CS449 HUMAN COMPUTER INTERACTION
ASSIGNMENT #1

DORM APP DESIGN DIARY

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Introduction: The Dorm App

The Dorm App is a social networking app for university students. The primary purpose of this app is to connect university students through activities they liked or through displaying the profiles of users in the same mode to each other.

In order to connect with people, the user should select one of the two modes: "friendship" and "flirting". Based on their mode preferences, users can directly match with people who like the same activities, in the same mode as themselves in the "Activities" channel. However, the app also has the option to pair users directly in the same mode without the mediation of an activity in the "People" channel.

Problem #1: The fact that the "Activities" and "People" channels of the application are displayed together on the main page and without directing the user to take any action, reduces the interaction of people with the application.

After the launch of the app, it was observed that most of the users within the app did not swipe or like the events as expected. The reason behind this situation is the design of the homepage.

The homepage which can be seen in Figure 1, does not create the urge in users to interact with people or look through events. The fact that both the People channel, together with the first 5 people in the queue, and the Activity channel are displayed openly on the homepage, consumes the excitement and curiosity of the user towards the app. Also showing the two major features of the app together on the same page, leaves the user in a dilemma that kills the charm of both features and lessens the activity of the user.

This situation subsequently causes dissatisfaction in the user in the sense that both users couldn't find the derive to take action to interact with that app and due to this situation among the users, nobody will get matched with other people as expected. This problem may lead to the app losing a significant amount of users.

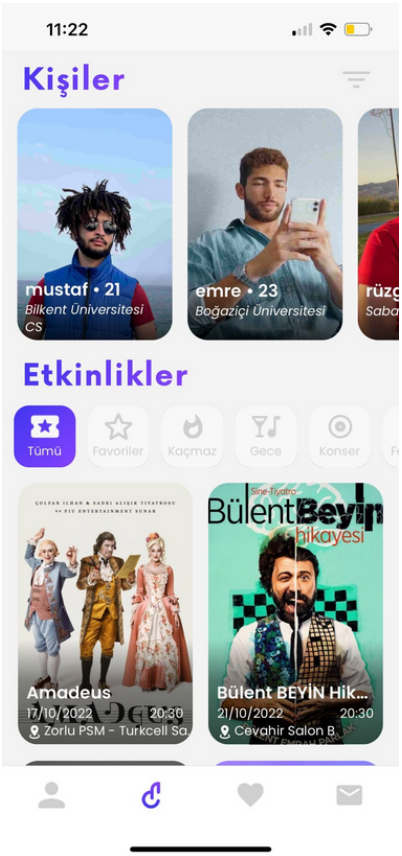


Figure 1: Homepage

Problem #2: No visible indicator to give users the feeling of which mode they are currently using.

The absence of a clear-cut distinction between these different modes in the designs of the interfaces sabotages the user experience and makes the app difficult to understand and use. Whether people view the homepage in flirting mode or friendship mode the UI looks always the same as can be seen in Figure 1. People may forget which mode they are currently in and keep swiping people with different intentions in their minds. As demonstrated in Figure 2, there is no indicator for the mode during swiping people.

In addition, mode switching can only be done from the user profile shown in Figure 3, but this is not a very obvious and easily accessible spot.

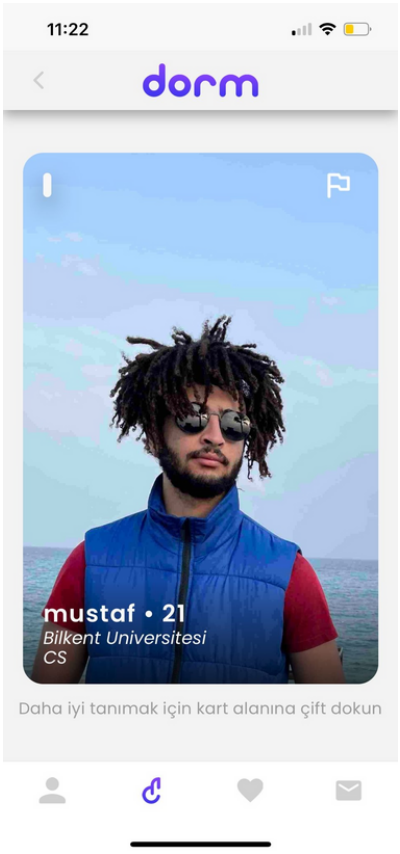


Figure 2: Swiping People

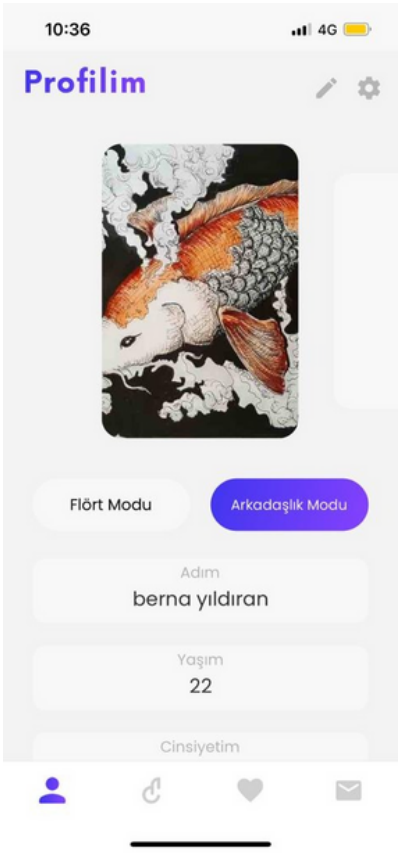


Figure 3: User's Profile

Problem #3: Separating people into different pools according to their flirting/friendship modes in the activities: Reduces the likelihood of people getting matched; and may be overwhelming for some users who have different intentions for different activities or the users who do not have intentions like flirting or finding a friend while browsing through activities.

