

Documentation of Software and Technical Writing

HUNGER STATION

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Introduction

The Kingdom of Saudi Arabia has emerged as one of the leading countries witnessing significant growth in the e-commerce sector across the Arab world. This growth is largely attributed to the Kingdom's efforts to bolster commercial activities and deliver exceptional services to entrepreneurs and emerging companies. Its role transcends mere facilitation; it is distinguished by launching platforms aimed at developing online stores and enhancing digital marketing.

The increasing demand for online shopping has led to a widespread proliferation of delivery applications throughout the Kingdom, reaching most cities and regions. This trend reflects the growing reliance of individuals on the Internet to fulfill their daily needs. Such applications not only save users time and effort but also offer attractive prices, promotional deals, and a diverse range of products to meet consumer needs effectively.

Among these applications, HungerStation stands out as one of the most popular delivery platforms in the Middle East, operating in both the Kingdom of Saudi Arabia and Bahrain. The app primarily showcases food products and various goods offered by merchants, allowing customers to order these items from available stores within the application. Subsequently, a dedicated delivery team is responsible for delivering the ordered products to the customer.

Customers have the capability to track their orders and communicate with delivery personnel. They can also modify or cancel orders and specify their preferred delivery times, among other functionalities.

Chapter 1

Introduction

To effectively understand the program to be described and implemented, it is essential to define both functional and non-functional requirements. Functional requirements play a crucial role in analyzing and identifying the necessary functions, while non-functional requirements are instrumental in ensuring a satisfactory user experience. Furthermore, the tasks associated with the application are pivotal in highlighting its distinguishing features compared to other applications.

HungerStation App Requirements

Functional Requirements

- **Login:** Users must be able to register, log in, and log out of the application.
- **Communication:** The system must provide a page for users to communicate with restaurants or delivery representatives.
- **Search Function:** Users should be able to search for specific data or items.
- **Notifications:** The system must send alerts or notifications to users.
- **Evaluation:** A page should be available for users to evaluate the restaurant, the delivery representative, and the application itself.

Non-functional Requirements

- **Performance:** The system should accommodate numerous users simultaneously.
- **Security:** Implementation of data encryption and secure access protocols is necessary.
- **Ease of Use:** The interface must be intuitive and easy for all users to navigate.
- **Reliability:** The system must maintain an uptime of at least 99.9% over the course of a year.

HungerStation App Tasks

- **Location:** Users can enter their delivery address or multiple addresses.
- **Payment:** Multiple payment options should be available (credit card, cash, Tabby, Tamara).
- **Order Tracking:** Users should be able to track the status of their orders.
- **Technical Support:** A contact method to reach customer service for problem resolution should be provided.
- **Account Management:** Users must have the ability to update their personal information and payment methods.

Conclusion

The requirements for the HungerStation application include fundamental functions such as logging in, communicating with restaurants, searching for items, and sending notifications. Additionally, users should have the ability to rate the services provided. On the non-functional side, the application must demonstrate high performance, robust security measures, ease of use, and reliability.

Chapter 2

Introduction

To assess the advantages and disadvantages of delivery applications and gather users' perspectives, we must analyze their responses to identify existing issues and propose effective solutions. Enhancing delivery applications contributes significantly to addressing the challenges of accessing services and purchasing food items. It facilitates and organizes communication between delivery personnel and customers, enabling users to place orders from the comfort of their homes or workplaces and receive their orders punctually without the need to visit physical locations.

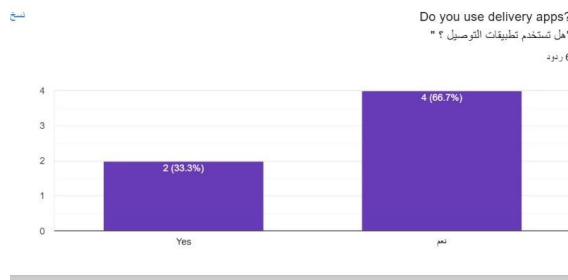
Purpose of the App

The application aims to alleviate the difficulties associated with accessing services and purchasing food supplies by enhancing and organizing communication between delivery personnel and customers. It also addresses payment method challenges and traffic congestion, allowing users to order from home or work and receive deliveries at scheduled times, minimizing the need for physical purchases. Users can now order a variety of items and request delivery from any location.

