

CS102**Spring 2023/2024**

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Project Requirements Report

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1. Introduction

In our fast-paced world, it's not easy to connect with people who share our interests, passions, and goals. Despite the convenience of technology and social media, people often feel lonely and isolated, and traditional social media platforms may not be the best places to find like-minded individuals since it is still the user's responsibility to seek them out. That's why we want to create VOYN, an Android application that simplifies the process of finding like-minded individuals who are mostly university students. VOYN will match users based on three main categories: transportation, sports, and accommodation. As an example of its transportation benefits, individuals with similar routes can connect and split the cost of transportation while sharing the experience. Similarly, in sports, people can come together to create teams and find partners with ease. Furthermore, individuals with a desire to live in the same location can easily connect. VOYN can help you connect with people who share your interests and goals, so you never have to feel alone again.

2. Details

2.1 Features

VOYN will have three main categories called transportation, accommodation, and sports to connect people. In a nutshell, people will be able to create activities in those categories. They will see other created activities. In a short time, they will find the most suitable group for them thanks to VOYN. In the case of a need to make a conversation, we will give them a chat opportunity. Additionally, each user will have customized accounts that give information about their bio, gender, age, department, and so on for others. Also, since ensuring trustworthiness is our priority, each user will have stars showing their reliability according to their behaviors in activity history. The detailed explanation of all those features will be the following:

2.1.1 Sign in and Sign Up

At the first attempt to use VOYN, each user will have to sign up for VOYN. They will enter their necessary information such as email, age, gender, and department. All of them will be visible to people who are in the same activity. After they sign up, they will be able to sign in with their passwords and emails easily. In the case of forgetting their passwords, we will offer the forget password part which enables them to change their passwords via email which is sent automatically by the VOYN team.

2.1.2 Account Settings and Customized User Profiles

After people sign up to VOYN, each user will have a default account consisting of basic information that is created while signing up. On the other hand, we will allow them to customize their profiles. To illustrate, they will be able to add a biography. In addition to those, each person will have stars. We as a VOYN team will determine points as 100 which is invisible to users. When a person attends an activity but forgets to come on that day, their point will be decreased by a certain amount. The stars of users will be the converted form of their points. For example, a user who has 100 points will have 5 stars. Customized user profiles will be visible to all users.

2.1.3 Main Page

- **Sports**

In this part, users will choose a sports category such as football, volleyball, or basketball. After that, they will see created activities by others in a list form. If they prefer one of them, they will click on it and attend to it. If they find it useful but are not sure, they will be able to contact via chat part. If they cannot find a suitable one for them, they will create a new post. The post will require sport type, location, day, and time information all of which will be determined by the creator.

- **Transportation**

The primary function of this category is that people will be able to travel together and interact socially and minimize cost. It will be very useful in intercity travel. However, there will not be any problem using it in short distance travel in one city if it is preferred. This may seem to create a time disadvantage but it will be very useful for university students in planned travels such as returning home at the end of the term in Bilkent. In this part, users will see all created activities by other users in a list form. They will be able to filter features according to the start and end points of transportation. If they find a suitable activity, they will click on it and attend this activity. If they see a possibility but are not sure, they will be able to contact via chat. If they cannot find a suitable one for them, they will create a new post. The post will require a start point, endpoint, day, and time.

- **Accommodation**

In this part, people especially university students will find suitable people to accommodate in the same dormitory room or house. They will see posts in a list form. They will be able to filter results according to dorm/house preference and gender. They will be able to contact others via chat. If they cannot find a suitable one for them, they will be able to create a new

activity. The process of creating a new post will be like the following. In the beginning, the user will choose a dorm or house. If the user chooses dorm, the user will enter room type, location, and gender information. If the user chooses house, the user will enter house type, location, and gender. They can also add extra information to the notes, which we will provide.

2.1.4 Chat

We are aware of the fact that there is a possibility that except for a small variable, they may find a suitable activity. In this case, they will be able to communicate via chat part to deal with. They will be able to send messages to each other. Additionally, the chat will enable people to interact socially.

2.2 Features that We are Dreaming to Add

- **New Categories**

We can give the freedom of adding new categories to users other than these 3 categories by activity keywords. For instance, users can add a camping activity by writing camping or a traveling activity by writing travel.

- **Proposal Activities**

We can add another activity type called proposal activity for long-term designing activities. For instance, a user who just wants to visit Europe can post an uncompleted event then it can be completed by other users to decide when, where to stay, what to do...

- **Reminders**

We can set reminders by sending users a notification via e-mail or telephone number. So that, after planning activities, users don't miss them unconsciously and avoid point penalties.

- **Language Support**

We can add other popular languages to ease the usage of the app for non-native speakers. Thus, we can have a wider audience of users.

- **Activity Rating**

We can add a survey, at the end of the activity, that can be filled out by participants, and participants of the activity can rate the organization, and place. Moreover, we can show the top-rated activities and places as an option to suggest undecided users.

