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ijircce@gmail.com



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Farey: The Genie

Krishna S¹, Sincy Mathew², Sajan S³, Vishnav S Rajan⁴, Joby Elsa Abraham⁵, Dr. Smita C Thomas⁶

U.G Student, Department of Computer Science and Engineering, Mount Zion College of Engineering, Kadamanitta, Pathanamthitta, Kerala, India^{1 2 3 4}

Assistant Professor, Department of Computer Science and Engineering, Mount Zion College of Engineering, Kadamanitta, Pathanamthitta, Kerala, India⁵

HOD, Department of Computer Science and Engineering, Mount Zion College of Engineering, Kadamanitta, Pathanamthitta, Kerala, India⁶

ABSTRACT: In the past few years, ordering food and products online in India has become really popular. Many delivery apps have popped up, giving people lots of options and making life easier. But with so many apps, it's hard to know which one offers the best prices and quickest delivery times. That's where "farey" comes in. It's an Android app that helps you compare prices and delivery times across different delivery apps in real-time.

To create farey, we used the latest technology. We built the front part of the app, what users see and interact with, using a tool called Android Studio. This made sure the app is easy to use. To get real-time data from different delivery apps, we used a tool called Selenium, which helps gather information from websites. This way, farey can always show you the most up-to-date info from different apps.

Behind the scenes, farey uses a flexible and scalable type of database called MongoDB to store and manage data efficiently. This helps the app quickly fetch the info you need when you're using it. We kept improving farey based on feedback from users. Their suggestions helped us make the app better and more useful. We tested farey to make sure it works well and is easy to use. It's been shown to handle lots of people using it at once and stays quick, even when lots of people are using it at the same time. People who tested it found the app's design and features helpful for comparing prices and delivery times.

KEYWORDS: Mental models, Participatory design methodology, Market research, Comparison system.

I. INTRODUCTION

The rapid growth of delivery apps in India has made it super convenient for people to get food and products delivered right to their doorstep. These apps offer a wide range of choices and make shopping a breeze. However, with so many options available, it's become a bit overwhelming for consumers to figure out which app offers the best deals and fastest delivery times. This becomes even trickier because prices and delivery times can vary a lot between different apps, even for the same item.

To tackle this challenge and give consumers more power to make informed decisions, the "farey" app was created. It's designed specifically for Android devices and acts as a one-stop solution for comparing prices and delivery times across multiple delivery platforms in real-time. Instead of hopping between different apps and websites to check prices, farey gathers all the necessary information and presents it in a user-friendly way, making it much easier for people to choose where to buy from.

Building farey involved using some advanced technologies. For example, Android Studio was used to create the part of the app that users interact with. This ensured that the app is easy to use and navigate. Selenium, another tool, was used for real-time web scraping, which means farey can constantly fetch the latest data from various sources in time. After lots of testing and tweaking, farey became a reliable and intuitive app, providing users with accurate and up-to-date information whenever they need it. The project report covers everything about farey, from why it was created to how it was developed and tested. It talks about the challenges in the delivery market, the technology used in building farey, and how the app helps users make smarter shopping choices.

II. RELATED WORK

Consumers are increasingly shopping and ordering online through apps or websites. This is because they like the simplicity and increased price transparency that makes price comparison easier. For all online products, users need to decide between various options. Users want to get the best deal with the least effort. Many options give the opportunity to compare places. With the rise of e-commerce sites, users can access the same product from more than one platform. Many online sellers offer different prices for the same product. Therefore, users should check various options to get the best offer. Comparison websites save users time while reducing the comparison workload. Those who use the comparison site save an average of 16% compared to those who do not use it. However, the results of these comparisons vary from region to region. For example, a comparison site in the travel industry could help users save more on bookings compared to other industries, such as the food industry. However, it is worth noting that there are important differences between the two services. Although people can order food every week, shopping trips are often a year-round attraction and GoIbibo compare different hotel or flight prices based on the user's location and time preferences. However, there are comparison services that can do this, such as CompareRaja , PriceDekho , and MySmartPrice. Another such example is Alpha: Cab Comparison , which compares prices of taxis like Ola and Uber. Since taxi prices change daily, prices are received instantly. However, it only provides users with the estimated price and not the actual price. website or application. In the United States, there is a food comparison site called FoodBoss that makes it easy to compare delivery prices and estimated times. Recently, a new competitor called MealMe emerged in 2020. Both apps make price comparison of food delivery easy; however, they may face some challenges in terms of usability and meeting customer needs. And this app only provides Uber takeaways. FoodBoss - they are all so hard. A web browser for most restaurant-related activities, including things like browsing menus. Navigating back and forth between browsers can be a pain. Considering that the number of product delivery app users in India is expected to reach 155.8 million by 2024 , the Indian market will benefit from benchmarking in product distribution. There are currently no published studies comparing food delivery apps or websites. This study is the first to conduct a comparative study focusing on comparing food products in the Indian market. Through this project, we aim to follow the discussion in which the Human-Computer Interaction and Computer Supported Collaborative Work (CSCW) community compares manufacturers with undiscovered but specifically designed vendors.