The strategy of dividing people into different pools according to their flirting/friendship modes over the activities they like, divides the pool of people participating in the activity into two, thus reducing the probability of people getting matched. Since Dorm is a newly released app, it currently has very few active users who like events and swipe people. For this reason, when these few users do not match people as expected, this causes user dissatisfaction and users to leave the app.

On the other hand, it also overwhelms the user who has different intentions for different activities. The user may want to match with people who like X Activity in flirt mode, but for the Y Activity s/he may prefer to meet with people who liked that in friendship mode. In this case, users should open their profile to change their mode and come back to the Activities page again to meet people in their preferred mode. This whole "Changing Mode" flow on the Activities page is both difficult and time-consuming for the user.

Lastly, there are users who don't want to think about any intentions like flirting or finding friends, while browsing through activities. For these users, selecting a mode in activities is just an additional issue and a headache to think about.

Problem #4: Not enough information is provided to the users about their current state in the app during the "Activity" channel flow.

Users can see the people who like the same activity by clicking the "Discover People" button on the back of the activity cards, as seen in Figure 4. But the problem is that this page does not provide any information for the user to understand for which event they swiped people. The page looks indifferent from swiping people in the People channel. It makes it impossible for the user to understand what part of the app they are currently in, or for what purpose they swipe those people.

This screen also suffers the absence of the indicator for in which mode the users swipe people, as noted in Problem #1. This causes the user to forget which mode they are in and subsequently the user cannot keep track of the current state of the

application. Such situations can greatly harm the user experience, forcing the user to return to the homepage every time they lose track of a stream or to return to a reference point where they know where they are.

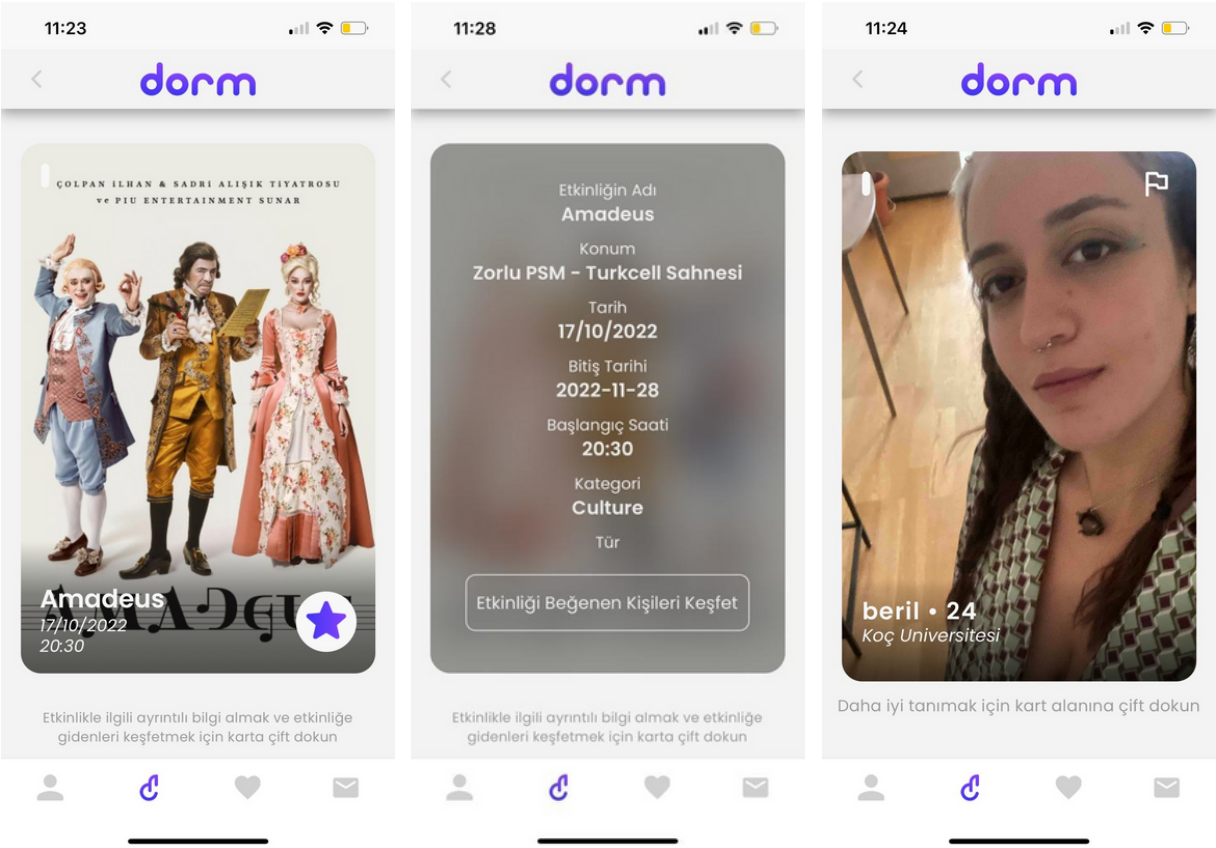


Figure 4: Activity channel flow

Problem #5: Organisation of the chat section of the app: Viewing people in different tabs depending on the match mode reduces the interaction between users; and for the people who matched through "activities", chat does not provide an indicator for people to see which activity they matched with that person.

As can be seen in Figure 5 and Figure 6, the organization of the chat is designed to separate matched-people based on the mode they are matched from. But this structure causes users to miss some notifications or forget people they matched with in the other tab and reduces the interaction between people.

Also, the current complex structure of the app makes it hard to display people matched from activities in the chat section. In the current system, people who are matched through an activity in flirt mode are displayed in the "Flirt Mode" tab in Figure 5, and people matched with the user who browses through activities in the

friend mode is displayed in the "Friend Mode" tab of the chat which can be seen in Figure 6. This leveled structure of the activities brings a degree of complexity for users to grasp the system and sabotages the user experience.

