifications (including healthy meals). When the app requests a list of restaurants offering healthy meals, the database is queried to return the appropriate results.
7. MS (Microservice):
• There may be microservices responsible for handling specific tasks, such as verifying healthy meal criteria or providing personalized recommendations. These services operate independently and help enhance performance.
8. Ads:
• Represents the advertising entity that sends ads related to restaurants or special offers. Ads can be tailored to match user preferences, such as promotions for healthy meals.
9. Security and Protection:

• Refers to the measures used to protect user data and order details from breaches or tampering, ensuring privacy and data security during transmission between the client and server.

10. Network:

• Illustrates how data is transferred between the app and the server over the internet or communication networks. The network plays a crucial role in response speed and the smoothness of the user experience.

11. Work Load:

• Represents the amount of processing occurring on the server as a result of user requests, such as searching for restaurants with healthy meals. Load distribution on the server ensures stable and fast performance.

The addition of the Healthy Food Filter as a new feature allows users to customize their searches and choose restaurants that offer meals aligning with their healthy lifestyle, enhancing the user experience and making the app more appealing to a new category of users.

Chapter 5 – Implementation and Validation

5.1 Implementation

5.1.1 Development Environment

Platform: The application was developed using a cross-platform framework to ensure compatibility with both iOS and Android devices, optimizing resource utilization and maintaining a consistent user experience across platforms .

Backend: The backend infrastructure leverages robust technologies to manage data storage, user authentication, and order processing efficiently.

APIs: Integration with external services, such as payment gateways and mapping services, was achieved through well-established APIs, facilitating secure transactions and accurate order tracking .

5.1.2 Key Features Implemented

User Authentication: Implemented secure login and registration functionalities, ensuring the protection of user credentials through advanced encryption methods.

Order Placement and Management: Developed intuitive interfaces for browsing menus, selecting items, and placing orders. The system efficiently handles various payment methods, including cash on delivery and electronic payments.

Real-Time Order Tracking: Enabled users to monitor their orders in real-time by integrating reliable mapping services, enhancing transparency and user satisfaction.

Rating and Reviews: Incorporated features allowing users to rate and review their experiences, providing valuable insights for continuous improvement of services.

5.1.3 Security Measures

Data Protection: Employed comprehensive encryption protocols to safeguard sensitive information, including personal user data and payment details, thereby ensuring confidentiality and compliance with data protection regulations.

Authentication: Implemented robust user authentication processes, requiring strong passwords and offering two-factor authentication options to enhance account security.

5.2 Validation

Ensuring that the HungerStation application functions as intended and meets user expectations involved a thorough validation process, encompassing various testing methodologies:

5.2.1 Testing Process

Unit Testing: Conducted detailed tests on individual components to verify that each functioned correctly in isolation, facilitating early detection of issues during development.

Integration Testing: Assessed the interaction between different modules, such as the frontend and backend, to ensure seamless data exchange and functionality.

System Testing: Performed comprehensive testing of the entire application to confirm that all features operated harmoniously across both iOS and Android platforms.

Performance Testing: Evaluated the application's responsiveness and stability under varying load conditions, particularly during peak usage periods, to ensure consistent performance.

Usability Testing: Gathered feedback from a diverse user base to assess the application's intuitiveness, making iterative enhancements based on user interactions and suggestions.

5.2.2 Validation of Functional Requirements

Menu Browsing and Filtering: Verified that users could effectively navigate and filter menus, particularly for specific dietary preferences, ensuring accuracy and ease of use.

Order Placement and Tracking: Ensured that the order placement process was seamless and that users received real-time updates on their order status, enhancing trust and engagement.

Payment Processing: Confirmed the reliability and security of payment transactions, accommodating both electronic payments and cash on delivery options to meet diverse user needs.

5.2.3 Validation of Non-Functional Requirements

Security: Conducted security audits to ensure the application was protected against potential threats, maintaining data integrity and user privacy.

Performance: Monitored the application's performance metrics to ensure it remained responsive and efficient, even under high-demand scenarios.

Usability: Analyzed user feedback to refine the user interface and experience, ensuring the application was accessible and user-friendly for all demographics.

