Android Mobile Application on Poultry Marketing

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Abstract:- Nowadays, poultry farmers are facing a lot of problems with selling their poultry products to customers. Between the customers and farmers, there are some kinds of mediators, who buy chicken from farmers and distribute it to chicken shops. These mediators are buying chicken less than the actual market price from farmers, which results in a loss for the farmers. This mobile application allows customers to directly contact the farmers and purchase the chicken at the actual price, so that both the farmers and customers can benefit from this application. Direct marketing allows the farmers to get a reasonable profit, and the customers to get fresh chicken at a liable price. We are in the process of including possible different products from farmers in this app.

Keywords:- Poultry Farmer, Consumer, Mobile Application, Direct Marketing.

I. INTRODUCTION

With the emergence of the 21st century, usage of mobiles has been increased. Previously, to buy a poultry product customer would visit a butcher shop. This method consumes more time and physical effort.

Mobile phones are playing a major role in our day-to-day life. According to the survey, the usage of mobile phones has raised from 12% of the world population in 2000 to 96% in recent times [1]. Mobile phones made our lives lead in a simple and easier way. We can meet our daily requirements by ordering on mobile apps and getting them delivered to our doorstep. No need of stepping outside to shop physically. Everything is made online and made it possible to lead a smart life. Technology is improving more and more we have to get habituated to it and make complete use of technology.

But using a mobile application customers can order their required product online and the product will be delivered on time. In general farmers sell their products at a lower cost than the original market price. This is due to the mediators present in between them. If the farmers are able to sell their products directly to the customer, then they can sell their products at a reasonable price and customers can buy the products at a lower price. In this era, the development of mobile applications became very accessible. This problem can be solved using the development of a mobile application.

Direct Marketing is a process in which a direct connection is established between a merchant and a customer. Our mobile application is influenced by direct marketing and the problems of the farmers. This application acts as a bridge between the farmer and the customer through which they can communicate directly with each other and helps the customer to buy the products directly from the farmer. It helps the farmer gain a reasonable profit and customers get fresh products at a lower price.

In recent times, we faced a lot of challenges and difficulties due to the covid-19 pandemic, which made our lives bound to our homes. In these times physical shopping is not very preferable and online shopping makes it way much easier to buy the products without setting a foot out of our homes. Under the current circumstances, online marketing has become essential and demands several requirements to sell and buy the products. So we came up with the solution of developing a mobile application considering all the circumstances mentioned above. Here, customers can buy the poultry products from a nearby poultry farm by using our application online and get the products in a specific allotted time.

A. SOFTWARE REQUIREMENTS
The Software Requirements are
- Android Studio Software
- Firebase database

B. HARDWARE REQUIREMENTS
The hardware requirements are
- Windows 10 or higher Working Operating System
- 64-bit CPU with processor intel i3 or more
- 4 GB RAM or more

C. MOTIVATION
Many farmers are giving up on poultry because they are not getting enough revenue. One of the reasons is the mediator's involvement. If we are able to reduce mediator involvement by connecting farmers and customers through a mobile application, then farmers will get decent revenue and customers will get the product at an affordable price. This will further strengthen the poultry industry.

D. PROBLEM STATEMENT
To design a mobile application for poultry farmers to connect with customers directly and sell their products without any intermediary.

E. SCOPE
The scope of the project is that it provides delivery on selected poultry products and is barely made for Android devices.

F. OBJECTIVES
The main Objectives of this project are:
- To supply a bridge of communication between farmers and customers across the country.
- Connecting Farmer to the Customer via a mobile application.

G. ADVANTAGES

The advantages of this project are:
- This helps the farmer to sell his products at a higher cost than his original market price.
- It also helps the consumer to buy the fresh products and at a cheap cost.
- User friendly App

H. APPLICATIONS
- Used by Farmers to sell their poultry products
- Used by the common people to buy the poultry products at cheap cost

I. ORGANIZATION

This paper is arranged as follows: Section 2 describes literature surveys. Section 3 describes the proposed framework. And the Section 4 describes about the Results and analysis.

