

Abstract:

Is waiting for a drink in a bar a problem? If at any point in your adult life you've entered a bar, pub or lounge, you have probably dealt with the problem of waiting to order a drink. It is a clumsy situation, where the bar is overcrowded and seats are occupied by other people you are standing at a corner in the bar trying to figure it out and in the counter, you have got the girl who's just standing there and can't figure out what it is she wants to drink, another guy ordering 12 shots of tequila for all of his friends, another guy who forgot his credit card and doesn't have any cash, all those people holding up the line in the counter. On the other hand, the bartender who is running between them, trying to keep everything straight. Meanwhile, your date's sitting alone by herself getting hit on while you spend 20 minutes trying to get her a raspberry martini.

Introduction:

To understand the problem and its context our team conducted brainstorming session of the topic. We have come up with points that we find necessary and related to the problem. Those points consist of our personal experience of spending time in the bar. After collecting and gathering all the necessary information, we ironed out all the similarity and came up with a set of lists with extensive points we believe suitable and representing our understanding of the problem topic. The summary is being stated below:

"so, you go to the bar to have some fun, to fulfill your needs of alcohol. you alcoholic - HOWEVER... you couldn't even get in - not because you're underage, just because there are too many people in this world. but you have your will, and you will thrive in or you will just be stranded outside - eventually you got in and this is what you wish for, nice calm and cozy place - NO! it feels like this... - ok forget it - now you just want to get a drink and gulp all the problem you have - all you have to do is go to the bar - ok now, where is it? - you found it and all you have to do is call the bartender and ask for your drink - but she is just keep smiling with another man - or they are just too busy - oh wait, do you even know what you want? too many options... - eventually, it's your turn - you're panic then you just order the 'usual' - while all you need is a bit of him, uhm I mean moët - then, your friends want to join and you need to reserve some seats - well good luck trying - so, what is happening?"

How do people adjust their waiting time in the bar?

- You need luck
- You have to be proactive to get the bartender attention
- You should know your drink to avoid any more delays
- You should be able to use your eye sharply
- Be prepared to wait long and/or apply the jungle's law, the strongest is the winner
- Keep it quick and pray
- Too tough to reserve seats for your friends

- Build up your frustration
- Expect to shout, shout for your drink

Literature Review

1. Table of information

Reference	Statement	Source
1	In Boston, there are more than a few bars that consistently have enormous lines sprawling down the sidewalk and around the block.	https://www.americaninno.com/boston/is-a-bar-ever-worth-waiting-in-line-for/
2	Peruse through the city on a Saturday night and you will see more lines than there are on Lincoln's face circa 1864 (or on bush's glass table circa 1979, zing!). The lines take a variety of different shapes and sizes, some orderly and single-file like we're 8 years old marching through the hallway on the way to music class. Other times we accumulate like an amorphous blob in the general area in front of the door, each person hoping they can osmosis themselves to the front without anyone else noticing.	https://idestfid.wordpress.com/2012/06/27/top-five-worst-lines-in-boston/
3	After the line? More lines! This is a phenomenon that I've never experience in any other city. Boston is the place in which you can wait in line outside the bar to get inside, and then wait in line inside the bar to get to another part of the bar. A line within a line within a line...Seriously? What makes you think I want to wait inside the sweaty bar just to walk down 10 steps to hang out in an even sweatier basement.	https://www.americaninno.com/boston/is-a-bar-ever-worth-waiting-in-line-for/
4	Some friends and I made an effort to stop by this past weekend, but after waiting in line for approximately three minutes, we remembered the one indisputable and age-proven rule about drinking: Do not wait in line for a bar. Not even once.	https://www.esquire.com/food-drink/bars/a53316/bar-lines-are-bad/
5	The average Briton will lose patience after waiting five minutes to be served at a bar, 13 minutes for a late train and 18 minutes for a friend to call back, a new study revealed.	https://www.telegraph.co.uk/news/newstopics/howaboutthat/11373010/Britons-lose-patience-after-waiting-five-minutes-to-be-served-at-a-bar.html

6	If at any point in your adult life you've ever entered a bar, pub, night club, lounge, or another fine watering hole, you've probably dealt with the problem of waiting in line to order a drink.	https://techcrunch.com/2012/11/01/coaster/
7	It's not the wait itself (a good 5 minutes, but my time's my own); it's the lack of acknowledgment that gets my goat. Even a nod or eye contact would do the trick.	https://retiredmartin.com/2017/07/23/queuing-in-spoons-ignored-in-pubs/
8	Now drinkers must wait in 'post-office-style' queues at their local pub.	https://www.dailymail.co.uk/news/article-1186986/Now-drinkers-wait-post-office-style-queues-local-pub.html
9	Drinkers in pubs are to be told to stand in a queue and banned from ordering more than two drinks at a time at the bar.	
10	People aren't going to want to drink if they have to queue up as if they're in the post office.	
11	Think about what you want to drink BEFORE it's your turn to order.	https://www.mirror.co.uk/news/uk-news/how-can-served-quickly-bar-6469119
12	In a world of smartphones, shortcuts and instant gratification, people refuse to wait for much these days. But for some reason, packing into a loud, dark drinking establishment on weekends is something people don't mind waiting hours for.	https://www.americaninno.com/boston/is-a-bar-ever-worthwaiting-in-line-for/
13	That mess gives me chills just thinking about it. Why do we subject ourselves to it? But more importantly, is a bar ever worth waiting in line for? No. For me, a bar is never worth waiting in line for.	
14	You came with friends. Maybe it's just me, but I'm not the type of person who goes out to bars looking to meet my next boyfriend, husband, best friend, maid of honor or any of the above. I go out to drink and dance with my friends. I can have fun with them at any bar.	
15	You Should Never Wait in Line for a Bar. Ever.	
16	If we look at our lives, there never seems to be an end of the possibilities to queue throughout the day. What facilities do we provide within our venues that could possibly cause people to queue? If we spend a moment	http://www.workingwithcrowds.com/the-thought-process-and-decision-making-ineffective-queue-managementsystems-life-at-an-event-is-one-long-queue-part-3/

	<p>and think about it, we can come up with a few. Here is a small list of some of the most common:</p> <ul style="list-style-type: none"> • Bars • Refreshment units/ catering units • Toilets • Cloak rooms • Merchandise outlet / retail outlet 	
17	In one of a series of memorable advertisements for which it has become justly famous, Federal Express (the overnight package delivery service) noted that: "Waiting is frustrating, demoralizing, agonizing, aggravating, annoying, time-consuming and incredibly expensive."	http://www.columbia.edu/~ww2040/4615S13/Psychology_of_Waiting_Lines.pdf
18	Sasser (et al) provide good examples of both managing the perception and the expectation of waiting times. For the former, they offer the example of 'the well-known hotel group that received complaints from guests about excessive waiting times for elevators. After an analysis of how elevator service might be improved, it was suggested that mirrors be installed near where guests waited for elevators. The natural tendency of people to check their personal appearance substantially reduced complaints, although the actual wait for the elevators was unchanged.	
19	As William James, the noted philosopher observed: "Boredom results from being attentive to the passage of time itself. (7) A more colloquial version might be 'A watched pot never boils'. The truth of this proposition has been discovered by many service organizations. In various restaurants, it is common practice to hand out menus for customers to peruse while waiting in line. Apart from shortening the perception of time, this practice has the added benefit of shortening the service time, since customers will be ready to order once they are seated and will not tie up table space making up their minds).	
20	A large part of the concern that we feel to 'get started' is due as noted above, to anxiety. In	

<p>the cases cited, the anxiety was about whether or not one had been forgotten. Anxiety can, however, come from other sources. Nearly everyone has had the experience of choosing a line at the supermarket or airport and stood there worrying that he had, indeed, chosen the wrong line. As one stands there trying to decide whether to move, the anxiety level increases and the wait becomes intolerable.</p>	
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From the table of information, we conclude that the topic related to the waiting in line for drinks does happen in the society and become problematic. This condition confirmed by the various sources claiming the same issue. The data retrieved from the references are opinionated therefore there are two points of view to the problem. In order to verify the claim from the sources, we relate them to a relevant research paper regarding the effect of waiting for people. Moreover, we also discovered that there is also a resemblance to the effect that occurs in the bar as well as in a pub, café, and another place that offer a similar service. The paper suggests that there is indeed a correlation between waiting and frustration. From this statement, we can take a connection between the frustration found in the references to why they behave as such. Several claims suggest that it is unfair for them to wait in line for a bar. By cross-referencing this statement to the paper, we can take a causal relation to what causes disappointment.

2. Causal relations table

After reading opinions in a blog post and other source media online, we can relate their opinions to the similar related paper and similar statements on why waiting can be frustrating for the customer. Below is presented a causal relation table by index, referring to the table of information:

Statement	Causal Relation
Reference 1	Related to reference 16.
Reference 2	Related to reference 1. There is a connection on how the line evolve in a different city
Reference 3	Related to reference 18 and 19. Reference 18 and 19 discussed the possibility and the impact of waiting in line and the unbelievable fact in reality where you have to wait in the bar.
Reference 4	Related to the reference 20. Reference 20 mentioned the effect of waiting that resulted in the statement mentioned in reference 4.
Reference 5	Related to reference 4 and 20.