5.2.4 Bug Fixes and Improvements

Addressed issues identified during testing, such as resolving navigation glitches and optimizing data loading times, to enhance the overall user experience and application reliability

related work

HungerStation is one of the leading applications in the field of food delivery, offering a range of features that make the user experience comfortable and efficient. With the addition of a health interface, the application becomes more beneficial for users, making it easier for them to navigate between different options and orders. This interface contributes to improving the overall user experience by providing accurate information about food safety and restaurants, which enhances trust in the service. The health interface also provides information about nutritional ingredients and calories, helping users make better dietary decisions. Additionally, the attractive and comfortable design encourages users to use the application more frequently, increasing engagement and connection with the app.

many applications are similar to HungerStation in the field of food delivery, but the addition of the health interface in HungerStation distinguishes it and makes the user experience better and more beneficial.

Application's name	Ease of Use	Coverage	Prices	Customer Service	Healthy section
1. Jahez:	Simple and easy interface.	Available in many major cities.	Competitive with frequent offers and discounts.	Fast and efficient support.	Does not have
2. ToYou:	Attractive and easy-to-navigate user interface	Wide coverage including major cities and many areas.	Reasonable prices with multiple meal options.	Good response and continuous support.	Dose not have
3. Ninja:	Simple and easy-to-use design.	Covers specific areas but is expanding rapidly.	Competitive with seasonal offers and discounts.	Good support but can be a bit slower at times.	Dose not have

Summary of each chapter

Summary of chapter 1

The project aims to enhance the
HungerStation app by adding a new dedicated section for dietary-specific foods, making it easier for users with specific dietary needs—such as keto, gluten-free, and diabetic-friendly diets—to find suitable options. This addition seeks to increase user satisfaction and engagement with the app.

The document outlines the project's goals, requirements, and functionalities of the new section, serving as a comprehensive reference to facilitate communication and collaboration among stakeholders during development. The current HungerStation system provides food and grocery ordering, but it lacks a dedicated section for dietary restrictions, making it challenging for users to find suitable options and reducing the user experience, as indicated by customer feedback.

Summary of chapter 2

The HungerStation development project aims to add a dedicated section for foods suitable for various dietary needs (such as keto and gluten-free), making these options more accessible and enhancing user satisfaction. The system handles diverse data, including user information, order details, and restaurant menus, requiring careful analysis to ensure smooth operation.

Key requirements include providing a convenient user experience through menu browsing, ordering, order tracking, and user reviews, along with non-functional requirements such as an attractive, easy-to-navigate interface, data security, and fast performance. Proposed solutions include cross-platform development to reduce costs, real-time order tracking using Google Maps, and offering multiple payment options for user convenience.

Summary of chapter 3

The development of the HungerStation app aims to provide a compatible environment on both iOS and Android platforms, targeting users aged 18 to 40 who prefer ease and convenience in food ordering. The app requires smart devices with at least 2GB of RAM and a modern processor, with a responsive design framework to adapt to various screen sizes.

The app's architecture includes:
- Algorithms: Utilizing a recommendation algorithm based on user preferences and order history to suggest suitable options, with machine learning to enhance recommendations over time.
- Reuse of Software Components: Leveraging APIs for payment processing, location tracking, and user authentication to expedite and simplify development.
- Project Management Strategies: Using Agile methodology for continuous development, with regular meetings and sprints to keep the team focused.
- Development Method: Combining Scrum for project management with DevOps for seamless deployment.

Future plans include adding features such as subscription services, loyalty programs, and integration with smart kitchen appliances. This project includes user maps and personas to guide development based on user needs, ensuring that the app remains adaptable and upgradable.

Summary of chapter 4

The HungerStation system consists of several main modules that work together to ensure a smooth and efficient user experience:

• User Interface (UI): Provides an easy-to-use interface displaying food menus, healthy meal options, and search and filter features, enabling users to quickly find what suits them.

• Recommendation System: Uses customized algorithms to analyze user preferences and order history, offering suggestions for healthy meals like keto or vegetarian based on that data.

• Restaurant Management System: Manages a database containing information about restaurants, categorizing them based on the healthy food options they offer, making it easier for users to find suitable restaurants.

• Payment System: Allows users to pay securely using multiple methods, such as credit cards, digital wallets, and cash on delivery.

• Order Management System: Tracks order status from the moment it is placed until it is delivered to the user, providing notifications at each stage of the order process.

The system is supported by a continuously updated database for fast search and filtering, an API to integrate different parts of the system, and data protection through encryption technologies to ensure security. All these components are illustrated in a System Architecture Diagram (SAD) to show the relationships between them.