Survey on the Need for Delivery Apps

A survey was conducted to gather opinions regarding the necessity, importance, and potential improvements of delivery applications. The following questions were posed to a sample of respondents:

1. Do you use delivery apps?



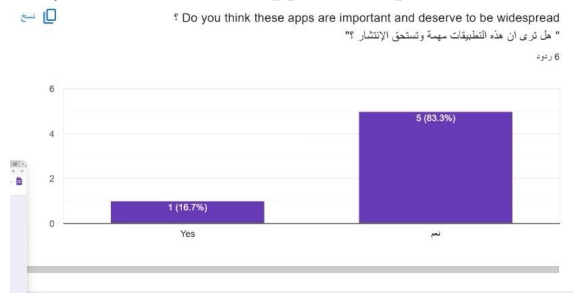
2. What are the advantages of using delivery apps?



3. In your opinion, what is the appropriate duration for an order to arrive?



4. Do you believe these apps are important and deserve to be widespread?



5. If given the opportunity, what features would you add to these apps?

إذا حصلت لك فرصة ، ماذا ستضيف لهذه التطبيقات ؟

6 ردود

وضع أسعار توصيل تناسب مع جميع شرائح المجتمع ، إضافة تحسينات في الجودة أثناء التوصيل ، تحديد وسائل نقل خاصة بحالة الحرارة أو شدة حسب الحاجة
حافظات طعام كي يصل الأكل ساخن أو بارد
تخفيض أسعار التوصيل ، عرض تطبيقات المستخدمين
-
توصيل الطلب خلال 30 دقيقة كحد أقصى، اختيار وقت التوصيل المناسب بالنسبة لي
توصيل اسرع وربط لكل المحلات والاسكان في تطبيق واحد

6. Do you think these apps have had an impact on society? If so, in what ways?

Do you think these apps have had an impact on society? If so, how was this impact

"أرايكم هل هذه التطبيقات كان لها تأثير على المجتمع ؟ وكيف كان هذا التأثير."

6 ردود

نعم ، كانت نظرة نوعية كبيرة وتطور شهدنا اثره واستفاد منها المجتمع بشكل كبير خاصة في جائحة كورونا ، أثبتت فاعليتها وأهميتها في ذلك الوقت
تأثير ايجابي من ناحية توفير الوقت وتقليل الازحام
نعم، تأثير ايجابي لتوفير احتياجي اذا لم اتسكن من القيام بهض
.Yes, positive impact
نعم تأثير كبير للأشخاص الذي ليس لديهم القدرة على الذهاب الى هذا المكان او بعد هذا المكان منهم
نعم سهلت الحياة

7. What are the disadvantages and challenges of using delivery apps?

What are the disadvantages and problems of using delivery apps?

"ما هي العيوب والمشاكل الموجودة في تطبيقات التوصيل من وجهة نظرك؟"

6 ردود

ارتفاع الأسعار بشكل مبالغ فيه في بعض التطبيقات
التوصيل مرات لا يكون سريع والأكل يوصل بارد
ارتفاع الأسعار
No communication with the driver
وصول الطلب خطأ
زيادة التكلفة

The survey results indicated that 100% of respondents utilize delivery applications. They noted benefits such as saving time and effort, creating additional job opportunities, tracking orders, providing multiple payment options like Apple Pay, facilitating delivery to remote areas, reducing waiting times, and ensuring quick delivery. Conversely, they pointed out disadvantages, including high prices, occasional delays, receiving cold or poor-quality food, and increased costs. Supporters of delivery apps believe they deserve wider acceptance than those who express reservations.

The ideal delivery time was suggested to be around 30 minutes, with a minimum of 20 minutes. Suggestions for improvement included establishing delivery fees that align with community standards, enhancing delivery quality, using appropriate food containers to maintain food integrity, displaying user reviews, ensuring delivery within a maximum of 30 minutes, accommodating individuals' preferred delivery times, and consolidating all stores and locations within a single app. Respondents also highlighted that these apps significantly impacted society during the COVID-19 pandemic by saving time and reducing congestion.

Several challenges currently persist in delivery applications:

- **Delayed Deliveries:** A possible solution is to establish reasonable delivery times based on distance.
- **High Prices:** Introducing a monthly subscription model for a nominal fee, allowing unlimited requests, could mitigate this issue.
- **Incorrect or Incomplete Orders:** Implementing a chat feature that connects customers with restaurants or supermarkets before finalizing orders would ensure product availability.