	Reference 4 similar to the reference 5, which hold firm the statement that waiting could lead to frustration and affecting the decision to leave the bar.
Reference 6	Related to reference 1, 2, 5. Reference 6 is the initial statement on the waiting line in bar and pub.
Reference 7	Related to reference 17 and 19. There reference 17 and 19 discussed the frustrating and how demoralizing waiting is in the bar. Reference 7 stated that it is unfair to wait in the bar and as little as nodding is considered as a sign of acknowledging that is lack of in a bar.
Reference 8	Related to reference 1, 2, 3, 4. Reference 8 is backing up the statement in the previous statement which arguably the result of waiting in line.
Reference 9	Related to reference 16, 17, 18, 20. The references discussed the cause of the statement mentioned in reference 9 related the frustration in the ordering affecting the rule of the bar which inflicts the nature of the bar.
Reference 10	Related to reference 1 and 20. The statement in reference 10 is an example of an impact caused by the waiting in lines introduced by the statement in reference 1 and another similar reference which hold the statement.
Reference 11	Related to reference 18 and 19. The statement in reference 11 referring to how the waiting lines should force the customer to have knowledge in mind. This is an implication caused by the frustration, which introduced in statements in reference 18 and 19.
Reference 12	Contrary to statement introduced in reference 3 and 17-20. The statement in reference 12 argues that customer doesn't bother to wait in the age of technology, which is an interesting point.
Reference 13	Related to reference 18-20. The statement in reference 13 is questioning the reality of waiting in line for drinking in a bar.
Reference 14	Similar to reference 13, which related to reference 18-20.
Reference 15	Related to reference 20 Reference 20 discussed the effect of the waiting to the frustration, therefore the statement in reference 15.
Reference 16	Base reference for reference 1, also discussed in reference 17, referring to waiting is frustrating and time-consuming.
Reference 17	Related to reference 18
Reference 18	Supporting the statement introduced in the previous references related to waiting in line.
Reference 19	Supporting the statement introduced in the previous references related to waiting in line.
Reference 20	Supporting the statement introduced in the previous references related to waiting in line.

Context of Use

To identify user opinions and do market research we concentrate descriptive, analytic and ethnographic research to get user response for our problem statement.

1. Questionnaires

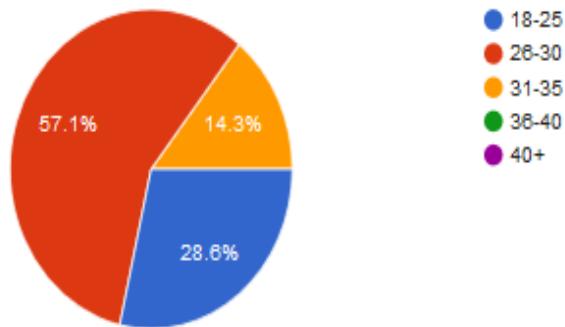
To dig down of the problem statement we had to analyze the people perception regarding the problem. To understand better from the users' personal experience we prepared questionnaires for interviewing our target user group. The interviews have been rolled out on [Google Sheet form](#). I have stated below the details of our questionnaires procedure and output of the interviews.

Consent form

QUESTIONS	RESPONSES	36
<h2>Drink ordering experience in a bar or pub</h2>		
Dear participant,		
First, thank you for your interest! Before the experiment starts, it is important that you are informed about the procedures. Therefore, we would like you to read this information letter carefully. Please do not hesitate to ask for clarification about this text or the general procedure. If anything might be unclear, the researcher will answer your questions.		
Goal of the study		
The purpose of the survey is to analyze the challenges, that users face during visiting a bar and waiting time to order a drink. The data collected from participants will be used in the better understanding of current problems that people are facing during placing a order in a bar and later on implementation of the solution .		
Procedure		
We ask that you complete the following questionnaire. The whole procedure will not last longer than 5 to 10 minutes.		
Voluntary participation		
There are no consequences if you decide now not to participate in this study. During the questionnaire, you are free to stop participating at any moment without giving a reason for doing so. You can withdraw your permission of your answers and data to be used for this research within seven days after your participation. If you choose to withdraw your participation, your data will be deleted permanently.		
Discomfort, risks and insurance		
As with any research at the Fraunhofer FIT, Sankt Augustin, NRW, Germany a standard liability insurance applies.		
Your privacy is guaranteed		
Your personal information (about who you are) remains confidential and will not be shared without your explicit consent. Your research data will be analyzed by the researchers that collected the information. Research data that are published in scientific journals will be anonymous and cannot be traced back to you as an individual. Completely anonymized data can be shared with other researchers.		
Compensation		
There will be no compensation for your participation.		
Further information		
If you would like further information on this study, please contact the researcher Hasan Mosharrof (Contact No: +49-17647680184, email: hasan.mosharrof@rwth-aachen.de). For any complaints about this research, please contact the research supervisor Sarah Suleri, User-Centered Ubiquitous Computing , (Fraunhofer Institute for Applied Information Technology FIT Schloss Birlinghoven, 53754 Sankt Augustin, GERMANY, Phone:(+49) 2241 / 14 - 3628 FAX:(+49) 2241 / 144 - 3628, Email: sarah.suleri@fit.fraunhofer.de)		
Thank you. Hasan Mosharrof (hasan.mosharrof@rwth-aachen.de) Christian (christian.simarmata@rwth-aachen.de) Faria Shams Elly (faria.elly@gmail.com)		

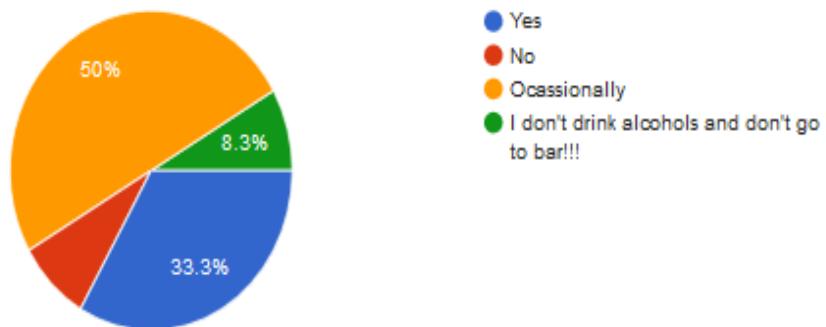
Which age group do you belong?

14 responses



Do you visit the bar for having drink?

36 responses



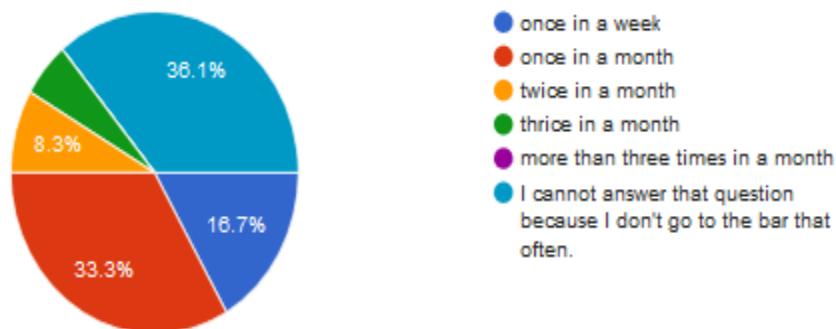
QUESTIONS

RESPONSES

36

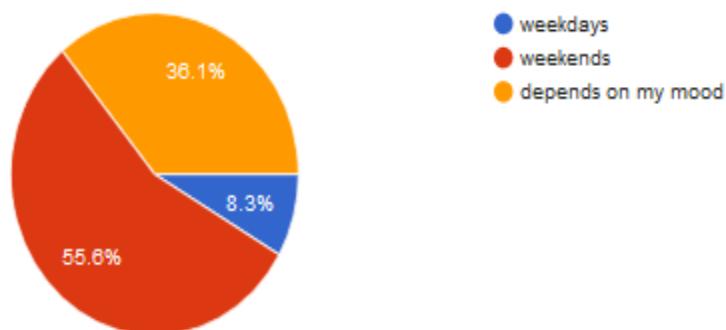
How often do you go to the bar?

36 responses



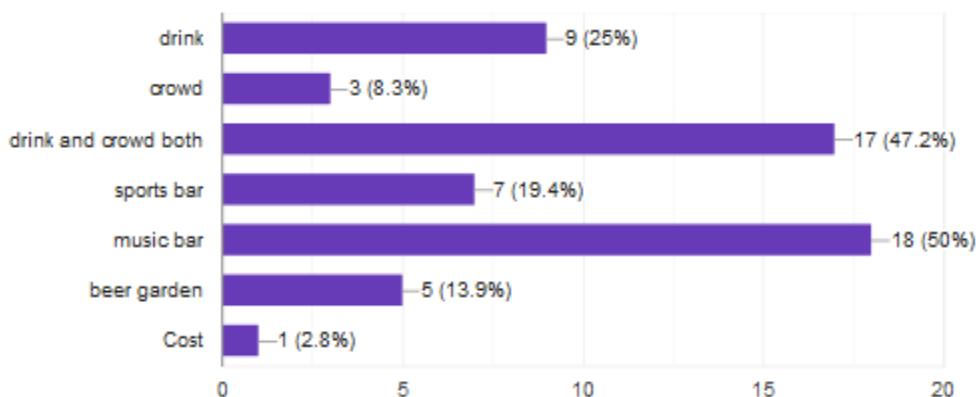
When would you most likely to go to a bar?