Summary of chapter 5

The “HungerStation” app was developed using a cross-platform framework to ensure compatibility with both iOS and Android devices, providing a consistent user experience across platforms. The app includes key features such as secure user authentication, order management with multiple payment options, real-time order tracking, and user ratings and reviews.

In terms of security, encryption technologies were used to protect personal data and payment transactions, with strong authentication mechanisms, including two-factor authentication.

Multiple tests were conducted to ensure the quality of the app, including unit testing, integration testing, system testing, and performance testing to ensure stability under heavy usage. User feedback was also collected to improve the user interface and make it more intuitive.

Finally, issues identified during testing, such as improving data loading times and navigation, were addressed, ensuring overall performance and reliability of the app.

Conclusion:

In conclusion, the development of the HungerStation application with the addition of a “Healthy Food” section represents a crucial step towards meeting the needs of a large segment of users who prioritize adopting a healthy lifestyle. Integrating healthy food options within the app not only enhances user convenience and accessibility to nutritious meals but also reflects the app’s commitment to providing innovative solutions that align with current market trends in food delivery. We hope that this new feature will contribute to the app’s success and expand its user base, while delivering a comprehensive and outstanding user experience.

Apendex

Source Code

1. User Registration and Login
   Start App
   If user is not logged in:
   Display "Login" or "Register" options
   If user selects "Register":
   Collect user information (name, email, phone, address, password)
   Validate inputs
   Create user account in the system
   If user selects "Login":
   Collect email and password
   Verify credentials
   If valid:
   Login the user
   Else: Display "Invalid credentials" message
   End If

2. Browse Restaurants
   Display list of restaurants based on user's location
   If user selects a restaurant:
   Display restaurant's menu
   Allow user to select items
   If user selects an item:
   Add item to cart
   Display cart button

3. Placing an Order
   If user is done selecting items:
   Display cart
   Allow user to review order and edit items
   Show total price including delivery fee
   Display "Place Order" button
   If user clicks "Place Order":
   Confirm delivery address Choose payment method (card, cash, etc.)
   Submit order to restaurant
   Show "Order placed" confirmation
   End If

4. Tracking the Order After placing an order
   Display order status (e.g., preparing, out for delivery)
   Allow user to track the delivery in real-time
   Update order status dynamically
   Notify user when the order is delivered
   End If

5. Payment Process If user selects card payment:
   Collect card details
   Validate payment information
   Process the payment
   If payment successful:
   Display "Payment Successful" message
   Else:
   Display "Payment Failed" message
   End If
   If user selects cash on delivery:
   Confirm "Cash on delivery" option
   End If

6. Rating and Review
   ```pseudo
   After order is delivered:
   Prompt user to rate the restaurant and delivery
   Allow user to leave a review
   Submit rating and review to the system
   End If
   ```

Section 3 Quality Assurance Documentation (QAD)

3.1 Quality Management Plan

Goal:	Outcome:	Target Objective:	Performance Measures/Data Source(s)/ Frequency/Responsible Person:
Ensure that users can easily find and order healthy food options, with accurate nutritional information, seamless browsing, and proper filtering for dietary preferences.	The app displays health-conscious restaurants and food options correctly, allows users to filter based on preferences (e.g., vegetarian, gluten-free), and provides nutritional details for transparency.	- Users can find healthy food options and filters with ease. - Nutritional information provided is always accurate and reliable. - Menus and restaurant listings load quickly without delay. - Orders from the health food category are processed without errors.	- Filter accuracy checked through user tests - Nutritional information accuracy verified monthly - User satisfaction based on feedback - Page load time monitored weekly - Order processing reviewed through support logs

3.2 Test Specifications

Step	Operator Action	Expected Results	Observed Results	Pass/ Fail
1.	User Registration and Login	Users should be able to create a new account using their email or phone number and log in using their details.		
2.	Browse Restaurants:	Users should see a list of restaurants based on their location.		
3.	Search Functionality	Users should be able to search for specific restaurants or .dishes using keywords		
4.	Display Restaurant Menu	Users should see a detailed list with prices, descriptions, and .photos		
5.	Add to Cart	Users should be able to add multiple items to their cart and see .the total price		
6	Checkout	Users should be able to review their order, choose a payment .method, and place the order		
7	Order Tracking	Users should be able to see real-time updates to the status .of their order		
8	User Profile Management	Users should be able to update .their profile information		