In addition to this problem, the current system does not provide a UI element to its user for informing users about which activity bring these two person together. So, when people are matched with a person in "X Activity", in the chat section user will just see the person's name, there will be no indicator for the event that brings together these two people.

Figure 5: Chat - Flirt Mode Tab

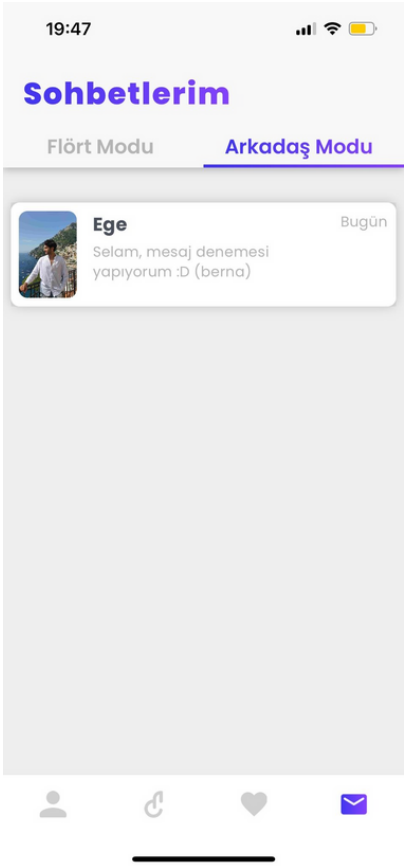


Figure 6: Chat - Friend Mode Tab

Associated Literatures

Problem #1: The fact that the "Activities" and "People" channels of the application are displayed together on the main page and without directing the user to take any action, reduces the interaction of people with the application.

According to Norman's 7 Stages of Design, Problem #1 is an HCI problem that is caused by the lack of constraints. Norman states the importance of constraints by stating providing semantic, logical, and physical constraints are required for guiding user actions and providing an easily interpretable system for them (Norman, 2013, p.73). The homepage of the app provides both People and Activity channels to the user without any constraints, therefore the user does not feel any obligation to take any action since they can access every resource whenever they want, and this feeling of "already having everything" leads users to not interact with the system. The motivation derived from curiosity and mystery is an important trigger for the users to take action and interact with the system. But the main resource for the curiosity to occur in users is the constraints of the system. Because in order to feel in control, people want to test the limits of the system and learn what they are allowed to achieve, the results of each action they take, and learn the states of the system after each flow they choose. The issues related to motivation and enjoyment of the user in the recent HCI systems gaining importance in the sense of being an indicator for overall user experience (Dix et al., 2004, p.6).

Problem #2: No visible indicator to give users the feeling of which mode they are currently using.

According to Ben Schneiderman's "8 Golden Rule", Problem#2 is an HCI problem that is caused by making users feel forced to remember their decisions and the current state of the app. Humans have limited cognitive space for information processing in short-term memory, therefore interfaces should be designed in a way that users do not feel an obligation to remember things (Schneiderman, 2016, p.96). Therefore the mode that the user is currently using should be displayed in the interface in a prominent spot since this is information very important for the user's experience and for the user to determine their future actions. The importance of these kinds of signifiers is also emphasized in Norman's 7 Stages of Design. Norman mentions that using signifiers in an effective way enhances the user's ability to discover the system (2013, p.72).

Problem #3: Separating people into different pools according to their flirting/friendship modes in the activities: Reduces the likelihood of people getting matched; and may be overwhelming for some users who have different intentions for different activities or the users who do not have intentions like flirting or finding a friend while browsing through activities.

From the data obtained after observing user activities, it's seen that separating people in different pools based on their modes in the activities reduces the chance of people getting matched. Norman's 7 Stages of Action Model for Interaction is a useful resource for understanding the experience problem and finding a solution for increasing people's chances to get matched.

The second part of the problem is about overwhelming the user by forcing them to make some decisions. The user may want to freely change their mode frequently based on the activities s/he encountered or maybe the user does not have any intention like flirting or establishing a friendship with the people who liked the same activity as themselves. In both cases, the system forces the user to an action that he or she does not fully content with.

Schneiderman mentions that for a better user experience, the user should feel in control within the system, and if the user feels inability in the way of achieving their desired result, this may lead to dissatisfaction with the system (Schneiderman, 2016, p.96). Also, as mentioned in the Introduction of the Human Computer Interaction (2004), systems should be there for supporting people in achieving their tasks, if the system forces its user to adopt an inconvenient way of work, then this makes the system not usable (Dix et al, p.5).

Problem #4: Not enough information is provided to the users about their current state in the app during the "Activity" channel flow.

According to Ben Schneiderman's "8 Golden Rule", Problem#4 is an HCI problem that is caused by not making its user feel in charge of the application. According to Schneiderman, users have a strong urge to feel in charge while using an application,. If they managed to get expected responses based on their actions without any surprises or unexpected results they consider their experience within an app as a "good" experience (Schneiderman, 2016, p.96). But in the case of following the app's state in the "Activity" flow, people may get surprised when they found themselves on a screen that is identical to the "People" flow after they click to "Discover People" button. Besides Schneiderman, Norman (2013) also highlights the importance of signifiers in his 7 Stages of Design by mentioning intelligent and effective use of signifiers enhances the user's experience by increasing the discoverability of the system (p.72). This situation may make users feel like they did not get what they are expecting and they may feel difficult to obtain enough information to understand where they are in the current state of the app. To get out of this situation users may click on the homepage or other sections of the app to arrive at a state where they are familiar with it, this is an unwanted experience for the users of the app, which may result in great dissatisfaction and cause the user to leave the app.

Problem #5: Organisation of the chat section of the app: Viewing people in different tabs depending on the match mode reduces the interaction between users; and for the people who matched through "activities", chat does not provide an indicator for people to see which activity they matched with that person.