36 responses



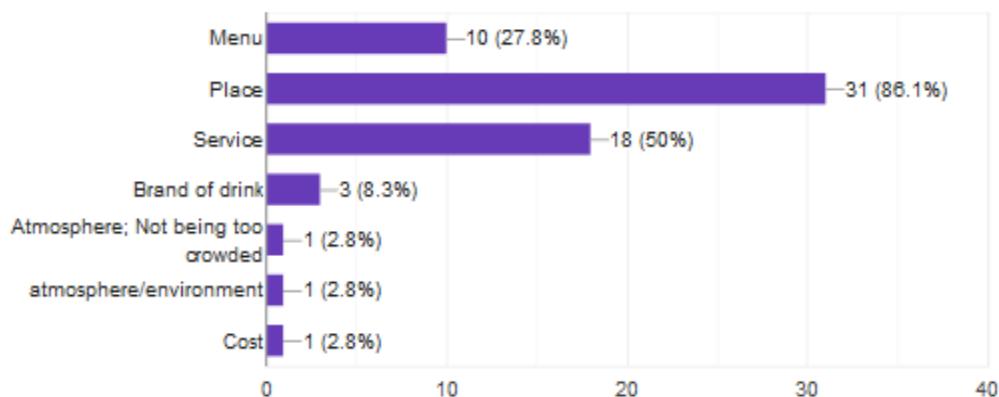
When choosing a bar, what do you consider the most important?

36 responses



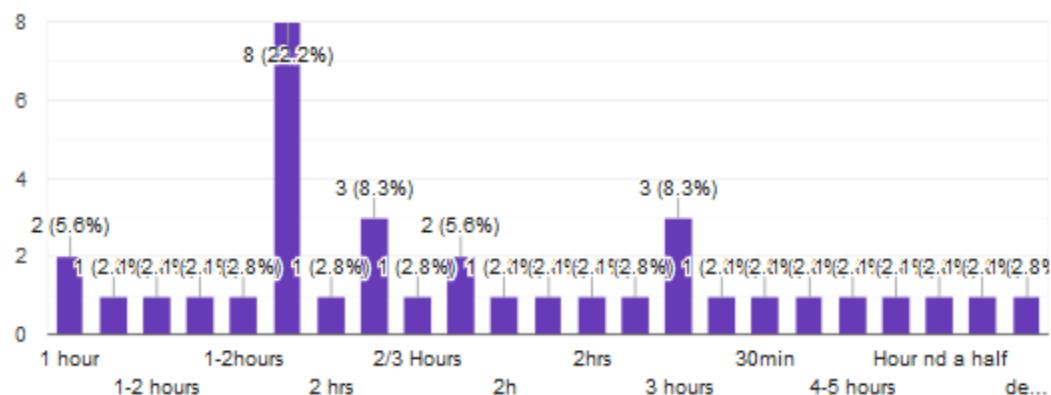
What are the important criteria for you to come back to a bar?

36 responses



How long would you generally spend in a bar before leaving?

36 responses



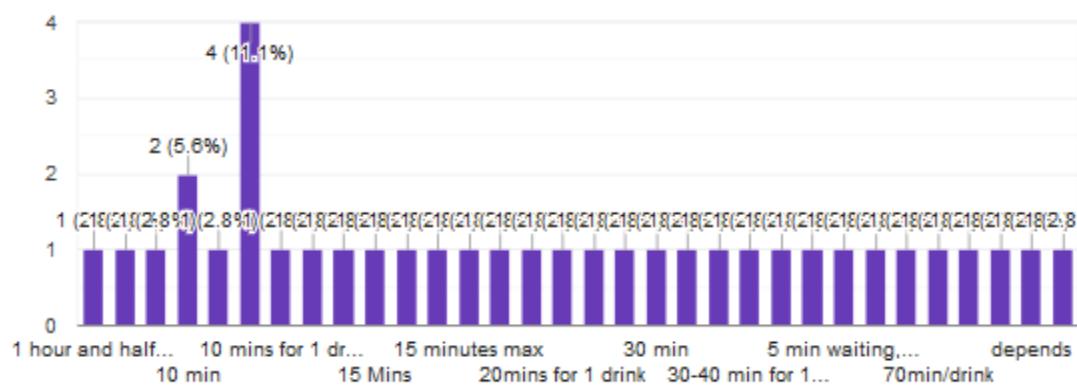
During the time in bar, how much drink or beverages you typically consume?

36 responses



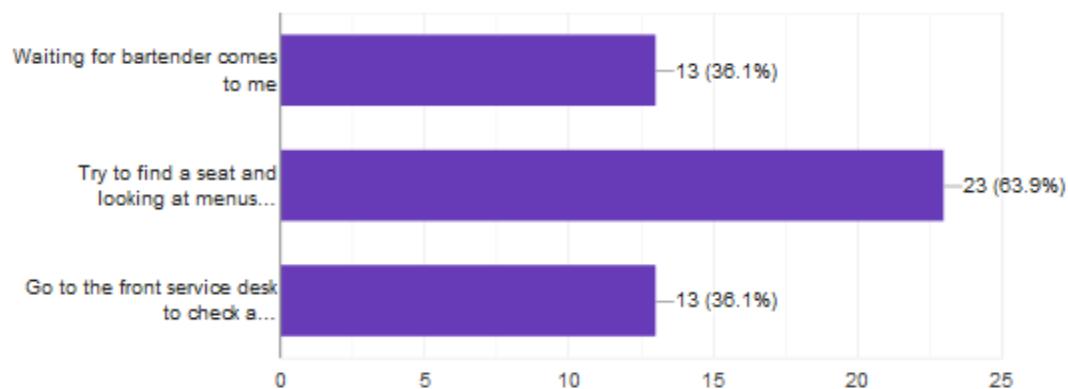
How much do you think the best ratio of you waiting and enjoying your beverages? e.g. 30 min waiting for 1 drink, etc

36 responses



When in bars, what do you usually do to get a drink?

36 responses



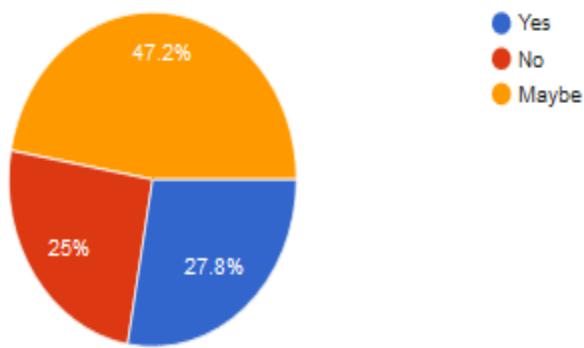
QUESTIONS

RESPONSES

36

Do you think waiting for ordering a drink in a bar is a problem?

36 responses



How do you usually do during the waiting time?

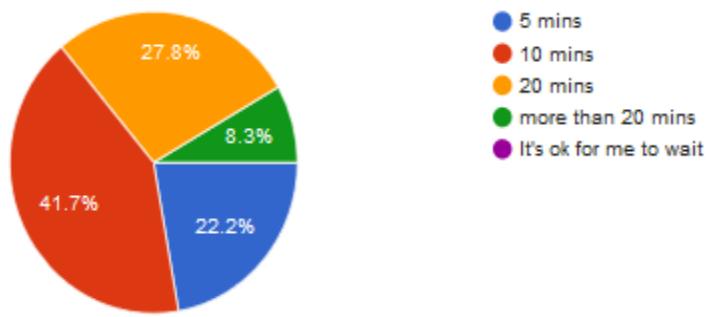
36 responses



▲ 1/4 ▼

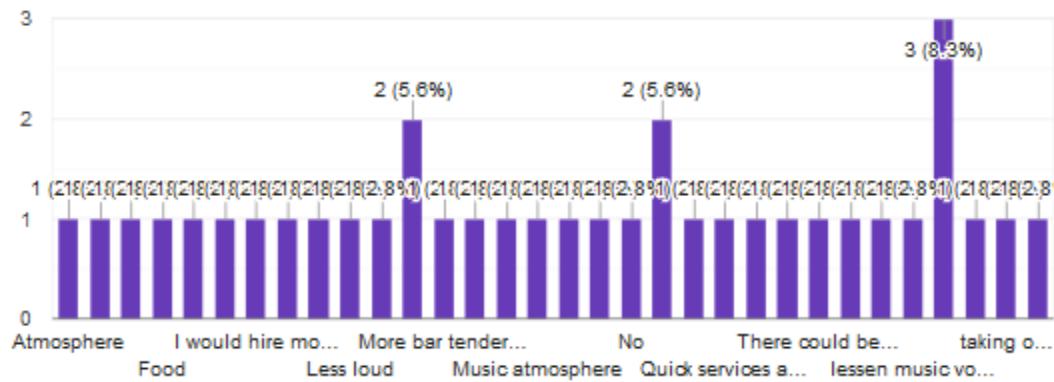
How long do you consider late for you to wait until the bartender come to get you?