III. METHODOLOGY

We present the design process, which is used to follow the synthesise of the final version of farey. The objective of this study is to understand the usage pattern of food delivery apps and the factors which shape these practices. We conduct a contextual inquiry to understand users needs and learn about their mental models. The design and development phase ensued. We followed participatory design methodology, where a regular engagement with the users are performed to iteratively prototype and test our design.

IV. RESULT

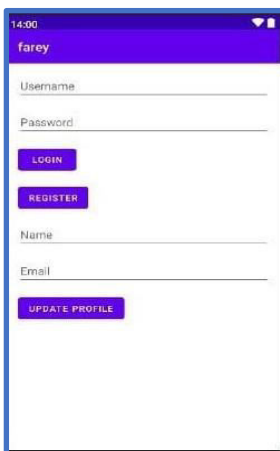


Fig. 1

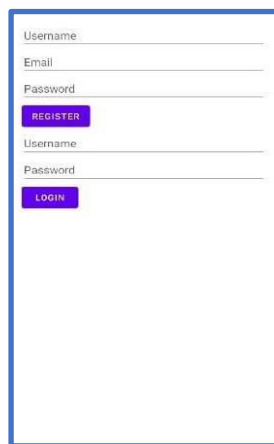


Fig. 2

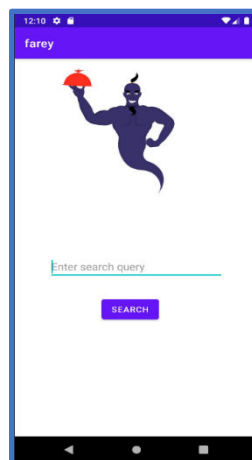


Fig. 3

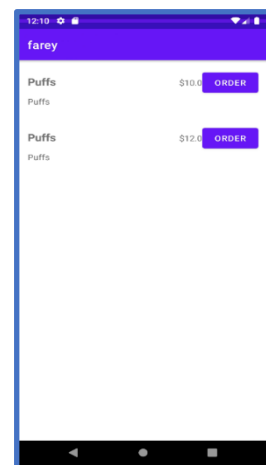


Fig. 4

Fig. 1. Admin Module

1. User Management: Admin can create, edit, and deactivate accounts, as well as control access levels and passwords. Additionally, they can generate reports on user activity for analysis.
2. Price Monitoring: Admin can track prices, set alerts for changes, and compare prices across different sellers. They can also view historical pricing data for analysis and decision-making purposes.
3. Review Moderation: Admin can review, edit, and remove user comments, ensuring they meet guidelines for content and tone. They can also analyse sentiment trends within reviews to understand user satisfaction levels and identify areas for improvement. Additionally, admin can communicate with users to address concerns or provide feedback on their reviews.

