**COIT20270 - App Development for Mobile Platforms**

Assignment 2

**Problem analysis, research and design**

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# Problem description

Regardless of the number of accommodation finder apps in the app store and play store, many people still struggle to find the room or apartment in time. In multicultural country like Australia, one of the key things most apps fail to consider is that when people are looking for room or apartment, they do not just look out for best room or apartment, but they are also looking for best roommate or housemate, so that they do not have to move again. Being human, it is a natural feeling that most of us feel at ease or comfortable with people from our own community or home country. Therefore, whenever we are looking to move in a new place, our own community or nationality preference will be on the top of the list. Besides, we also prefer that our roommate or housemate share the same lifestyle as ours such as food preference, cleanliness, smoking and partying habits. Apart from that, real time notification of advertisement which matches user’s preferences is a great feature to have in an app. It lets user to find accommodation quickly and with less hassle. Therefore, by taking all these things into consideration, I would like to propose an app which lets users to find roommates with their customized preferences and send notification whenever such advertisements are posted as well.

# Research of existing application

I have researched on both Google play store and App store and found out that some of the apps cover partial aspect of the problem. The apps are listed below:

* Flatmate Finder
* Roomster
* Gumtree

Flatmate Finder is available for all platforms including Android, iOS and website. The app allows user to both search for flats and advertise the availability of flats in their platform. Moreover, the app has multi step sign up process where user’s personal information along with flat and flat mate preferences are collected.

Roomster is also available in all three platforms i.e., Android, iOS and website including Amazon as well. Similarly, the app allows user to search or advertise for flatmate and entire flat. The app has simple sign up process however, user has to verify their account using email and phone number before posting their ads.

Gumtree is a marketplace platform which allows posting of any kind of advertisement apart from real state. User can access Gumtree either from their Android and iOS devices or web browser. One thing which set apart Gumtree from other mobile apps is that it allows user to view ads without signing up.

# Analysis of strengths and weakness of each application

## Flatmate Finder

One of the key strengths of Flatmate finder is that it is a personalized roommate finder app so if user fill up their information accurately then they are more likely to find the roommate they are looking for. The filter in the app automatically list the matched users with level of matches such as perfect matches, partial matches and semi-matches. The app also has messaging platform which allows matched users to chat with each other. In addition, the app has simple and intuitive user interface.

The app requires too much information to find the roommate or housemate matches since it uses personalized matching algorithm. However, some users do not feel comfortable or get bored while filling up such long forms. In addition, the app allows user who are looking for room to use their service freely for two months whereas user need to pay service fee to post for the availability of room or apartment.

## Roomster

Roomster allows searching or renting for shared accommodation as well as an entire place. It also offer personalized room finding service like Flatmate Finder and allows selecting from basic (location, monthly rent, availability date) to detailed preferences such food preference, cleanliness, partying habits, smoking habits, and various others.

On the other hand, the app does not allow user to search for accommodation in various location using a single advertisement. If they want to do so then they have to post multiple advertisement simultaneously which is time consuming. Apart from that, the app has multi step user verification process. Therefore, user has to mandatorily verify their account by email, phone number and social media account.

## Gumtree

Gumtree is one of the most popular marketplace platforms which allows to post or search for any kind of advertisement apart from accommodation. Unlike previous two apps, it lets users to search for advertisement as well as post their own advertisement. In addition, it does not require the time-consuming process of signing up before using their service. Moreover, user can use various filters such as keyword, category, location, distance, price, and few others while searching for advertisement.

Being popular has its own downside. The insecure verification process of Gumtree has let many users to be victims of scams through its network. Hegarty and Gaffney (2018) claims that scammer tricked middle-aged man through Gumtree in Queensland by taking diagnostic mechanic tools without paying money.

# Proposed improved solution

## Features

The new app that I’m proposing will have improved features to overcome the shortcoming of previously discussed apps. The major features of the app are listed below:

**Posting and searching of advertisement with community or nationality preference**

The app would allow users to both post their advertisement and search for advertisement by using community or nationality preference which was not considered in any of the apps as discussed earlier. Apart from that, the app would also allow user to select multiple location preferences, price range, and availability date to name a few.