- **Integrating with Other Calendar Apps**

We can integrate other calendar apps like Google Calendar or Apple Calendar. So, users' selected activities and their current calendar combine and ease the work of users in terms of calendar organizing.

- **Sponsorships and Business Relations**

We can make some business connections with places or organizers. Users of our app can get some discounts and privileges different than normal consumers. Companies can also profit more because of the boosted number of consumers via our app. Thus, there is a win-win condition here. This type of corporation can be beneficiary for consumers, companies, and us.

- **Community Forums**

We can also create some community forums that can discuss the good and bad of an activity publicly. So that, users can select their activities consciously and won't be disappointed. Furthermore, organizers can enhance themselves to decrease the bad sides.

- **New Technologies**

We can update our application with new Android features. Android is developing day by day and they are integrating new features and libraries. We can add those features to accelerate our application such as navigation which is a jetpack library that can be used in the future.

2.3 Similar Works and Features They Have, Comparison

Letgo¹ : Our chat system resembles Letgo's system in that a person only talks with the people who opened activities because our application is not a chat app. Our context and purpose are completely different from Letgo's. Letgo is for trading second-hand items.

Airbnb² : The purpose of Airbnb is to get tenants and renters together, while doing this they take commissions. We aim to get two or more renters together and let them discuss the further details without taking any money from them. They can also use ours to find roommates for the dormitory.

BlaBlaCar³ : BlaBlaCar lets two or more people share the price of fuel together, one of them has a car, others do not. It is taking commission from users, which we will not, and our point of view is much broader. We will let the users decide on everything. Even if no one has a car, they can still share taxi prices with our app. Also, transportation is not our only service, we will provide other services such as accommodation, and sports.

2.4 What are the Advantages of Voyn Over Others?

First of all, VOYN is based on a completely original idea. There are applications similar to VOYN, but they do not offer any feature to connect people who have similar interests and features in a short time. Additionally, VOYN will include the most necessary categories in today's world named transportation, accommodation, and sports. This will save people from having to deal with other applications for each category. Perhaps, the most similar side of VOYN compared to others is that it includes a chat part. On the other hand, we will make it in a way that is spared from unnecessary features to make it for user convenience. It will just enable them to message while dealing with others, which will avoid confusion. All in all, VOYN will be a completely original application with its main target and the way it offers similar sides like the chat part.

2.5 Technology, Advantages, and Benefits of Our System

We use Firebase, which is a NoSQL database, to store and manage the data of our users, their preferences, and their matches. NoSQL databases offer some benefits over traditional relational

¹ "Letgo." <https://www.letgo.com> (accessed March 4, 2024).

² "Airbnb." <https://www.airbnb.com.tr> (accessed March 4, 2024).

³ "BlaBlaCar." <https://www.blablacar.com> (accessed March 4, 2024).

databases, such as scalability, flexibility, and performance⁴. For example, we can easily add new fields or attributes to our data model without affecting the existing data or schema. We can also store large volumes of data with high availability and low latency. The platform is developed using Android Studio, a powerful and versatile tool that offers support for multiple devices, easier testing and debugging opportunities, and simple user interface design for Android app development, which is the most common mobile operating system. For instance, we can use the emulator to test our app on different devices and configurations. We also use Git and GitHub for collaborative work, which enables efficient version control, code review, and project management. Git allows us to track the changes we make to our code and revert to previous versions if needed. GitHub enables us to host our code online and share it with other developers. We can also use GitHub features, such as issues, pull requests, and code reviews, to communicate and coordinate our work effectively.

2.6 Audience

This application is designed to cater to the specific needs of users mostly university students who want to connect with their peers for various purposes. Whether they are looking for a sports buddy, a roommate, or a seatmate, they can find them easily and quickly on this platform. Unlike the other equivalents mentioned before, this application serves more simple and beneficial usage. Also, this application creates a secure environment where they can find each other freely and confidently. The potential audience groups for this application include newcomers who want to find roommates, sports lovers who want to find partners and join teams, and long-distance travelers who want to share rides and expenses with their friends.

3. Summary & Conclusions

3.1 Conclusion

In conclusion, VOYN is an Android app that is of paramount importance in terms of the features it provides. The essential feature of VOYN is to create a bond between people who share similar purposes and interests in a short time. VOYN will also include additional features such as providing flexibility in creating new categories, setting compatibility with calendar apps, creating forms, and so on. Our vision as a VOYN team is to create an environment where each person can benefit from all the opportunities without huge effort to find other people by providing them with trustworthiness and offering ease of use which is perhaps the most important thing in today's world. We believe that such a complex app with a lot of features and at the same time such a basic app in terms of usability will meet the needs of most people in the world where people experience a lack of that kind of application and will be appreciated by people.

⁴ Wikipedia Contributors, "NoSQL," *Wikipedia*, Oct. 19, 2019. <https://en.wikipedia.org/wiki/NoSQL> (accessed March 4, 2024).