The current structure of the chat section of the application fragments the page in order to establish a distinction between "matched people" from different modes. For providing better user experience mappings can be utilized, instead of using the method of fragmentation to group elements from the same category. Mappings establish a relationship between elements on the interface (controls) and their functions, and mappings can be formed and improved through spatial layout and temporal contiguity (Norman, 2013, p.72). In sum, instead of fragmenting the views, mappings through colors, shapes, and other indicators like badges can be used for categorizing the elements and providing a better user experience.

Notes about Axure and Figma

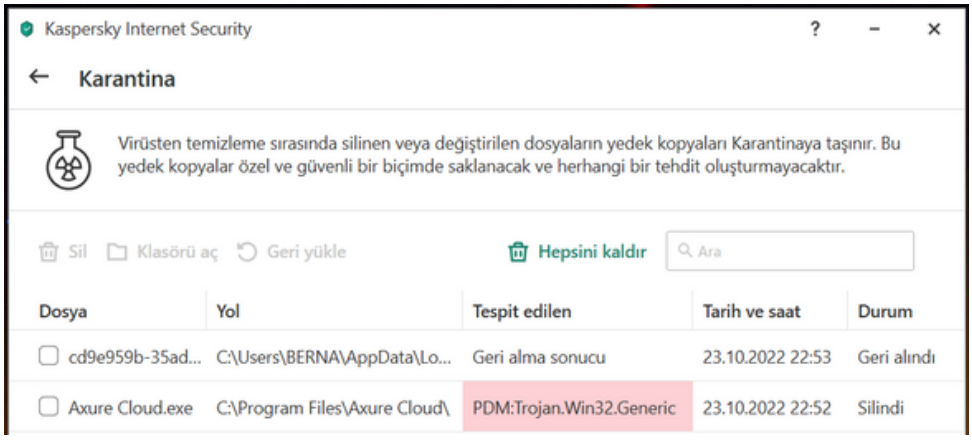
Figma Link:
https://www.figma.com/proto/vcnL16mWaDh66NA1IcGFHB/CS449_BernaYildiran_DesignDiary_DormUI?page-id=2914%3A34532&node-id=2914%3A37192&viewport=1368%2C640%2C0.21&scaling=scale-down&starting-point-node-id=2914%3A37192&show-proto-sidebar=1

Merhaba Hocam,
Bu ödev kapsamında projenin prototipini Axure üzerinden yapmamızın beklendiğinin farkındayım fakat yaşanan bir aksaklıktan dolayı prototipi Figma üzerinden yapmak zorunda kaldım. Dorm projesi benim daha önceden üzerinde çalıştığım ve hala daha devam ettirdiğim bir proje olduğu için sayfa tasarımlarını Figma üzerinden yapmaya devam ettim. Bunun sebebi ise bu linkte de belirtilmiş olduğu gibi Axure'un kendi geliştirmiş olduğu Figma plugin'inin Figma'da tasarlanmış olan ekranları Axure RP veya Axure Cloud'a kopyalanabileceğini vaadetmesiydi. Fakat bu plugini kullanmayı denediğimde Axure RP'de hata verdi. Bu linkteki yorumlardan öğrendiğim kadarıyla bu pluginin çalışmasıyla ilgili son bir kaç aydır insanlar sorun yaşıyormuş.

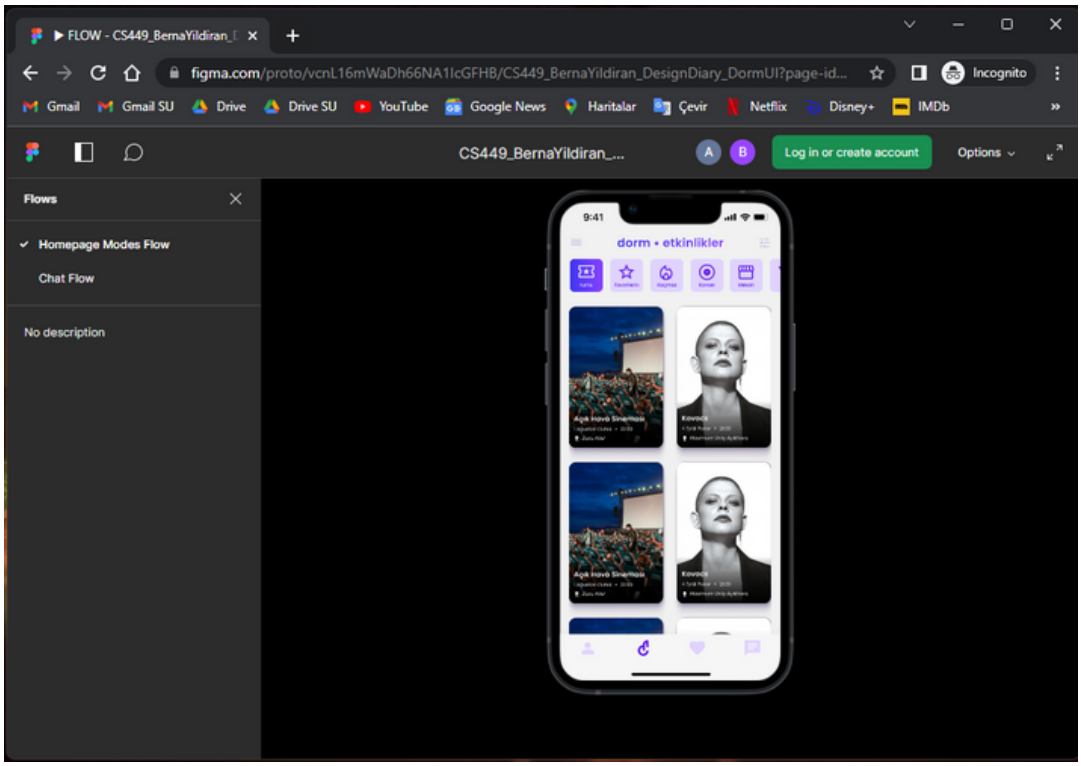
Bu yüzden plugindeki Figma'da tasarlanmış ekranları Axure Cloud uygulamasına aktararak prototip geliştirme seçeneği denedim. Bunun içinse Axure Cloud desktop uygulamasının indirilmesi gerekiyordu. Bu uygulamayı indirirken Windows OS, bu uygulamanın güvenli olmadığıyla ilgili hata verdi. Fakat Axure'un güvenli bir kaynak olduğunu düşündüğümden uygulamayı yine de kurdum ve Figma ekranlarını Axure Cloud'a aktarmaya başladım. Birkaç ekranı aktardıktan sonra Kaspersky antivirüs programım uygulamanın Trojan Malware içerdiğini ve derhal silinmesi gerektiğiyle ilgili uyarılar vermeye başladı. Aşağıdaki screenshot'ta bu durumu görebilirsiniz.