II. LITERATURE SURVEY

Nicolas Serrano, Josune Herantes, and Gorka Gallardo proposed a case study on Mobile Web Apps[1]. The overview is There are various kinds of mobile web apps. Each one has its advantages and limitations. This article describes decision-making for selecting a mobile web app .It tells about which kind of application a developer should develop based on the features and type of service he wants to provide and what a customer should prefer based on his requirements. There are various kinds of applications such as standard web apps, Responsive web apps, Mobile web apps, Hybrid apps, Native apps. With the increased usage of mobile phones and limited features of web apps, most users are now preferring to use mobile apps. These can be downloaded from respective app stores such as the google play store for android apps and the apple store for ios apps. These mobile apps are mainly divided into two types, such as hybrid or native apps.A hybrid app can run on different operating systems with a single code base like an app developed on flutter, while a native app can't run with the same codebase on different operating systems. It will have a unique codebase for each operating system. Our mobile application is also a native app. It only works on Android devices.

Fethi BOUDARHI and Zaki SARI proposed case study on renovation of a delivery network of various poultry products from slaughterhouses to retailers in the city of Tlemcen(Algeria)[2]. The overview is It tells about the process of delivering the products to customers with less expense. By delivering meat products to customers from the nearest slaughterhouses, heavy transportation costs can be reduced. At the same time, the customer can get the product quickly. Here the customer's location is not useful simply for delivering a product but to deliver it in less time possible.Agri-food supply chain is the term used for the distribution of food products from farmer to consumer. It includes perishable and non-perishable agri-foods. Fresh agri-foods including meat, milk, fruits, vegetables, etc. are perishable. Non - perishable foods are grains, potatoes, nuts, etc. Fresh agri-foods can be damaged within a few weeks. Therefore, it is more important and difficult to supply these products freshly to customers. The concern for food safety

and quality is rising among people nowadays. Hence, the direct marketing of food products from farmers to consumers is increasing day by day.

Tiahong Zhao, Wei Tu, Zhixinag Fang, Zhengdong Huang, Shengwu Xiong proposed a system on Optimizing Living Material Delivery During the COVID-19 Outbreak[3]. The overview is the coronavirus disease 2019 (COVID-19) epidemic has spread worldwide, posing a great threat to human beings. The stay-home quarantine is an effective way to reduce physical contacts and the associated COVID-19 transmission risk, which requires the support of efficient living materials (such as meats, vegetables, grain, and oil) delivery.Notably, the presence of potential infected individuals increases the COVID-19 trans1mission risk during the delivery. The deliveryman may be the medium through which the virus spreads among urban residents. However, traditional delivery route optimization methods don't take the virus transmission risk into account.A complex network-based virus transmission model is developed to simulate the possible COVID-19 infection between urban residents and the deliverymen.

N. Tahraoui, L. Triqui Sari, M. Bennekrouf proposed a system on planning and synchronization of broiler production in a delivery network[1]. The overview is The poultry industry faces a lot of challenges to survive. Some of the high costs of vaccines or medicines for birds, disease outbreaks, and hot climates. These are the things that mostly affect poultry production. As the rising need for poultry products is increasing, therefore, it is also necessary to increase production.[4] analyses the production of chicken in a poultry supply chain. It provides strategies and decision-making to manage the fluctuating poultry market needs. The study focussed on a slaughterhouseinTlemcen.The objective of the study was to propose a breeding schedule while minimizing the cost of production.

Mamata Sharma and Dr, Navneet Sharma proposed a system for E-Commerce Application Service on to the public cloud Environment[5]. The overview is Recently, the demand for cloud computing increases rapidly due to its multiple benefits to the customers like scalability, efficiency, user friendly, 24x7 availability, and so on. Cloud becomes very popular due to its salient features which can incorporate various domains such as the Internet of Things (IoT), Big Data, Machine Learning for creating easy and flexible computation mechanisms. In E-commerce, whole types of transactions of services and goods are directed online. E-commerce is also known as Electronic commerce. When anyone demands any house product from amazon or when anyone buying the whole of our fashion accessories from Flipkart or even when anyone paying for our Netflix and Spotify payment each month is included in electronic commerce.