References/ Sources:

- **HungerStation app**
- **HungerStation official website**

For more information and details :
https://drive.google.com/file/d/13ATDY0VvbrSF2AoGqPEoapkJjpvdTLxg/view?usp=drivesdk
https://drive.google.com/file/d/1IQHXPBXN-_810CYA5S71j7tu0IcwEKJ/view?usp=drivesdk
https://drive.google.com/file/d/14AfDIRlIFZ3xR6d9UWbI3jrQsopcdrQh/view?usp=drivesdk
https://drive.google.com/file/d/1qz7qIq0RGOFvziUoPJc8QB3dW2vNjxEN/view?usp=drivesdk

User Manual

Table of Contents

Introduction

System Name: HungerStation (HS)
Version: 2.1 (Release 2024.1)

Purpose:
This User Manual provides instructions for using the HungerStation app for food and grocery orders.

Scope:
It covers browsing menus, placing orders, tracking deliveries, and finding dietary options, based on user feedback.

Audience:
Targeted at customers, restaurant partners, and delivery staff.

Evolution:
The manual will be regularly updated with new features and user feedback.

Security:
Users are advised to protect their personal information, with tips on account security and an overview of privacy policies.

Overview

HungerStation is a web-based and mobile app designed for food delivery services, allowing customers to easily order meals from various restaurants and have them delivered to their doorstep. The purpose of the app is to provide a simple and convenient way for users to access a wide range of dining options and other services, such as grocery deliveries and pharmacies.

Key Features:

- **Home Page: Displays restaurant suggestions and categories, with a search bar for finding specific restaurants.**
- **Healthy Food Category: Shows restaurants offering healthy meals and diet-friendly options, such as keto.**
- **Orders Tracking: Users can view and track their current and past orders.**
- **Offers Page: Lists available discounts and promotions from restaurants.**
- **Wallet Service: Allows users to save payment information for easy checkout and refunds.**
- **Customer Service and Settings: Provides access to customer support and app settings (e.g., language, notifications).**

Architecture:

HungerStation is a web-based and mobile application that operates on a client-server model, where the user interacts with the app on their device, and requests are sent to a server for processing and delivering content.

User Access Mode:

The app has a graphical user interface (GUI), making it easy to use with touch or click-based navigation.

System Environment:

HungerStation runs on Android and iOS devices for mobile use, and is also accessible via web browsers for desktop users. The app requires an internet connection for accessing restaurant listings, placing orders, and tracking deliveries.

2. Getting Started

This section provides a step-by-step guide on how to navigate through the HungerStation app, from system initiation to exit. Each screen and action is explained in a logical flow, helping users understand how to use the system effectively.

2.1 Cautions & Warnings

Before using HungerStation, please be aware of the following cautions and warnings:

1- Unauthorized Access: Users must log in using valid credentials (username and password). Any attempt to access without proper authorization will be denied, and repeated unauthorized access may result in account suspension.

2- Penalties for Misuse: Sharing personal login information with unauthorized individuals may result in penalties, including loss of access to the system and account deactivation.

3- Data Privacy: Be cautious when sharing sensitive information. HungerStation ensures encryption of personal data, but users must avoid posting sensitive details like passwords or personal information in public reviews or feedback sections.

4- Electronic Payment Waiver:If you're making payments electronically (e.g., using credit cards), ensure your device is connected to a secure network. Unauthorized payments or any misuse may lead to account investigation. Users can request a waiver for dispute settlements through our support team by submitting a formal request online.

2.2Set-up Considerations

.1 -Device Requirements:*

- ***Smartphone/Tablet:* The HungerStation app is available on both iOS (version 10 and above) and Android (version 5.0 and above) devices.**
- ***Internet Connection:* The app requires a stable Wi-Fi connection or mobile data (3G, 4G, 5G) to place orders and track deliveries in real-time.**

2 -System Installation:*

- ***Download:* Users can download the HungerStation app via the App Store for iOS devices or Google Play Store for Android devices.**
- ***Permissions:* Once downloaded, allow the app to access location services (for tracking deliveries) and notifications (for updates and offers).**

3 -User Interface Setup:*

- ***Login Screen:* When launching the app for the first time, you will be prompted to create an account or log in. Provide a valid email address, username, and password. Ensure that you use a strong password to protect your account.**
- ***Home Screen:* Once logged in, the app's home screen shows the categories: "Restaurants," "Groceries," and "Dietary Options." Users can navigate easily using the menu at the bottom of the screen for quick access.**

4 -Notifications and Alerts:
• *Push Notifications:* Users can enable notifications to get real-time updates about order status, promotions, and special offers. Ensure that notification settings are enabled on your device under app permissions.