Tüm bu yaşanan olaylar sonucunda uygulama prototipini Figma üzerinden yapmak zorunda kaldım. Sonraki sayfaya bu prototipin nasıl görünteleneceği ile ilgili screenshotlarla beraber bir tutorial ekleyeceğim. Umarım yapmış olduğum prototipi raporun geri kalanı ile beraber değerlendirip kabul ederseniz çok sevinirm.

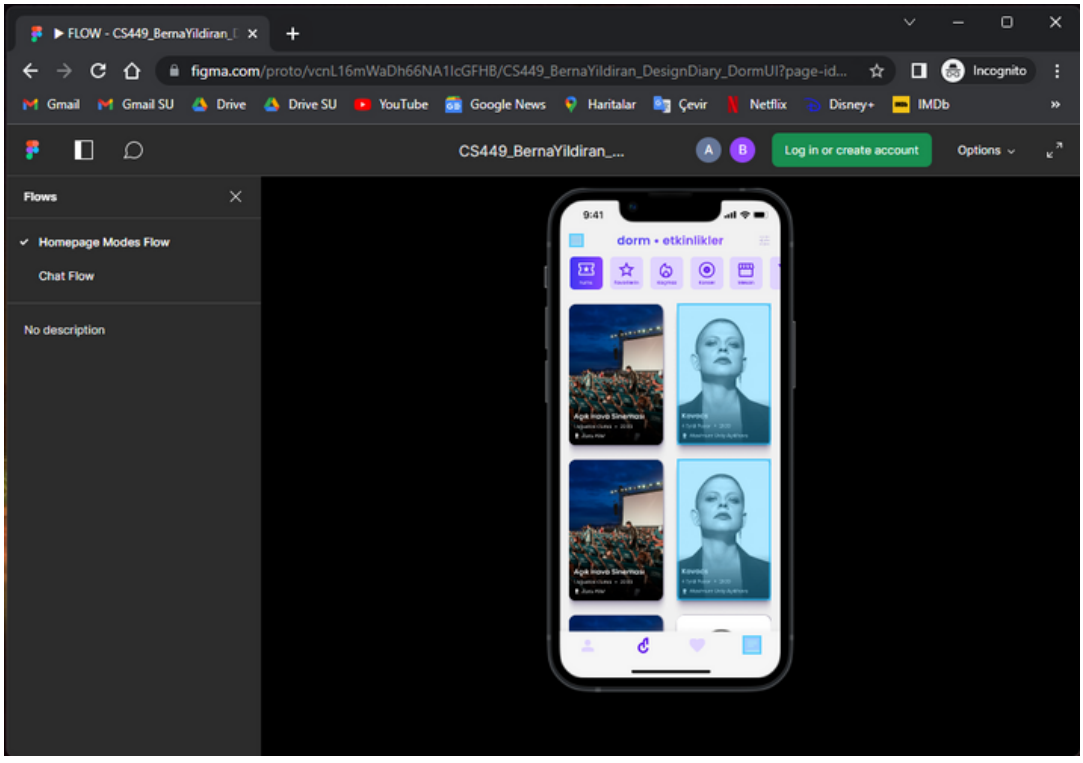
Bu açıklamayı okumaya zaman ayırdığınız için çok teşekkürler,
Berna



1 Yukarıda vermiş oldğum Figma Linkine tıkladığınızda aşağıdaki ekran açılmaktadır.



2 Sağ tarafta bulunan panelde raporumda kullanmış olduğum birbiriyle tamamen entegra çalışan iki "Flow"u görüntüleyebilirsiniz. Bu aşamada ekrandaki elementlere tıklayarak uygulama prototipini incelemeye başlayabilirsiniz. Ekrandaki tıklanılabilir elementler siz ekrana dokunduğunuzda mavi highlight ile vurgulanacaktır.



Recommendations / Proposed Solutions

Figma Prototype Link:
https://www.figma.com/proto/vcnL16mWaDh66NA1IcGFHB/CS449_BernaYildiran_DesignDiary_DormUI?page-id=2914%3A34532&node-id=2914%3A37192&viewport=1368%2C640%2C0.21&scaling=scale-down&starting-point-node-id=2914%3A37192&show-proto-sidebar=1

Figma Project Link:
https://www.figma.com/file/vcnL16mWaDh66NA1IcGFHB/CS449_BernaYildiran_DesignDiary_DormUI?node-id=2914%3A34532

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These first three problems about the app are interrelated with each other. First, starting with Problem #1, the "Activities" and "People" channels should be displayed on separate pages. However, in doing so, one channel should not be more dominant than the other. This means that both channels must be displayed in equally important locations within the app. The purpose of this attitude is to keep the architecture of the application as objective as possible and give the user the opportunity to freely choose the channel they want.

To solve Problem #1, Activity and People channels should have their own homepages and the switching between these two channel modes can be controlled from a side panel that displays these different channel modes. The wireframe of the depicted design can be observed in Figure 8.

Secondly, Problem #2 and Problem #3 may be handled through the same solution in the sense of interface design. The interfaces should indicate to the user the current state of the app. Users should immediately realize whether they are using the app in flirt mode or friendship mode.