36 responses



Should you change anything in the bar you visited, what would it be?

36 responses



According to the user response 24% think 'waiting for a drink in bar' is a problem, 48% still not sure and 28% think it is not a problem.

2. Observation

Observation held in Bönnsch in Bonn at 17:30 pm on Friday 09.11.2018

Subject	Observation
Man 1	<ul style="list-style-type: none"> • He got into the bar, checking his surroundings • Chose a seat in the bar (directly near the bartender) • The bartender came to the man and talked • The man got a menu, the bartender went away • The man read the menu for approximately 10 minutes • He called the bartender in his sight • Order the drink and beverages • He waited for approximately 23 minutes for his order to come • During his wait, he used his phone • He ate and drink his food • He finished his drink and played with his phone again, approximately 35 min • I couldn't see how he paid
Man 2	<ul style="list-style-type: none"> • Similar to Man 1 • Choose to seat in the bar, not the table • Directly talk with the bartender onsite • There is a different time 10-20 minutes for each step due to crowd • The man paid the bill once he got the food
Man and Woman	<ul style="list-style-type: none"> • The man and woman chose a seat in a table with 4 seats • They talked until the waiter came to their table, approximately 7 minutes • They got a menu and the waiter went away • The man called the waiter and ordered • Their food and drink came after approximately 25 minutes • They ate their food and drink for about 25 minutes • The man called the waiter again by raising his hand • A waiter got the signal, while he was cleaning/ preparing a table and rushed to the man • Either he ordered a new item or paid the bill • I lose them because I had to move
4 Women	<ul style="list-style-type: none"> • The four women already in the bar while I observed • Food and drink already in their table • I observed them for 45 minutes until I left, they just talked. • I left the bar because it was already almost 3 hours and I only order 2 glass of beer

3. Focus Group Summarize

Subjects: Isha, Owais, Nishit, Natalie, Farhad

We conducted a focus group consisted 5 people from a different perspective and experiences in related to the waiting in bar, pub, café. The purpose of the focus group is to get a deeper understanding and information related the phenomena and how do most people behave in the situation. In the focus group, we asked a very particular question about how they behave in the bar when they have to wait for a menu. One comment stated that usually in Germany they have a menu in the table, so they can get this information even before they meet the service person in the place, therefore less waiting time to get the menu. Another comment also stated to support the comment, that most of the times this condition is very crucial because usually, their menu is usually changing from day to day suggesting that it is not possible for them to order the ‘usual’ every time they come to the bar. For the time limit of them waiting are vary, but the participants agree that yes, it is indeed frustrating for them to wait for the service to deliver. In this particular condition, they mentioned for almost every task that requires their assistance. For example, getting utensils, order, bills, and some other things that only could be delivered by the service provider in bars. One comment also mentioned about his frustration when he needed assistance, but the service provider just walks pass by without noticing and bothering to his way of seeking attention. Another comment also mentioned the similar that this is frustrating when they have to do a certain thing such as catching the bus, but the service provider couldn’t deliver the task immediately. In regard to ways of catching attention, their answers also vary, some of them are comfortable to be vocal about it, some of them are shy and utilize the ‘mind’ game, where they want to catch their attention by staring at the service provider. For conclusion, we agree that this is actually a problem and also a frustrating situation where there could be improvement made.

4. Interview

To get more concise perception from users each of our group members took 3 interviews individually to analyze the user needs for proposing a solution which may scope the problem.

Interviews Taken by Hasan

Interview_01

Name: Mia Simo

Profession: Student

Summary

Mia is a Dominican Republican lady finished her Master’s in Germany. She usually goes to the pub or bars two times a week. She prefers to go weekdays as she doesn’t consume too many beverages. She pretty often goes with her friends and likes to select a musical bar especially who has karaoke events. Sometimes she has hard luck to find seats in the bar then she selects the most available option unless there something special event is going on in that particular bar. To select the drink from the menu is her utmost challenge. Most of the time she finds the menu book isn’t available on the table and she needs to go to the service

desk to order her drink. Waiting 10 to 20 minutes isn't a problem for her at all as she is surrounded with friends but which irritates her most is the inaccessible menu in the table and she tastes the same drink.

Interview_02

Name: Mohammad

Profession: Student

Summary

Mohammad is a Palestinian guy doing his Master's in Germany. He usually goes to the bar or pub once a week and mostly on weekends with his friends. He doesn't bother to order the drink from the front service desk cause he can easily take the advantages of his height to draw the attention. Sometimes he finds that language is a problem to talk and get the suggestion from the bartenders as well as from the menu.

Interview_03

Name: Abhijit Das

Profession: Student

Summary

Abhijit is an Indian guy doing his Master's in Germany. He usually goes to the bar once in a month, pretty most weekends. Sometimes depends on any party or event he also visits the bar in weekdays as well. He prefers sports bar where he can watch matches and having the drink with friends. According to his previous experiences, he couldn't properly communicate with the bartenders to get similar kind drink suggestions within his previous order range because of the language barrier. Sometimes order drink from the front service desk is also irritating for him as he finds that he is waiting too long in there to get his service.

Interviews Taken by Christian

Interview_01

Name: Henry Murphy

Summary

The subject confirmed that he usually goes to the bar for several occasions. From the subject's information, we got that usually, it took him about 5 to 7 minutes after entering the bar or pub or club, before someone notices him and offers help. If after that time limit there is no one notice him, he chose to not bother the waiter/waitress because he finds it rude to shout or snap fingers at people. Instead, he will wait and try to wait patiently while trying to make eye contact with the waiter/waitress available. The subject also mentioned that in Germany, usually, the service is very good with a friendly waiter/waitress maybe because of the tipping culture. As he stated, if they do a good job, they will be rewarded with a tip. He also mentioned that it is usual to find bars with menus available in every table, therefore easy for him to search for the food and beverages he wants. Even that is not the case usually, he will just wait for someone to give him the menu, which the condition refers to the initial statement related to waiting. The

subject mentioned that he is not a very active person in terms of getting the waiter's attention, instead, he will try to do an unobtrusive way to get their attention, as he said, using mind power. He also agreed that waiting in the bar is frustrating especially when you are alone

.

[Interview_02](#)

[Borishov Mikhail](#)

Summary

The subject provided information related to his behavior in case of waiting in a bar or café. The subject is more active in terms of taking action if in case he is not able to get any service. He didn't take too much consideration for leaving the place if he finds it necessary. His time limit is 15-20 minutes without service. There is also some consideration if the place is nice, he wouldn't mind waiting longer but if the place is crowded, not so nice, he will definitely leave the place. However, during the waiting time, he will attempt to call the waiter for service. However, as he mentioned, sometimes they are so busy and made the situation frustrating.

[Interview_03](#)