2.3 User Access Considerations

HungerStation has several user groups with specific access rights and restrictions:

1. General Users
- Access Rights: Browse menus, place orders, track orders, leave reviews.
- Restrictions: No access to administrative features or other users' data.

2. Registered Users
- Access Rights: All general user rights, plus saved favorites and order history.
- Restrictions: Same as general users.

3. Restaurant Partners
- Access Rights: Manage own profiles and menus, view performance analytics.
- Restrictions: Cannot access other restaurants' data or customer information.

4. Delivery Personnel
- Access Rights: View assigned orders and update status.
- Restrictions: No access to payment information or restaurant management.

5. Administrators
- Access Rights: Full access to system features, including user and restaurant management.
- Restrictions: Must comply with data protection policies and are monitored for compliance.

2.4 Accessing the System

To access HungerStation, users must follow specific procedures based on their user group. Below are the steps for obtaining a user ID, logging in, and managing passwords.

1. Creating a User
AccountProcedure:
*** Download the HungerStation app from the App Store or Google Play.**
*** Open the app and select “Sign Up.”**
*** Enter required information (name, email, phone number) and create a password. * Verify the email or phone number via a confirmation link or code sent by the app**

2. Logging In * Procedure:

*** Open the HungerStation app.**
*** Select "Log In."**
*** Enter your registered email/phone number and password.**
*** Click "Log In" to access your account.**

3. Changing or Resetting a Password * Changing Password:

*** Log in to your account. * Navigate to "Account Settings."**
*** Select "Change Password."**
*** Enter your current password and the new password, then confirm the new password. * Save changes.**
*** Resetting Password:**
*** On the login screen, select "Forgot Password?" * Enter your registered email/phone number and submit.**
*** Check your email or SMS for a password reset link or code. * Follow the link or enter the code to set a new password.**

4. User ID Retrieval

*** If you forget your user ID (usually the registered email or phone number), you can:**
*** Visit the login screen and select "Forgot User ID?"**
*** Enter your registered email/phone number to receive a reminder.**

2.5 System Organization & Navigation

HungerStation is designed for intuitive navigation, providing easy access to its main features. Below is an overview of the system organization and navigation paths.

1. Home Page

The home page is the central hub, featuring a search bar for quick item or restaurant searches, along with sections for featured restaurants and popular items.

2. Menu Browsing Navigation Path:

Use the search bar for specific searches or browse categories (e.g., cuisines, groceries) on the home page.
Features:
Filter by dietary preferences (e.g., vegan, gluten-free).
Sort results by popularity, ratings, or delivery time.

3. Placing an Order Navigation Path:

Select an item to view details, choose quantities/customizations, and click "Add to Cart." Checkout Process:
Access the cart from the home page or cart icon.
Review items, apply discounts, and proceed to checkout.
Enter delivery and payment information to finalize the order.

4. Order Tracking Navigation
Path:
Access from the home page or user account menu.
Features:
View order status (e.g., being prepared, out for delivery).
Receive real-time updates and estimated delivery times.

5. User Account Management
Navigation Path:
Access via the profile icon on the home page.
Features:
Edit personal information, payment methods, and notification settings. View order history and saved favorites.

6. Ratings and Reviews
Navigation Path:
Prompted after order completion or accessed from order history.
Features:
Rate food quality and delivery service. Leave feedback for future users.

2.6 Exiting the System

To properly exit the Hunger Station app, follow these steps:

1. **Finish Your Order: If you have any ongoing orders, make sure to complete them or cancel them if necessary.**

2. **Navigate to the Home Screen: Tap on the home icon or back button to return to the main screen of the app.**

3. **Access the Menu: Look for the menu icon, usually represented by three horizontal lines or dots, and tap on it.**

4. **Find the Logout Option: Scroll through the menu until you find the "Logout" option.**

5. **Confirm Logout: Tap on "Logout" and confirm your choice if prompted. This ensures that you are securely logged out of your account.**

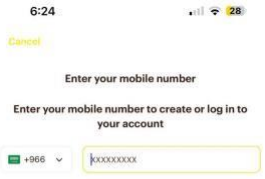
6. **Close the App: After logging out, you can close the app by swiping it away from your recent apps or pressing the home button.**

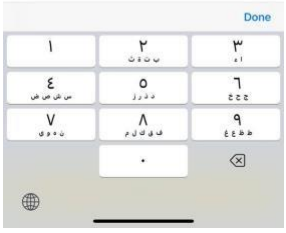
Following these steps will ensure that you exit the Hunger Station app properly.