As can be seen in Figure 9, both channel modes within the app utilize the Flirt and Friendship modes. But while this situation is a plus for the people channel in the sense that people can meet with the people with the same intention as themselves, it is not useful for the activities channel. This mode separation within the Activity channel causes two main problems. Firstly, it reduces the likelihood of people getting matched by dividing them into two categories. Secondly, it overwhelms the user who has different intentions for different activities or the user who does not have intentions like flirting or finding a friend while browsing through activities.

To enhance the user's experience, the flirting/friendship mode option can be removed from the activities channel and the People channel can be broken into Flirt Mode and Friendship Mode. The wireframe of the depicted design can be observed in Figure 10. In this way, Problem #1 and Problem #2 will be solved since all the modes (Activity Mode, Flirt Mode, Friendship Mode) have their own specialized homepages. Lastly, Problem #3 is also solved in the sense that, the Activity channel became an individual mode, independent from the Flirt and Friendship Mode. In this way, people's chances to get matched with other users increases significantly and there will be no need for trying the decide what mode should be selected for each activity. The final design of the modes side panel and homepages of the different modes can be seen in Figure 11, Figure 12, and Figure 13.

Figure 8 - Side Bar Version 1

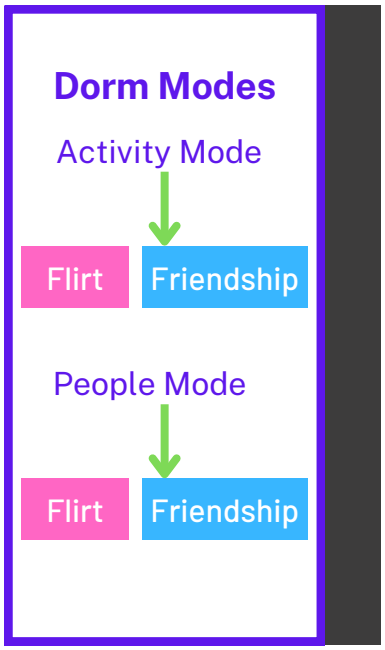

Figure 9 - Side Bar Mechanism

Figure 10 - Side Bar Final Version

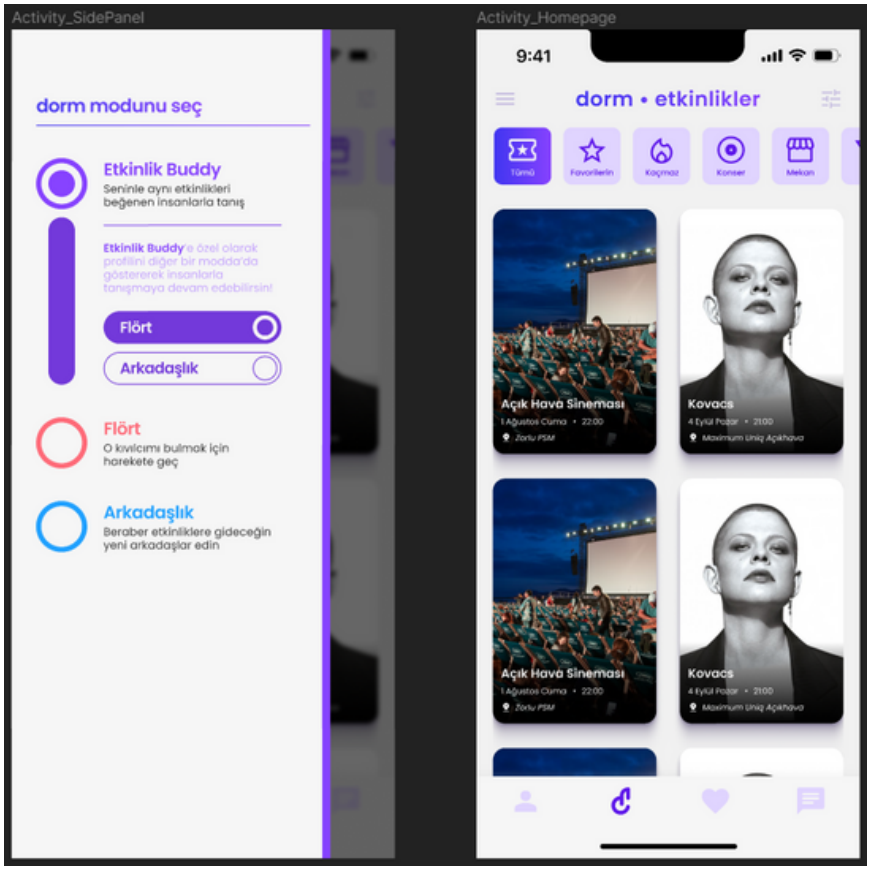

Figure 11 - Activity Mode

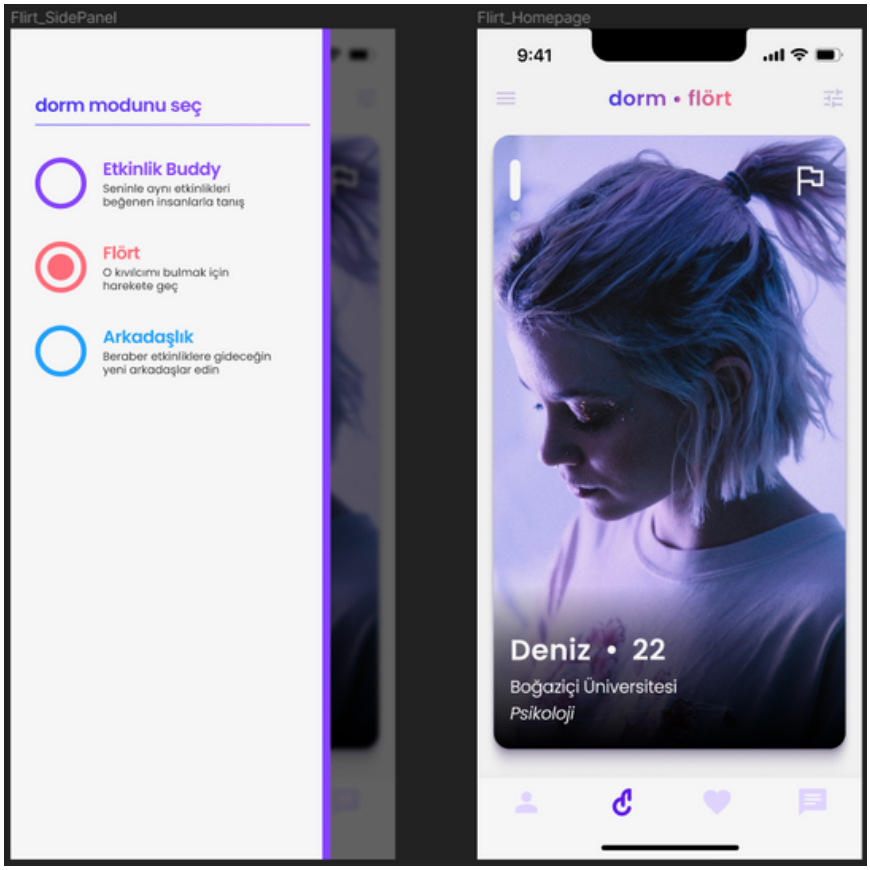

Figure 12 - Flirt Mode

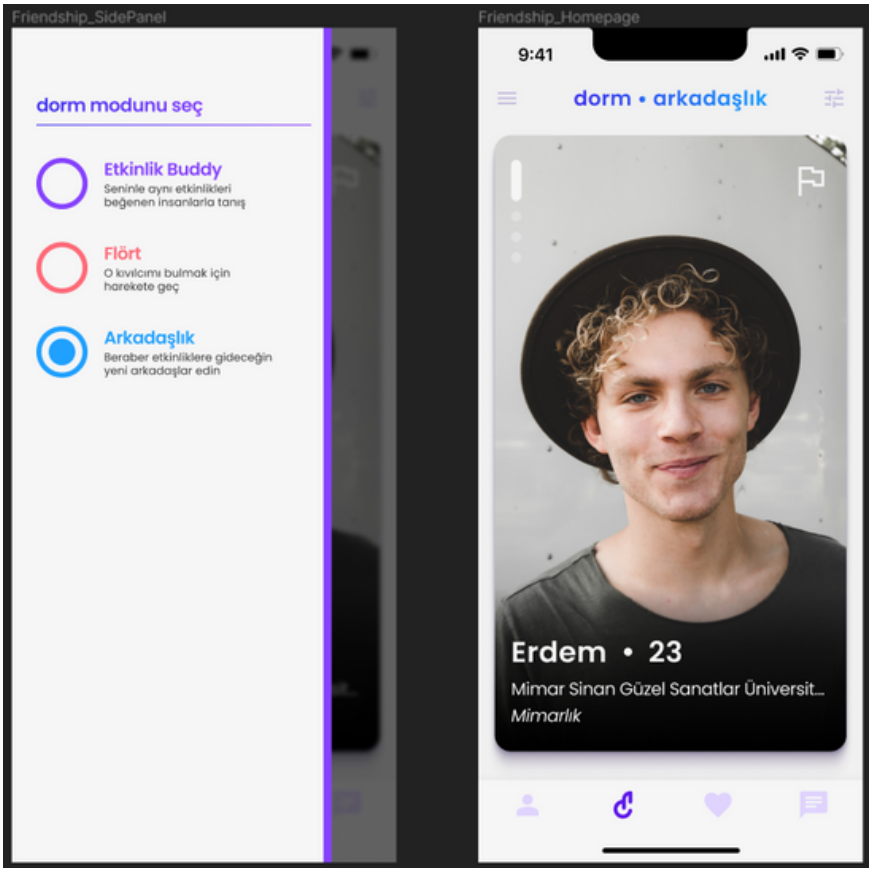

Figure 13- Friendship Mode

Problem #4: Not enough information is provided to the users about their current state in the app during the "Activity" channel flow.

The solution for this problem is that instead of keeping a "dorm" heading on each page, the page names can be changed based on the page content. This is a similar issue to Problem #2 which is about not providing enough information to the user about which mode they are currently using. In Problem #2, colors and titles are used as indicators of changing mode. For the problem experienced in the Activity channel flow, after the user clicks on the "Discover People" button, sufficient information about which activity they are displaying these people for should be provided in an obvious space on the screen. The new design for this problem can be viewed in Figure 14.