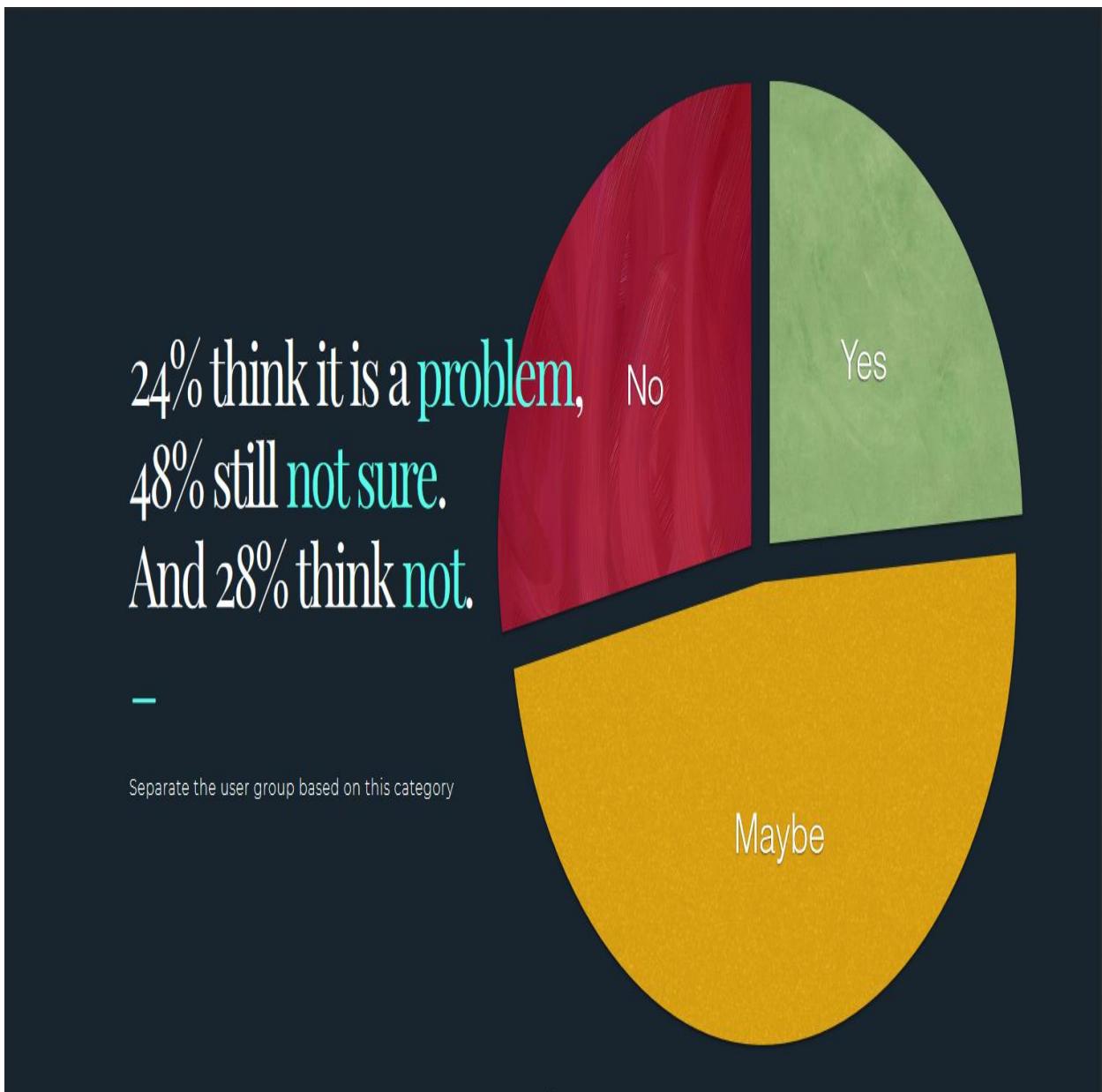
[Mohammed Ijaz](#)

Summary

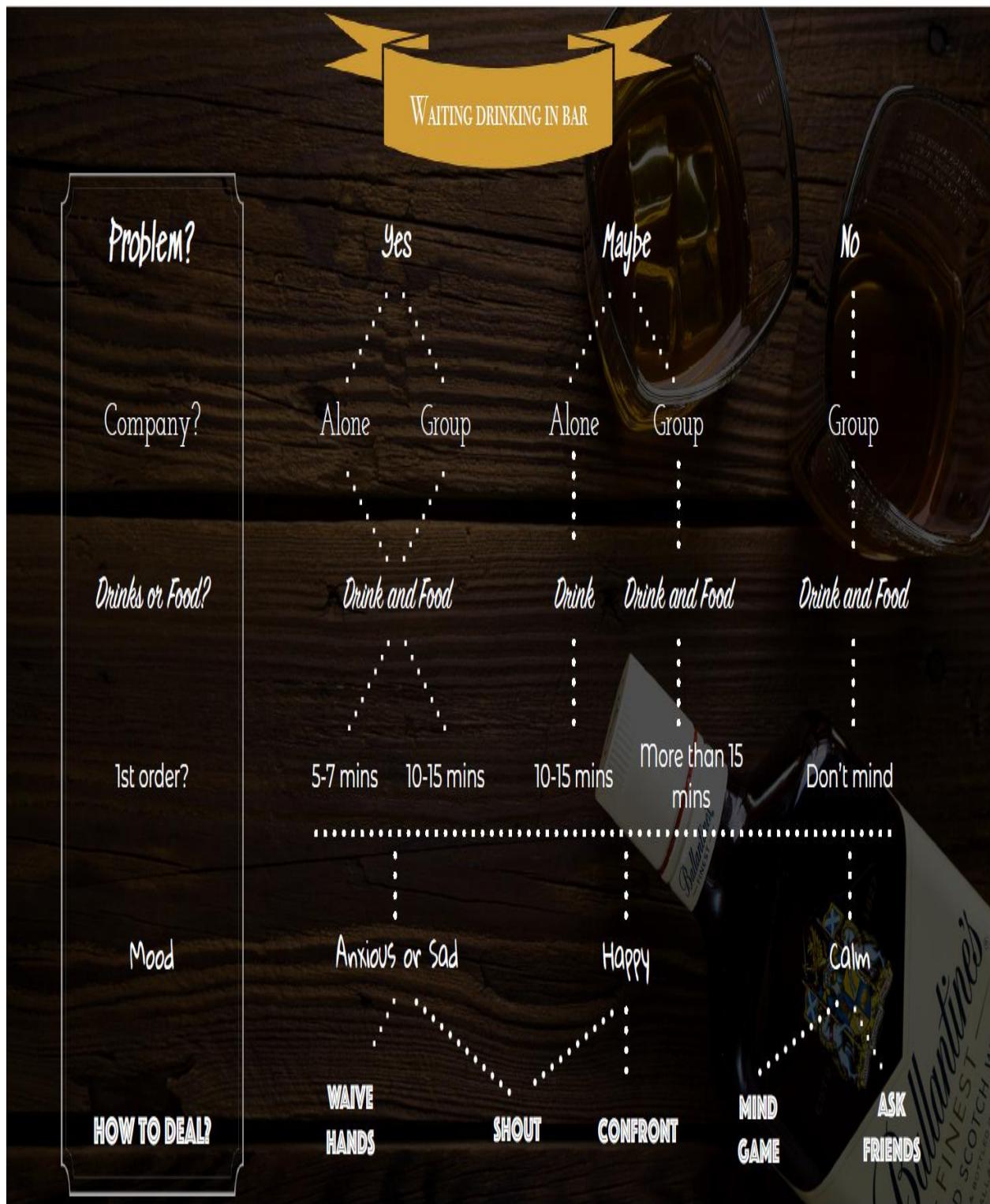
The subject gave information related his habit when he visits a bar, pub, or café. He stated that when visiting bars, it is alright for him to wait for quite some time, as long as he could get a proper place. However, usually, this doesn't apply when he is in a hurry or he is hungry. Similar to subject 2, he will decide to leave the place if he found it not worth the wait. He wouldn't bother to wait any longer, or to call the waiter if he already waiting for so much time. However, this is tolerable if he is waiting for his friend. In that case, he wouldn't mind if no one is coming to him. He also has this time limit in his head for when he will take further action. The action could be calling the waiter by waving hands, call them by raising his voice or come to him in person. He finds it frustrating if he is waiting too long for tasks that shouldn't be there in the first place. Such as waiting for his already ordered drink or food, or when the waiter forgot his request.

Categorizing information and define a user group

Separate the user group based on their answers from our ethnographic approach which include survey questionnaires, observation of people, focus group discussion and user interviews. As a result, we found 72% of the people in our dataset agreed with us waiting for a drink in a bar' is a problem. In this step, we categorizing all users information to define our user group.



1. User Diagram



2. Affinity Diagram

Classifying our user opinion and we create the affinity diagram. User Diagram provides information to create the affinity diagram.



3. Persona

Persona for people those like hanging out with friends



Alex Murphy

27, Student, Working Student

"Let's have some fun together!"

Aspirations

"Spending time with friends is a must. I like to have someone to share my thoughts."

Occupation

Alex is a Ph.D. student doing Life Science. He spent half of his day in university and another half in work. He works in a lab where he also prepares his thesis.

Characteristics

He is a very easy going person. Love to hangout with friends. It is hardly to see him alone. There will always be at least one person with him.

Mindset

Spending time doing his chores as a student and working student is a blast for Alex. He loves meeting new people. He goes to the bar always with friends and the kind of person who like to tell stories. Alex enjoys dancing while waiting for his drink or food in bars. He could spend 30 minutes talking to strangers without ordering food or drinks first.

Needs

When going to the bar, it is fine for Alex to wait for his order to come. Because he doesn't find it a problem when the bartender busy with their stuff.

However, it's better to have something to do in a bar, rather than just sitting around doing nothing.

Frustrations

He hates it when he needs to go somewhere alone. Even though he could always open up with talking with new people.

But still it's better to know you have someone with you.



Favourite Drinks

Love red wine and enjoy doing shots



Favourite Food

Anything with potatoes is his favourite. Enjoys Italian foods



Favourite Entertainment

Enjoy dancing, music, cooking Instagram, Facebook

Persona for people who likes going alone



John Sebastian

25, Student, Working Student

"I love to have some me time, but it doesn't hurt when you have someone to talk to"



Favourite Drinks

Beers when alone and with friends
Cocktails if necessary



Favourite Food

Anything contains meat
Potatos and barbecue sauces



Favourite Entertainment

Enjoy music, social media
Instagram, Facebook

Aspirations

"It would be great if I can go to the bar and enjoy my time with my drinks without bothering about talking to people."

Occupation

John is a student and currently working in a company as his side job. He needs his me time during the heavy days and enjoying his drinks in bars.