3. Using the System

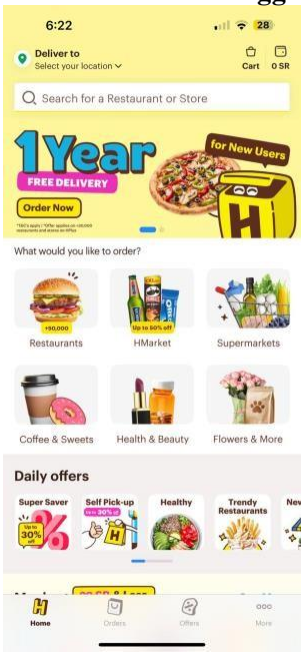
HungerStation is an app for delivering orders from restaurants to customers in an easy and fast way.

Login:
Enter your phone number and add your personal information later, such as your home location, to make ordering, contacting the driver, and receiving and rating the order easier.

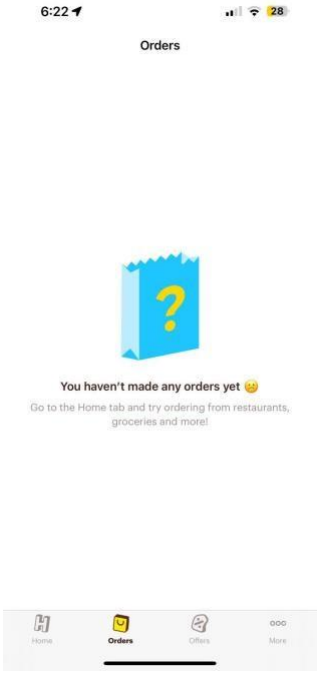




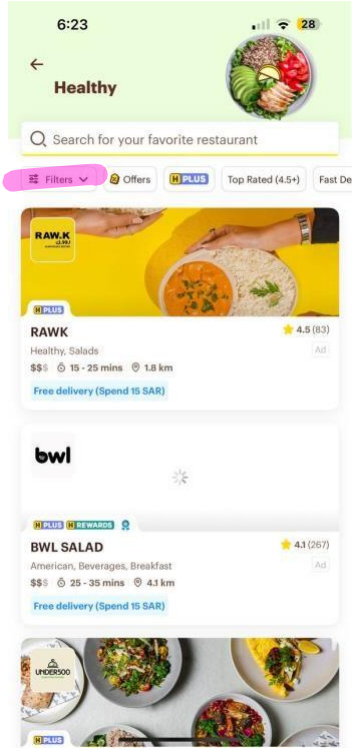
Home Page:
Shows restaurant suggestions, categories, and also a search bar to look for a specific restaurant.



Orders Page:
Displays all previous orders and allows tracking of new orders.

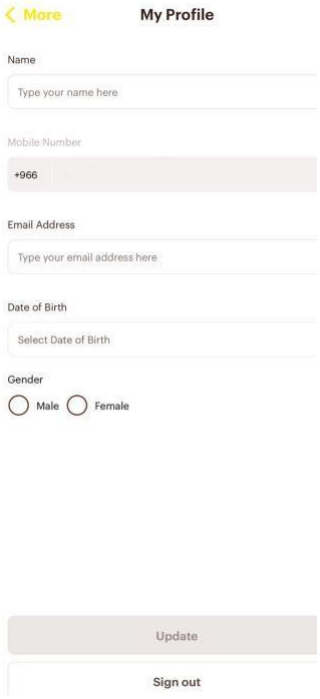


Healthy Food Section (Our New Feature):
Within the categories like restaurants, desserts and coffee, pharmacies, and supermarkets, there will be a section for healthy food. This section will show all restaurants that offer healthy meals or meals suitable for specific diets, such as keto.