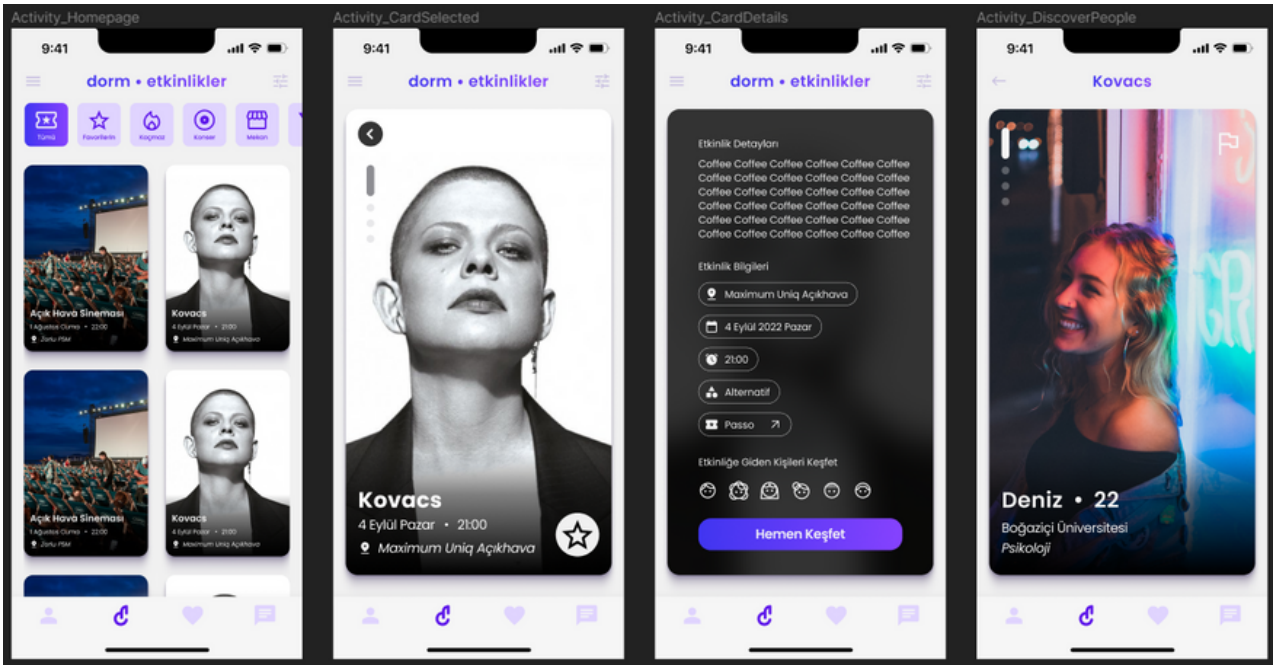

Figure 14 - Re-designed Activity mode flow

Problem #5: Organisation of the chat section of the app: Viewing people in different tabs depending on the match mode reduces the interaction between users; and for the people who matched through "activities", chat does not provide an indicator for people to see which activity they matched with that person.

The last issue that should be addressed is Problem #5 which can be considered as the result of the previous issues mentioned in this design diary. Since the architecture of the different modes and channels did not handled well in the initial design of the app, the chat section is designed in a fragmented manner. The fragmented design used for dealing with Flirt and Friendship mode, causes users to forget people they matched with or miss notifications. Therefore, a solution for this problem is to display all the people the user matched until now on a single page, without losing the information about which mode brings the two-person together. In order to achieve this goal, colors assigned to different modes of the app and badges that emphasizes the mode will be utilized for displaying people in the chat section. For people who are matched through an activity, the matched person's profile picture is highlighted with a purple frame, and the badge under their name indicates the activity that brings them together. In the case of Flirt, the color pink is used for highlighting the profile and the badge under the person's name emphasizes the Flirt mode. Lastly, for displaying people matched in Friendship mode, blue is used as the highlight color and the badge remarks the Friendship mode.

In addition to all these, people may filter the conversations based on the mode using the 3 dots placed near the "Conversations" title. In this way, people may categorize the chat with a minimalist indicator rather than fragmenting the whole chat section. The re-designed version of the page can be displayed in Figure 15.

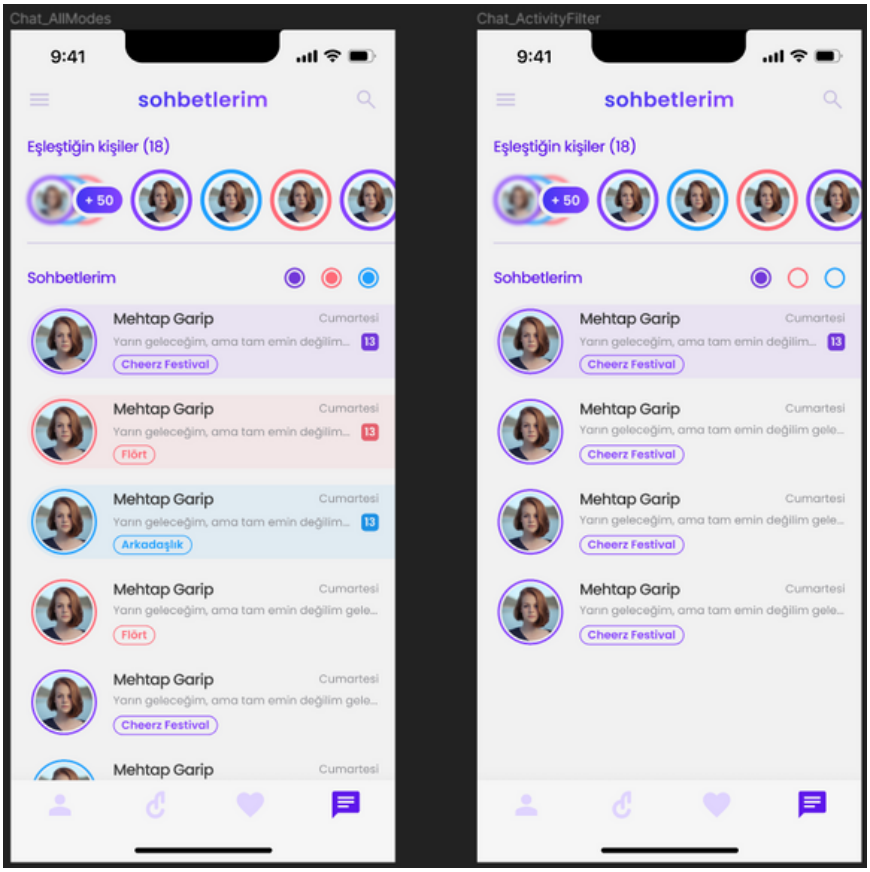

Figure 15 - Re-designed chat for the 3 app modes (Activity, Flirt, Friendship)

References

- Dix et.al. (2004). Human Computer Interaction. Introduction. pp. 1-8

- Norman, D. (2013). The psychology of everyday actions, Ch.2 pp. 37-122. The design of everyday things. Basic Books.

- Shneiderman, B. et.al. (2016). Guidelines, Principles, and Theories. pp. 81-120. Designing the User Interface: Strategies for Effective Human-Computer Interaction, 6th Edition