Characteristics

He is a very punctual person and responsible of his actions. Constantly focused on his job even when he's out of the office.

Mindset

A couple of times a week John will go to the bar to enjoy some drinks. Sometimes he goes alone or with his friends. However, he hates it when he needs to wait and do socialising in the bar where he wants to have some alone time. He has a hard time to deal with a crowded bar, especially when alone. John wants some quick release with his drinks, without thinking too much of anything else.

Needs

John needs a fast method of buying drinks without worrying of waiting in lines, or waiting for bartender.

Frustrations

He loses time waiting for menu and drinks and sometimes he misses his order.

He also wants to have a peaceful place when he needs to wait for his friends without anyone bothering him.

Also he is angry when there are no bartenders available for him and he has to put effort to get their attention.

4. Context Scenario

We created stories for our persona, to show an idea, how people deal with the situations.

Task 1: Go to a bar to drink and to have some alone time.

Goals: John need to enjoy his alone time.

John is a very busy person throughout his whole day. He needs his personal time to be relaxed and enjoy drinks in a bar. Most of the time he goes to the bar alone on weekdays. As his usual routine, he goes to a bar, enters and looks for a quiet place to sit and enjoy his drinks. Unfortunately, the bar is usually overcrowded. He tries to call the bartender, but no one notices. He then decides to check his works and in order to do that, he has to switch on his laptop, though he really hates to do works in his leisure time. Anyway, 15 minutes passed but still, no one comes to check him. He gets frustrated and tries to get the bartender's attention by doing hand waving and one bartender notices and comes to get his order. He orders a glass of beer quickly. Not taking too long, his beer comes. He is enjoying the drink but because of the overcrowding, it is quite irritating. After about one hour, his drink is finished and again the same thing happens. He wants to order his second round. He is thinking "should I call the bartender again? What if I have to wait again for a long time? or Should I go to the counter and order in person?" He finally makes his decision to go to the counter and order directly. He is not in a mood to try seeking the bartender's attention. Unfortunately, the same story happens. He has to wait there because of the long queue. However, he goes back to his sit and tries to call the bartender to order his drink.

Task 2: Go to a bar and never mind waiting for a drink.

Goal: Alex wants to have some fun with his friends.

Alex is a Ph.D. student and already staying in Germany for a long time. He is a very cool, friendly and loves to go to parties. Whenever he is available, he will go to a pub, club or a bar to have some drinks. Sometimes with his friends and colleagues. He often tries to go to a new bar or a pub. After entering the bar, he usually sits near the counter but unfortunately that day he couldn't get any seat available. He sits at a table and tries to call the bartender. He is very spontaneous about trying to grab the bartender's attention for his orders. Though he waits for about 10 minutes to be noticed, it is perfectly okay for him to wait there, because he thinks bars are a busy place. In the meantime, he tries to talk to people around him. Thus, Alex got a lot of new friends from the bar. According to him, it's interesting to know new people. Moreover, they are experiencing the same situation, waiting and lost in the crowd. By that time, he gets his drink and still talking with others there. After his second glass, he is looking for the bartender for his 3rd drink but he couldn't find anyone around him. So, to kill some waiting time, he decides to go to the dance floor and start dancing. Because it's better to have fun with the crowd and enjoy the music than waiting for your order. Although he never minds waiting in a bar, sometimes it's also frustrating for him when he needs to spend more time for every drink, and he has to wait for 15-20 minutes just to get noticed.

Task 3: Go to a bar alone and wait for friends to join.

Goal: John and his friend are having a party and look for a nice and cozy bar.

As we know that John is the kind of a person who enjoys his alone time but sometimes, he still goes with friends to hang out and chill in the bar. Most of his friends are service holder so he planned to hang out at weekends in their regular bar. John is very punctual about timing, so he goes there at 10 pm sharp. Therefore, he usually arrived sooner than the other. His friend then told him to take sits for them and wait. He enters the bar and asks the bartender about a cozy and quiet place for six people. However, all the tables are occupied, and he is asked to wait for about 10 minutes. While he is waiting, his friends arrived. But the problem now is that the bartender isn't available, and they have to either call or wait for the bartender to come. The bartender finally shows up after 15 minutes of waiting. One bartender comes and tells them that the table is still occupied. However, they can merge 2 tables and be ready for six people. At that moment, the place is not so quiet anymore and there are a lot of people in the bar. John doesn't quite like a crowded place even when he is with his friends and still prefers a quiet place. So, they left for another bar and luckily, they got a nice place to sit. Now comes to order their drink. The bartender comes after they sit down. They then order their usual drink and two of them order a random drink from the menu. They are chilling there, gossiping and all of them decides to have tequila shots. They order and wait for their shots, that time the bar was getting crowded and there are fewer bartenders. So, it is taking some time for them to get their order. After about 15 minutes they get their shots. Unfortunately, one glass falls down and they have to call the bartender. His friend then goes after the bartender for help. John and his remaining friend are waiting for the replacement shot because they want to do the cheers together. After about 5 minutes of waiting they finally can do their cheers and enjoy their shots.

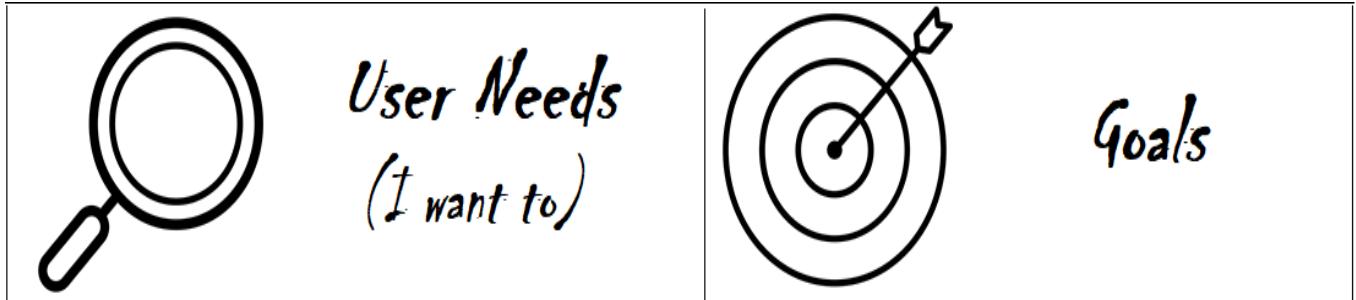
In conclusion, there are people who love being alone, always hanging around with friends. But all these depend on the mood.

User Stories

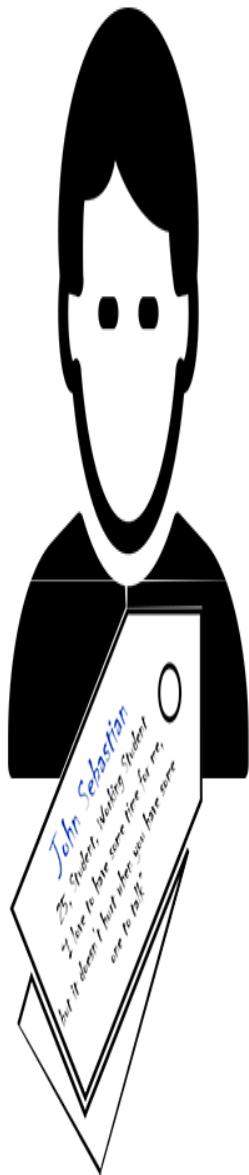
User stories are part of an agile approach that helps shift the focus from writing about requirements to talking about them. **User stories** are short, simple descriptions of a feature told from the perspective of the person who desires the new capability, usually a user or customer of the system. They typically follow a simple template:

As a < type of user >, I want < some goal > so that < some reason >.

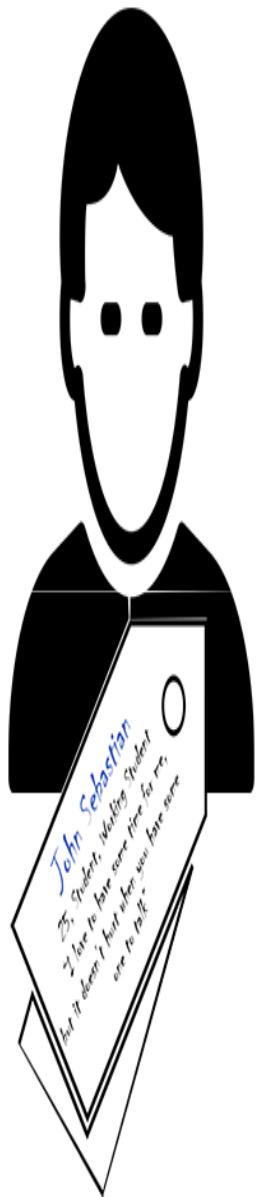
In our problem statement “Waiting for a drink in a bar” we have identified 33 user stories. All the user stories are shared in the attached excel file.