A. Ahmad et. al proposed an Empirical Study of Investigating Mobile Application Development Challenges[6].The overview of this study is it describes the challenges in developing different kinds of Mobile Applications. It followed two research approaches Systematic Literature Review (SLR) and interviews. There are several

common challenges found in various applications such asfragmentation, testing, change management, reuse of code, lack of tool support, lack of expertise, user experience, compatibility, and security. One of the reasons for the failure of mobile apps is the increasing number of platforms. Most of the time, people endorse mobile applications with a lack of understanding of the limitations they possess in the platform on which they run.This leads to overhype or unwanted expectations from users. So when users finally use the apps, they feel disappointed, leading to the failure of the application.

Qianying Ding and Zhuoqui Zhou proposed a case study on the Application of Interactive Marketing in E-commerce[8]. The overview of the study is that it shows the importance of interactive marketing. Many companies give unilateral coverage on their products without hearing about user advice or suggestions or complaints about their product. This causes the product not to be developed further. This issue has become a barrier to the development of enterprises. There are many advantages to E-Commerce interactive marketing. It is global, Bidirectional, Interactive, Mutually aiding, and increases Reciprocity. Businesses want their products to reach customers as much as possible. It only happens when they fully understand the customers. In Interactive marketing, one side is the enterprise and the other side is the customer. Interactive marketing helps both sides making it a win-win marketing strategy.

III. PROPOSED SYSTEM

This section describes the architecture of the proposed system and methodology.
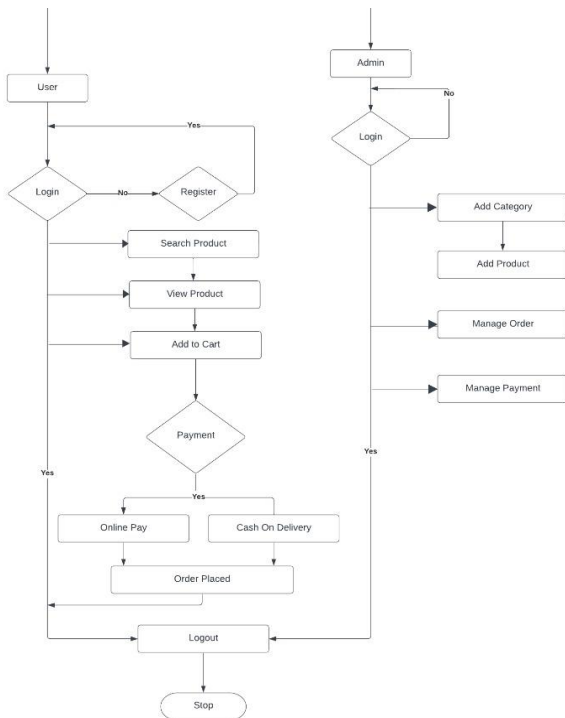
A. PROPOSED FLOW DIAGRAM

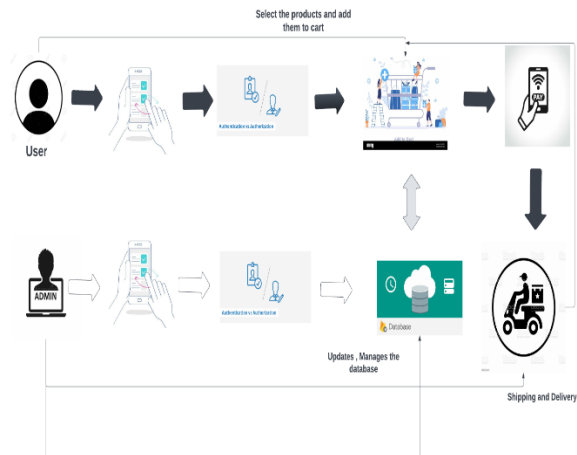Fig. 1: Proposed Flow Diagram

B. ARCHITECTURE DIAGRAM

Fig. 2: Architecture Diagram

IV. METHODOLOGY

A. Administrator Module:

The Admin module is a unique module that won't be visible to customers. There is no sign-up for the admin module. An admin is the one who adds the products and manages the products and payment services of the application. The admin module works at the backend of an application. The Admin will provide the shipping status and the other details to the customers.

- Algorithm
  - Import all the required packages.
  - Collect the data from the user and store it indatabase.
  - Validate the login credentials of the user.
  - Collect the order details from the user and store them in the database.
  - Collect all the required data from the user for the delivery of the product.
  - Validate the payment made by the user.
  - Stop

B. Customer Module:

The Customer module consists of customer login and if not login, the customer has to be registered before using this application. The Customer can search for the products that he wants and view the product details as shown in fig(3).For buying the products he has to add the products to the cart as shown in fig(4).Then the customer has to choose the payment process as cash-on-delivery or online payment and givthe e address location to receive their products.