Similar Applications

Several applications are similar to the one discussed, such as Jahez, Mr. Mandoob, and Mrsool:

- **Jahez:** Offers a user-friendly interface; provides multiple restaurant choices; supports large orders.
Disadvantages: Prices may be higher; delays in order delivery can occur.
- **Mr. Mandoob:** Focuses on fast delivery; presents a variety of store options.
Disadvantages: Limited restaurant choices; fewer payment methods.
- **Mrsool:** Allows users to order from any restaurant; offers delivery flexibility.
Disadvantages: Delivery times can vary; higher delivery fees may apply.

Conclusion

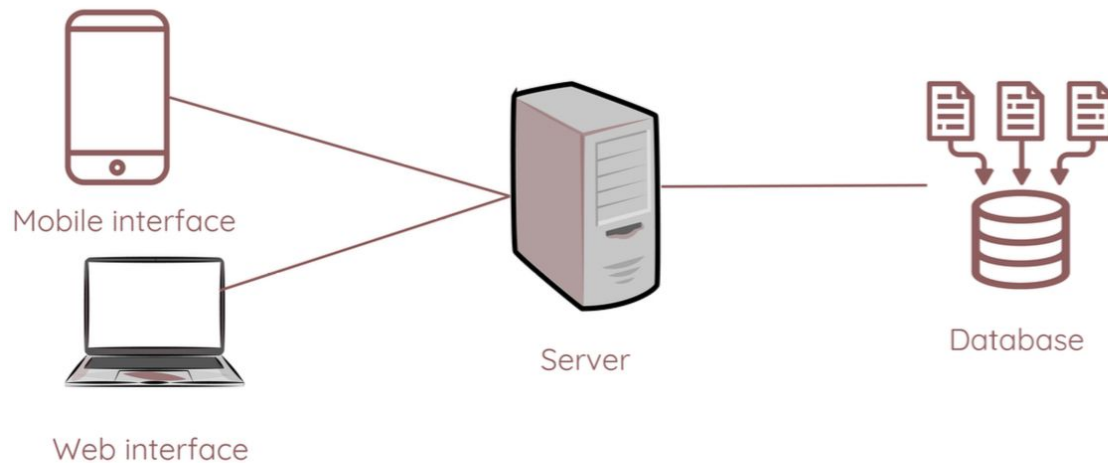
In conclusion, delivery applications represent a transformative technological advancement that significantly impacts the daily lives of individuals. While users have expressed positive views regarding their advantages, they also identified various challenges that need to be addressed. Solutions to these challenges include reducing delivery times and establishing competitive fees, thereby enhancing the user experience. Addressing these challenges will also increase the demand for delivery applications.

Chapter 3

Application Design

In this chapter, we will discuss the design of the application, including its architecture, data model, and technical specifications that ensure its efficiency and security.