- be relaxed and enjoy drinks at a bar
 - sit at a corner in bar
 - call the bartender
 - order couple of drinks
 - order the drinks from counter
 - change my drink types
 - check the list of available drink
 - get an empty seat
- so that
- I can enjoy my personal time
 - I can enjoy my drinks
 - I can place my drinks order quickly
 - I can feel relaxed utterly.
 - I could access the menu of all available drinks
 - I could enjoy different savor.
 - I could order the drink.
 - I could sit in the bar.



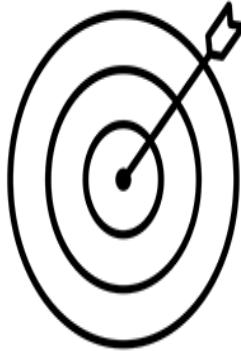
- order a drink or food
 - visits pub or bar with friends or colleagues
 - order drinks when it's finished
 - visit the bar in weekends
 - get the service by avoidable intervals from the bartenders
 - place my order without talking with the bartender
 - wave or call the bartenders
 - sit in a quiet and cozy place
- so that* →
- I can enjoy my time.
 - I could have a great time with friends.
 - I can enjoy the moment without intervals.
 - I could enjoy time with friends.
 - I can keep balance my time in bar with friends and in my home as well.
 - I can avoid my discomfort talking with unknown people.
 - I can place my order.
 - I can have fun with my friends.



- visit the bar with friends
 - access the menu in multilingual option
 - select musical bars
 - access the menu availability on the table
 - access the menu availability on the table
- so that**
- I don't have to face difficulties for ordering because of the language barrier.
 - I can order the drinks without my friends help because of language barrier.
 - I can enjoy the karaoke events with my drinks.
 - I don't have to go to the counter to place my order.
 - I don't have to taste the same drink.



User Needs (I want to)



Goals



- visit the bar in weekdays
- use gadgets
- try new bar or pub
- talk with people in bar
- know whether the bar is overcrowded or not
- pay my bills without waiting
- visit the bar two times in a week
- visit sports bar
- order the usual drink first
- visit the bar with my partner
- go to the dance floor and dance

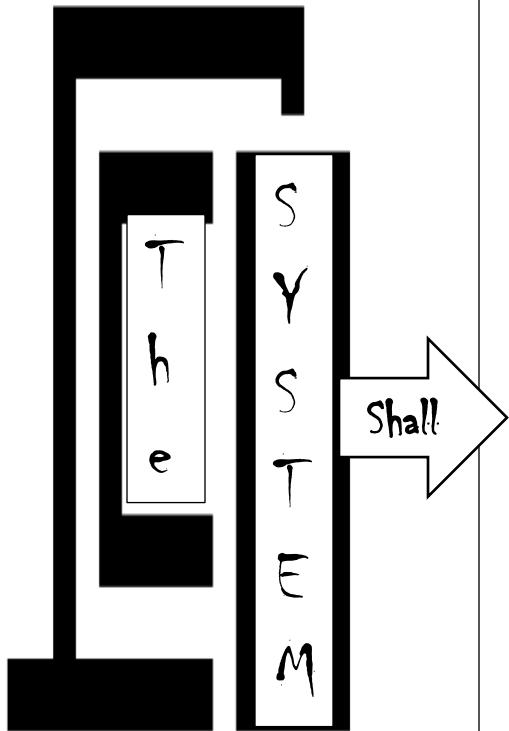
in order to

- being refreshed from toil.
- avoid tedious waiting time.
- change the flavor and enjoy different environment
- being socialized and make friends.
- avoid waiting in long queue or standing at corner for grabbing a seat.
- avoid missing the public transport.
- being refreshed.
- watch matches and having drinks with friends
- avoid the waiting time.
- enjoy quality time.
- avoid waiting time.

User Requirements

Analyzing the user story we have concise our users requirements. All these are functional requirements.

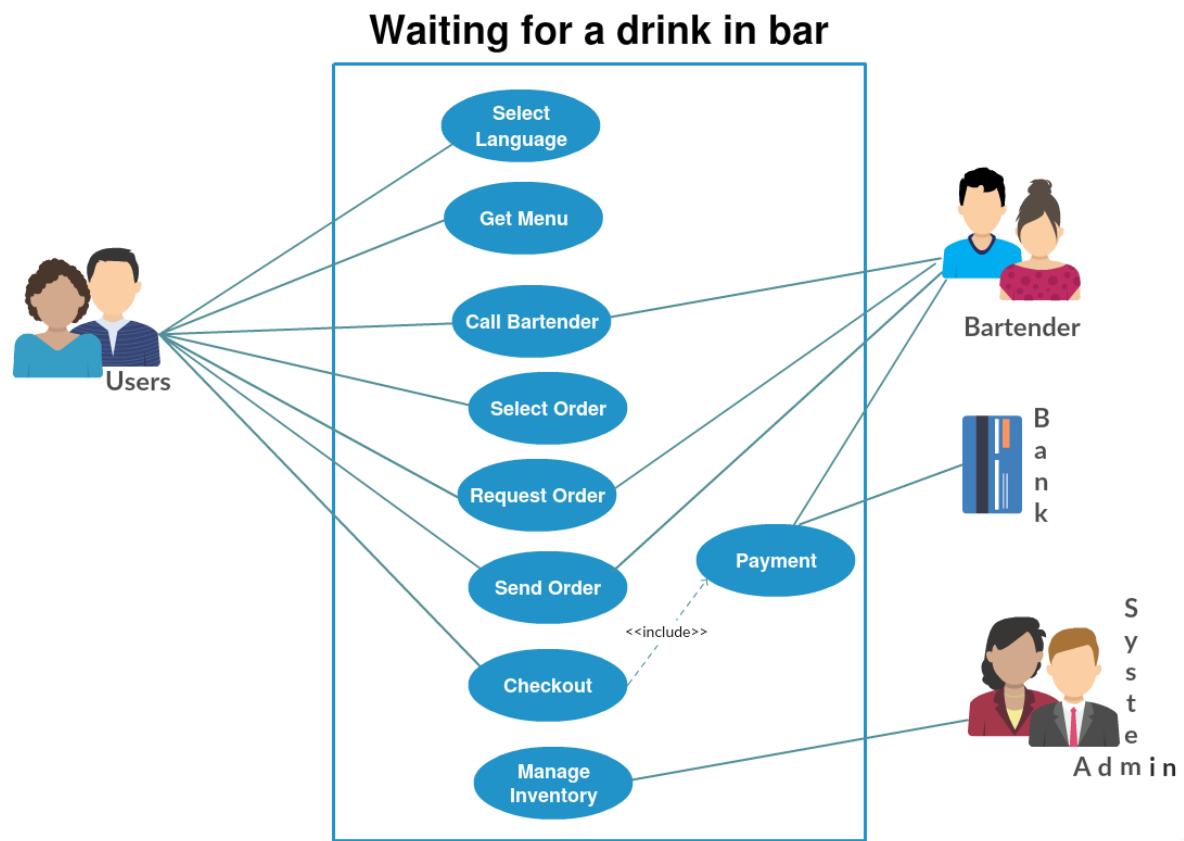
For the problem of **"Waiting for a drink in a bar"** users' requirements are:



- identify the corner sit in the bar
- notify the user about no of available seats in the bar.
- assist to call the bartender.
- be able to take multiple order of drinks and foods.
- help the user to order while sitting in counter as well.
- take different types of drinks and food order.
- inform whether the drinks are available or not.
- find the empty seat for the user in the bar.
- take the order of drinks.
- reserve the table for the users and having good time with friends.
- inform the user about new bars and pubs.
- keep users' attention to use it as gadget.
- be able to identify people availability.
- able to identify user drinks status for preparing the next order.
- able to identify bars available on weekends.
- be able to inform bartender availability to avoid queueing times
- be able to accept user's order.
- be able to identify the bar condition in terms of crowd to avoid queueing.
- be able to accept payment from user to avoid wasting time for payment.
- be able to provide drink list in multiple language.
- be able to inform user to go to the bar 2 times a week.
- be able to inform available musical bar near user.
- be able to accept order from user directly from the table.
- help the user to interact with people in the bar.
- help the user to order the usual drink first.
- be able to have payment methods.
- The system shall provide the available bars options to watch sports.
- The system will provide information about the bar types whether it has dancing facility or not.

Use Case Diagram

Use case diagrams are usually referred to as behavior **diagrams used** to describe a set of actions (**use cases**) that some system or systems (**subject**) should or can perform in collaboration with one or more external users of the system (**actors**). From user needs and requirements analysis of ‘Waiting for a drink in a bar’ problem following use case, subject and actors are identified.