Fig.2. User Module

1. User Registration/Login: Users can securely create accounts and log in. They can also utilize additional security measures such as two-factor authentication for added protection. Furthermore, the registration process may include options for personalized account setup, such as selecting preferences or interests.
2. Profile Management: Users can update their details and preferences. Additionally, they can manage their privacy settings, controlling what information is visible to other users. Furthermore, the profile management feature may include options for uploading a profile picture or setting custom avatars.
3. Search and Compare: Users can find products and compare prices easily. They can refine their search results using various filters such as brand, price range, or customer ratings. Furthermore, the comparison feature may include side-by-side displays of product specifications for detailed analysis.
4. Shopping History: Users can track past purchases and searches. They can view detailed order histories, including itemized lists of purchased products, order dates, and payment methods used. Furthermore, users may have the option to download or print their shopping history for record keeping purposes.
5. Notifications: Users can set preferences for price alerts and updates. They can choose to receive notifications via email, push notifications, or SMS, depending on their preferred communication channel. Furthermore, users may have the flexibility to customize notification settings based on specific criteria such as price thresholds or product availability.
6. Review Submission: Users can submit product reviews. They can rate products on various criteria such as quality, performance, and value for money. Furthermore, users may have the option to attach photos or videos to their reviews to provide additional context or evidence of their experience.

Fig. 3. Search screen

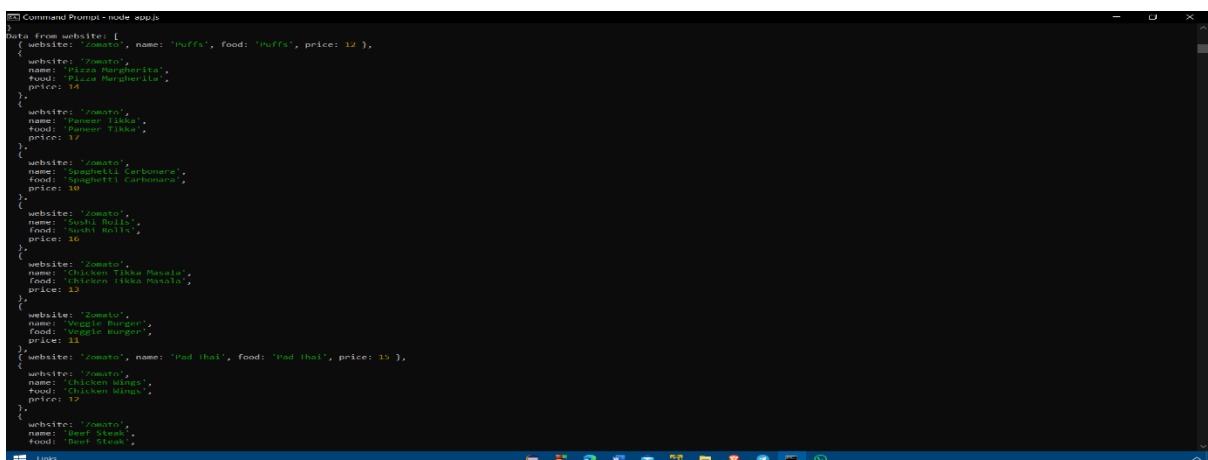
User can search whatever he/she wants.

Fig.4. Result screen

Sorted list of items according to the user preference.

Fig. 5. Server Side

Order placed on the server side



```
Command Prompt - node app.js
{
  "data from website": [
    {
      "website": "Zomato",
      "name": "Buffs",
      "food": "Buffs",
      "price": 12
    },
    {
      "website": "Zomato",
      "name": "Pizza Margherita",
      "food": "Pizza Margherita",
      "price": 14
    },
    {
      "website": "Zomato",
      "name": "Tandoori Tikka",
      "food": "Tandoori Tikka",
      "price": 17
    },
    {
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      "price": 16
    },
    {
      "website": "Zomato",
      "name": "Sushi Roll",
      "food": "Sushi Roll",
      "price": 30
    },
    {
      "website": "Zomato",
      "name": "Chicken Tikka Masala",
      "food": "Chicken Tikka Masala",
      "price": 13
    },
    {
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      "price": 15
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    {
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      "price": 12
    },
    {
      "website": "Zomato",
      "name": "Beef Steak",
      "food": "Beef Steak",
      "price": 18
    }
  ]
}
```

Fig.5

V. CONCLUSION

We created Farey, a food comparison app, to help people make smarter food choices. We put a lot of effort into researching, designing, and developing it. Now, Farey is a powerful tool that's customized to suit the needs of modern consumers who care about what they eat.

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