This module has to perform the following steps.

- Algorithm
  - Import all the required packages
  - Add products available for marketing and store them in the database.
  - Collect the order details from the database.
  - Validate the received of the payment if online.
  - Prepare the order delivery and update the database.
  - Send the order confirmation to the customer.
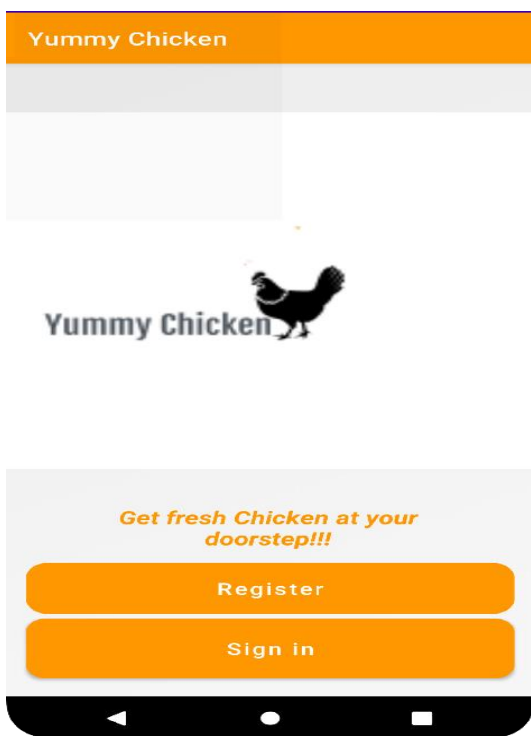
V. RESULTS AND ANALYSIS
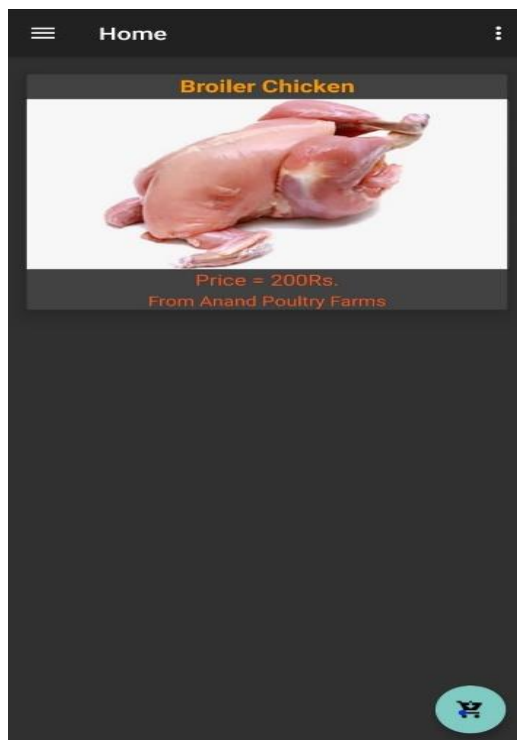