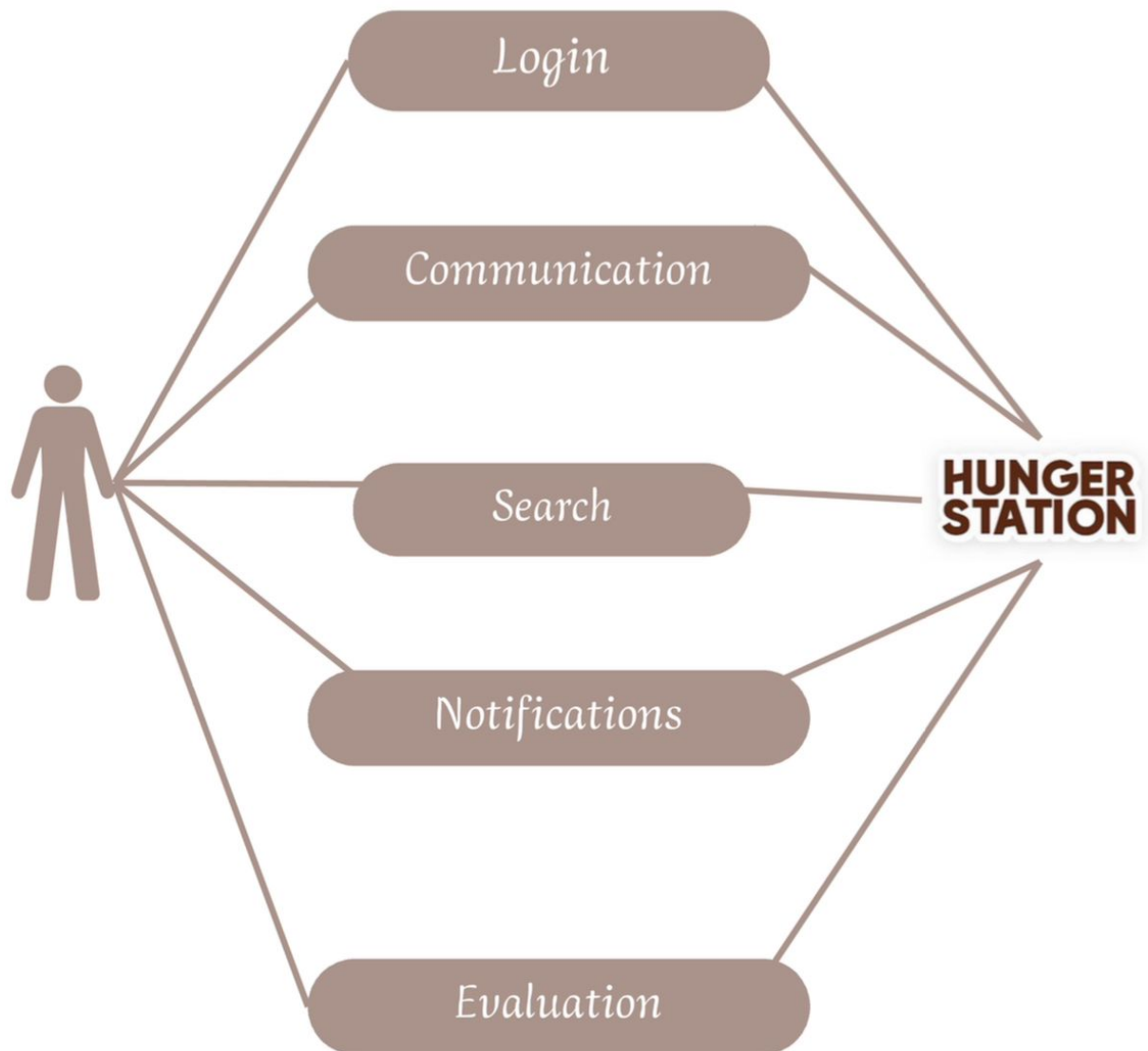
3.1 System Architecture The architecture of the HungerStation application consists of several components that facilitate user interaction and data processing.



- **Mobile Interface:** Users interact with the application via mobile devices, providing an intuitive user experience.
- **Web Interface:** Users can also access the application through a web portal, offering flexibility in how services are consumed.
- **Server:** Both interfaces connect to a centralized server that manages data requests and responses.
- **Database:** The server communicates with a database that stores user information, orders, and other essential data.

3.2 Data Model data model outlines the structure of data within the application and how different entities interact with each other. Key components include:

App system



- **User Accounts:** Information regarding users, including personal details and order history.
- **Orders:** Data related to customer orders, including order status and delivery information.
- **Products:** Details about available products and their descriptions.

3.3 Technical Specifications The following technical specifications outline the requirements and technologies used in the development of the application:

Efficiency and Performance:

- **RAM:** Minimum 2GB, preferably 4GB.
- **Database:** Capacity of 5 to 10GB with expandability.

Technologies Used:

- **Operating Systems:** The application is available on Android and iOS.
- **Application Development:**
 - **iOS:** Developed using Swift.
 - **Android:** Developed using Kotlin/Java.
 - **Backend:** Implemented in Python.
 - **Front-Back Interface:** Utilizes GraphQL for communication between the client and server.

Security:

- **Authentication:** Integrated with Nafath for secure user authentication.
- **Session Management:** Utilizes JWT for managing user sessions securely.
- **Data Encryption:** Implements end-to-end encryption to protect sensitive information.

Additional Features:

- **Notification System:** Alerts users regarding their orders and promotions.
- **Live Chat for Technical Support:** Allows users to communicate with support via WebSocket.

Version Control

Version control is crucial in managing changes to the application, ensuring that updates are tracked and collaborative development is streamlined. We utilize Git as our version control system to manage the codebase effectively.

References

- Hunger Station. (2024). About Us. Retrieved from <https://hungerstation.com/>
- Al-Muqbel, H. (2024). *E-commerce in Saudi Arabia: A Bright Future*. Journal of Business and Management, 11(2), 45-67.
- Saudi Arabian General Investment Authority (SAGIA). (2024). *E-commerce Growth in the Kingdom*. Retrieved from <https://www.sagia.gov.sa/>

3.4 Appendices

3.4.1 Version Control The project code is shared via GitHub, which allows us to document the work steps and write comments, you can access it through the link below

3.4.2 Style Guide This document has been prepared following the Google Style Guide for technical writing to ensure clarity and consistency.