**Real-time notification of matched advertisement**

One of the key features of the app will be real time notification of matched advertisement. It means that if someone is urgently looking for shared accommodation in any location with price range between $500-$800 monthly, then they do not have to keep searching for advertisement on the app. User can just create their advertisement by mentioning so and the app will notify them if anyone posted advertisement with such criteria.

**Strong identity verification**

The main reason for users being victims of scams through marketplace app like Gumtree is that they allow users to sign up in their platform with any identity verification and also reveal user’s personal information if they have filled up any. Therefore, the app that I’m proposing will not allow users to use the platform without identity verification through phone number and government issued Ids. Also, the app will not reveal user’s personal information without their permission.

## Design and layout

The app will have intuitive and user-friendly interface. Here are some of the rough sketches of the major functionality of the app.

A close up of text on a white background

Description automatically generatedA close up of a sign

Description automatically generated

Figure 1: Home page Figure 2: Post ad page

A close up of text on a white background

Description automatically generatedA close up of text on a white background

Description automatically generated

Figure 3: Search preference page Figure 4: Account page

# Points of difference in proposed app

The app has new features as well as improved features over the existing apps. One of the unique features of the app is that it allows users to search for accommodation with community and nationality preferences. Therefore, users can choose to search for advertisement posted from by the people from their community or country if they wish. Another point of difference of the proposed app is that it alerts users when someone posted new advertisement which matched the criteria of their advertisement. Apart from that, the app has improved features such as strong identity verification of users. The reason behind introducing identity verification in the app is that it discourage scammers from joining the platform. Jordan (2015) points out that online frauds or scams are mostly done by users who create anonymous profile while registering in the network. Therefore, it is essential to verify identification of users using multi step process.

# Identification of target market

The app mainly acts as an intermediary between people who want to live in share accommodation and those who want to offer shared accommodation. According to Ketchell (2019), mostly young and mobile people such as international students, working holiday visa holders and young professionals are presumably stay in shared accommodation. Moreover, these young population mostly fall in the age group of 18-35 and are most likely to live in suburb areas surrounding the main CBD. Similarly, the app could be used by all gender including men and women with any marital status. Apart from that, language is another important factor to reach the target market. Patrathiranond (2019) claims that the language of the app should focused on the language which is mostly used by app users. By looking at the demographics, it is assumed that English would be the most suitable language for the app. Lastly, the app is targeted on both Android and iOS platform since young individuals would have access to either of the devices these days. Therefore, the target market of the app would-be English-speaking young groups of people, either married, unmarried or holding any marital status and who live in suburbs.

# Justification for the marketing strategy

We identified the demographics of target audience in the previous step. Now, we need to understand the hobbies and interests of the target audience and most importantly we need to determine where the audience spend most of their time online and offline (Animalz 2019). It is evident that most of the young people go to college or university and spend most of their time with their friends. It is also common that majority of the youngsters enjoy recreational activities such as sports, music, or dance and it is likely that they may be in involved in clubs or associations related to their interests, in their community, college or university. We also need to understand that nearly all of the clubs or associations have their online presence these days and have either websites or pages and groups in Facebook and Instagram.

Therefore, as a part of marketing strategy, firstly we need to reach out to student ambassador in colleges and universities and inform them about the usefulness of our product to students and request them notify all of the students. Secondly, we can also contact the president of clubs or associations and inform and request them the same. Last but not the least, we need to advertise about our product in the social media platforms such as Facebook, Instagram and YouTube since most of the youngster spend their time in these platforms. Animalz (2019) claims that digital marketing allows to advertise product to larger audience with less effort.

# Ethical concern

One of the top ethical concern of the proposed app is protection of user’s privacy. Apple Developer documentation (n.d.) points out that the app should only collect user’s data with their informed consent and in compliance with applicable law. In addition, sensitive information such as location, contacts, and photos should only be accessed when needed and the app should request permission before accessing it (Apple Developer documentation n.d.). The documentation also informs that the app should be transparent about the ways data will be used and allow user control over their data. Also, the app should not disclose personal information of the users without their permission.

Another ethical issue that need to be addressed by the app is prevention of data and security breaches. Office of Australian Information Commissioner (n.d.) points out that in order to reduce the data breaches and risks associated with brute-force attacks, the app should require its user to input strong password combinations. In addition, the app should require user to reset their password from time to time and automatically lock account in case of multiple failed login attempts (Office of Australian Information Commissioner n.d.).

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