Fig. 3: UserRegistration Page
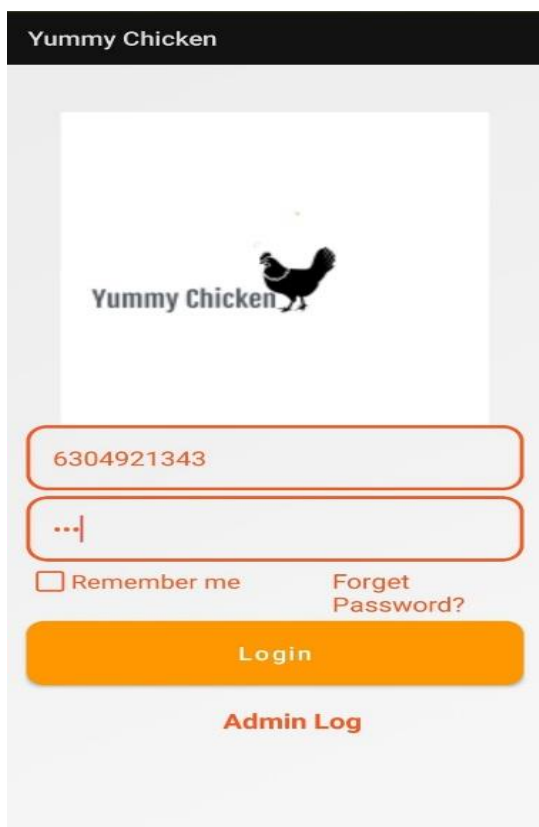

Fig. 5: User Home Page
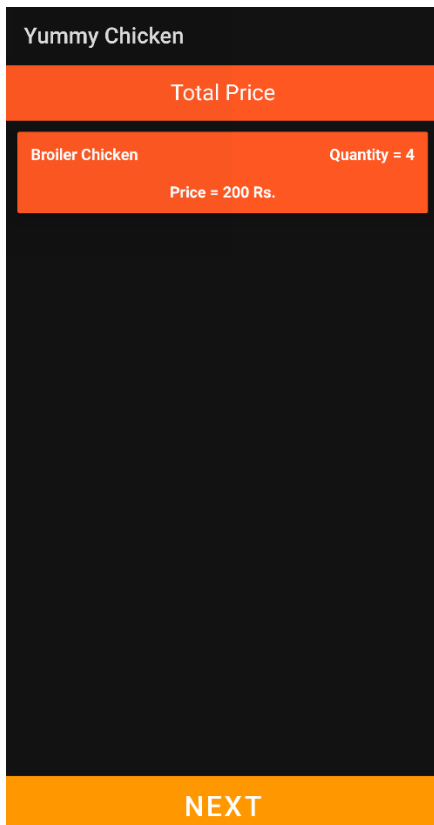

Fig 4: User Login Page

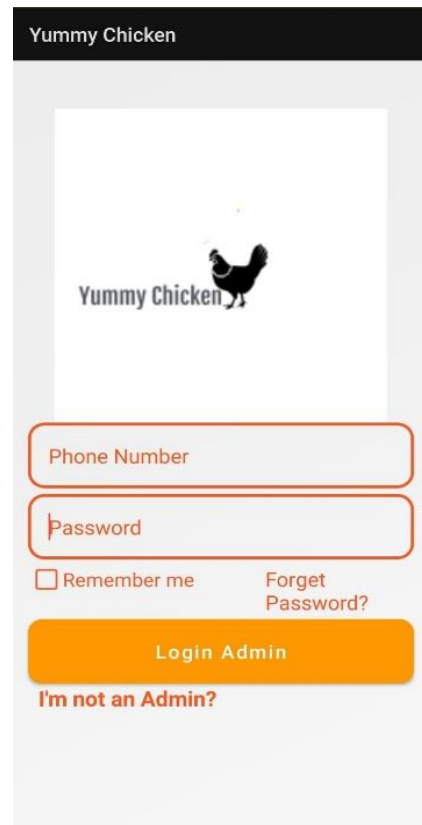Fig. 6: User Order Page

Fig. 7: User Cart Page

Fig 9: Admin Login Page
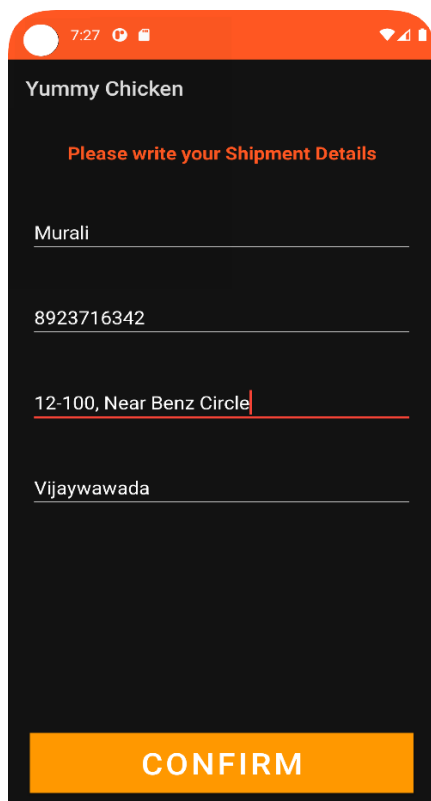
Fig. 8: User Shipping details page
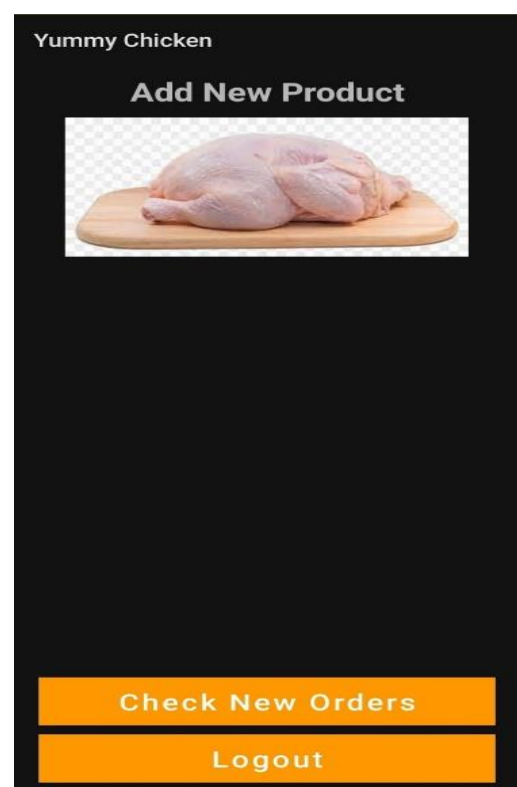
Fig 10: Product Page

Fig 11: Admin Check orders page

VI. CONCLUSION AND FUTURE WORK

In this project, we collected the order details from the customer and send them to the farmer through our mobile application. In this application, the payment system works on cash on delivery. In the admin panel, the farmer can view the products ordered by the customer and can prepare the order according to the requirements. Then the order will be shipped by the farmer and updated in the database. The customer will be notified about the shipment of the order.

Our future work is to apply for online payments in the payment system and add a location module in the application and we also try to improve the delivery options available to the customer.
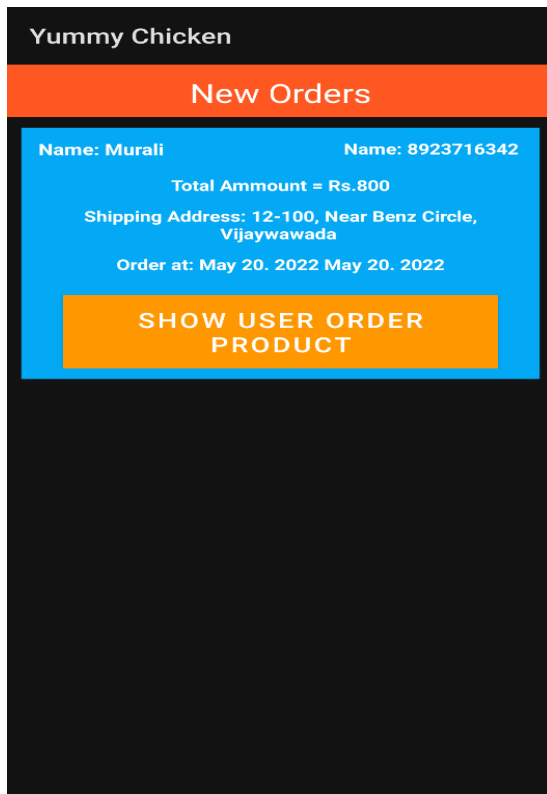
Fig 3 shows the customer registration page. This page allows the customers to create an account by using their mobile number and creating a password. Next time the customer uses this mobile number and password to login into the app.

Fig 4 shows the customer login page. This page allows the customers to login into an account by using their registered mobile number and password.

Fig 5 shows the Home page of the application. On the home page, the customer can search for the products they want to buy and view the product cost details. If the customer clicks on the product, it will display all information about that particular product.

Fig 6 shows the Order Page. On this page, customers can select and add the products to the cart.

Fig 7 shows the cart page. The cart consists of selected items that the customer wants to buy. It will display the total price and quantity of the product as shown in the figure.

Fig 8 shows the product shipping details page. On this page, the customer has to fill in their address details to receive their products.

Fig 9 shows Admin Login Page. There wiil be no registration for admin like customer.

Fig 10 shows product page, where admin can place new products.

Fig 11 shows order checking page. The Admin can confirm the orders or view the orders.

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