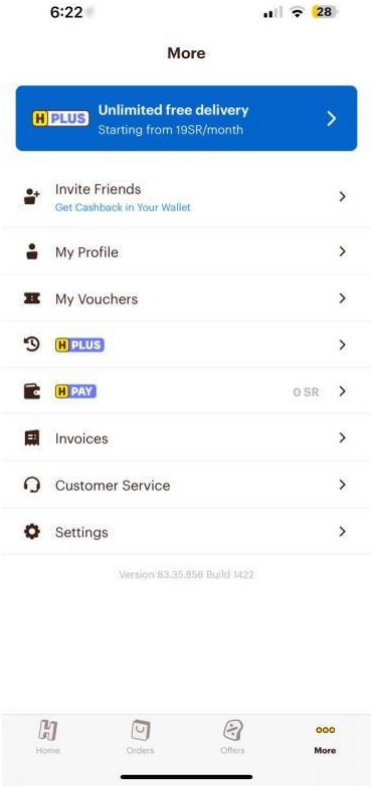


More:

- **Profile: Allows you to edit personal information.**

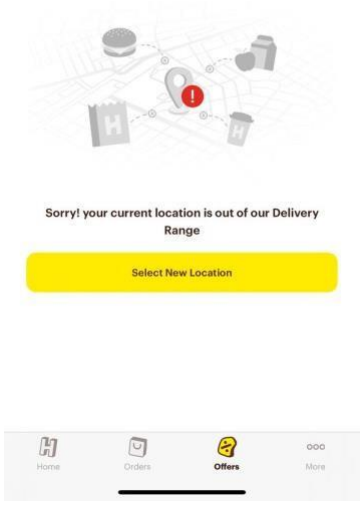


- **Invite Friends: Share the app with friends.**
- **Customer Service: Contact customer service in case of any error or issue.**



• Settings: Change language, notifications, or delete the account.

• offers



3.1

The healthy food category is our new feature. It includes all the restaurants that offer meals suitable for the keto diet, those following a specific diet, or people who prefer healthy food.

This feature shows all the restaurants providing this service, allowing users to browse, choose, and order easily.

3.1.1

Offers Page:
Shows discounts and offers from restaurants, but requires logging in.

Wallet Service (found under More):
Allows you to save your card in the app to make payment easier and to process refunds.

HungerStation Plus Services (found under More):
Displays the prices of Plus subscriptions and the special services included, as well as any discounts available for subscribing through certain banks or ongoing subscription offers.

Appendix A: Glossary

Term	Acronym	Definition
1. Cart	Customer's Active Request Tool	A virtual space where users can review and manage items they intend to purchase before finalizing their order.
2. Delivery	Direct Express Logistics for Immediate Value and Efficient Routing for You	The process of transporting food or items from a restaurant or store to the customer's specified location.
3. Menu	Meal Essentials and Nutritional Units	A list of food and beverage items available for order from a restaurant or service within the app.
4.Order Confirmation	Order Confirmation	A notification or message indicating that a user's order has been successfully placed and is being processed.
5. Payment Method	Payment Authorization Yield	The method used by the user to pay for their order, such as credit card, debit card, or digital wallet.
6. Promo Code	Promotional Reward Offer for Maximum Outreach	A code that users can enter to receive discounts or special offers on their orders.
7. Restaurant	Reliable Eats and Service Team	An establishment that prepares and serves food and drinks to customers, which can be ordered through the app.
8. Tracking	Timely Response and Accurate Courier Knowledge	The process of monitoring the status and location of an order in real-time until it is delivered.

Appendix B: Referenced Documents

Document Name	Document Location and/or URL	Issuance Date
<Persona UserStory(1)>	https://drive.google.com/file/d/13ATDY0VvbrSF2AoGqPEoapkJjpvdTLxg/view?usp=drivesdk	<07/09/2024>
<QAD1>	https://drive.google.com/file/d/1IQHXPBXN-_810CYA5S71j7tu0IcwEKJ	<12/09/2024
<SRS1>	https://drive.google.com/file/d/1qz7qIq0RGOFvziUoPJc8QB3dW2vNjxEN/view?usp=drivesdk	<06/09/2024>
<SDD1>	https://drive.google.com/file/d/14AfDIRIIFZ3xR6d9UWbI3jrQsopcdrQh/view?usp=drivesdk	<10/09/2024>

Table 2 - Referenced Documents