Use Cases

- Language Selection
- Menu
- Notify Bartender
- Meu Selection
- Order Request
- Checkout
- Payment
- Inventory

Actors: **Users, Bartenders, System admin, Bank.**

Use Case Description

Name	Choose language
Id	UC_01
Actors	User
Organizational Benefits	Increase the language options by helping the customers to order that he is interested in.
Frequency of use	100% of the users from different languages people use to select language option for orders
Triggers	The customer selects the options to change the language for order
Preconditions	User is viewing this language option in the system
Post conditions	All the available languages will be shown to user to select one language for order options
Main course	<ol style="list-style-type: none"> 1. System prompts the user to confirm selected language 2. User confirm to save the selected language 3. System shows the options in the selected language
Alternate courses	System shows the options for choosing language
Exceptions	<p>User decided to get the menu</p> <ol style="list-style-type: none"> 1. See "Get Menu" from use case <p>System fails to choose the language</p> <ol style="list-style-type: none"> 1. Notifies the user that an error occurred 2. Return user to select and confirm language again

Name	Get Menu
Id	UC_02
Actors	User
Organizational Benefits	Increase the orders by helping the customers to get the menu
Frequency of use	80% of the users use the menu options to select theirs drinks.20% likes to see the menu by going to the counter and order
Triggers	The customer selects the menu options to see the menu
Preconditions	User is viewing menus in the system
Post conditions	The whole menu will be shown to user to select for ordering options
Main course	<ol style="list-style-type: none"> 1. System cause the user to get the menu 2. User confirm to save the items/drinks 3. System shows the menus to select orders
Alternate courses	System shows the options for getting the menu
Exceptions	<p>User decided to choose orders</p> <ol style="list-style-type: none"> 1. See "choose order" from use case <p>System fails to choose the selected items</p> <ol style="list-style-type: none"> 1. Notifies the user that an error occurred 2. Return user to select and confirm the items again

Name	Call Bartender
Id	UC_03
Actors	User
Organizational Benefits	Increase the sales by helping the customers to call the bartender for placing the order
Frequency of use	Almost every user wants to call the bar tender to place an order. 5% may like to be noticed by the bartenders
Triggers	The customer selects the option "call the bartender" to call for order
Preconditions	User is viewing the option in the system
Post conditions	All the available bartenders name will be shown to user to call for placing orders
Main course	<ol style="list-style-type: none"> 1. System prompts the user to call bartender 2. User call the selected bartender to order 3. System shows the options to call bartender
Alternate courses	System shows the options for calling bartender
Exceptions	<p>User decided to order now</p> <ol style="list-style-type: none"> 1. See "request order" from use case <p>System fails to call the bartender</p> <ol style="list-style-type: none"> 1. Notifies the user that an error occurred 2. Return user to select to call bartender again

Name	Select Order
Id	UC_04
Actors	User
Organizational Benefits	Increase the sales by helping the customers to choose order
Frequency of use	70% of the users choose orders for placing the items
Triggers	The customer selects choose order for ordering
Preconditions	User is viewing choose order option in the side of the menu
Post conditions	All the food and drinks items will be shown to user to choose and select for orders
Main course	<ol style="list-style-type: none"> 1. System prompts the user to confirm selected order 2. User confirm to save the selected orders 3. System shows the options for choosing orders
Alternate courses	System shows the options for choosing orders
Exceptions	<p>User decided to choose the items from menu</p> <ol style="list-style-type: none"> 1. See "Get Menu" from use case <p>System fails to choose the language</p> <ol style="list-style-type: none"> 1. Notifies the user that an error occurred 2. Return user to select and confirm choosing to order again

Name	Request Order
Id	UC_05
Actors	User
Organizational Benefits	Increase the sales by helping the customers to request order
Frequency of use	Every user use to select request orders for placing the request
Triggers	The customer selects the options to request Order
Preconditions	User is viewing the request order option in the system
Post conditions	The request order option will be shown to user to select for placing the request for order
Main course	<ol style="list-style-type: none"> 1. System prompts the user to confirm requested order 2. User confirm to save the order 3. System shows the options to request orders
Alternate courses	System shows the options for requesting order
Exceptions	<p>User decided to choose order</p> <ol style="list-style-type: none"> 1. See "choose order" from use case <p>System fails to choose the language</p> <ol style="list-style-type: none"> 1. Notifies the user that an error occurred 2. Return user to place and confirm order request again

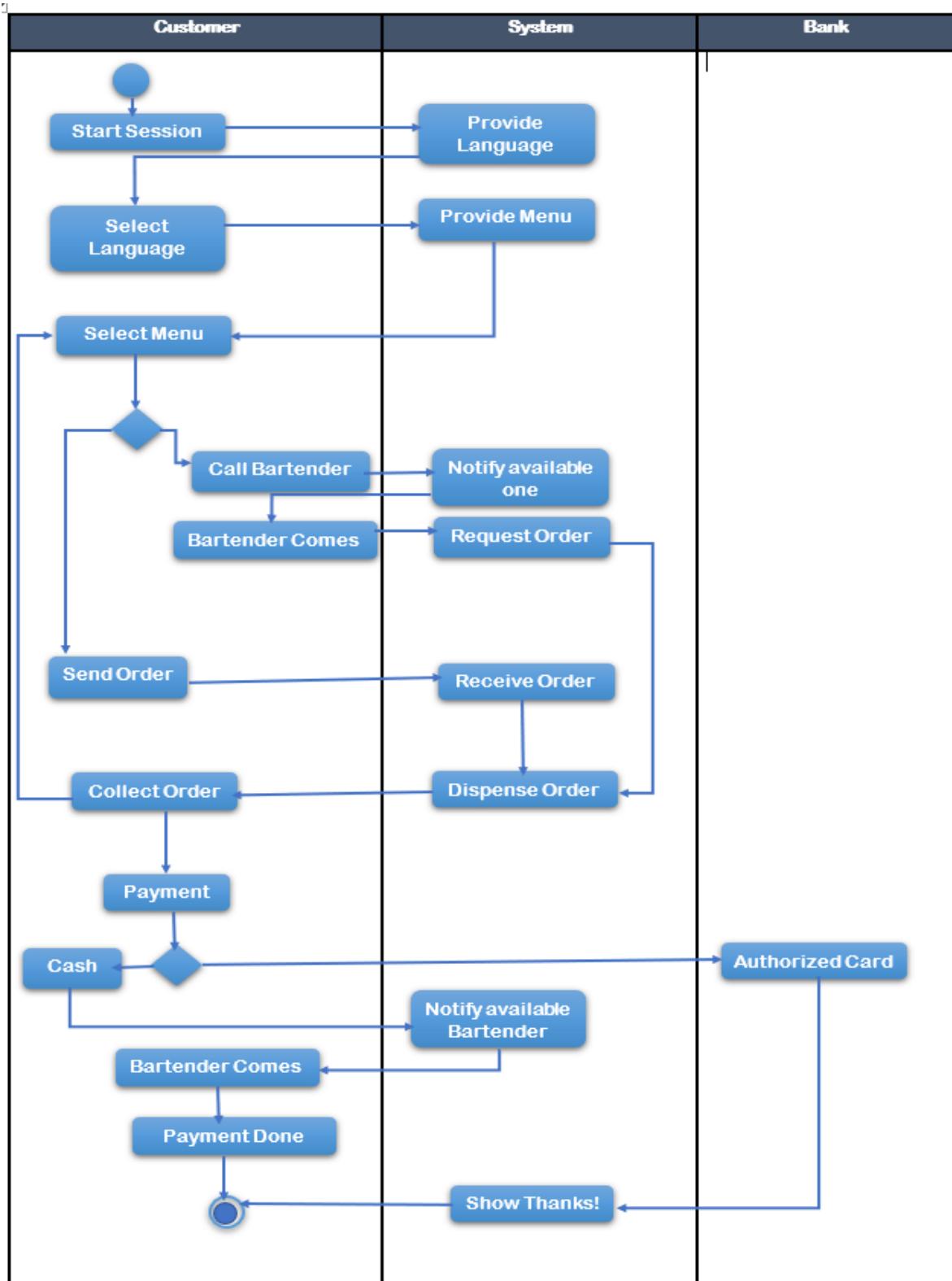
Name	Send Order
Id	UC_06
Actors	User
Organizational benefits	Increase the sales options by helping the customers to send order
Frequency of use	Every user use to send orders to confirm the order
triggers	The customer selects the options to send order
Preconditions	User is viewing the send order option in the system
Post conditions	Send order can be selected will be shown to user to confirm orders
Main course	<ol style="list-style-type: none"> 1. System prompts the user to confirm selected orders to be sent 2. User confirm to send the orders 3. System shows the confirmation of the order
Alternate courses	System shows the options for sending orders
Exceptions	<p>System fails to choose the language</p> <ol style="list-style-type: none"> 1. Notifies the user that an error occurred 2. Return user to select send order option again

Name	CheckOut
Id	UC_07
Actors	User
Organizational benefits	Increase the sales by helping the customers to checkout after the order
Frequency of use	All the users use to select checkout options
Triggers	The customer selects the options to checkout after placing the order
Preconditions	User is viewing the checkout option in the system
Post conditions	Checkout option can be selected & will be shown to user
Main course	<ol style="list-style-type: none"> 1. System prompts the user to confirm checkout 2. User confirm to checkout after orders 3. System shows the checkout option
Alternate courses	System shows the options for checkout
Exceptions	<p>System fails to choose the language</p> <ol style="list-style-type: none"> 1. Notifies the user that an error occurred 2. Return user to confirm again

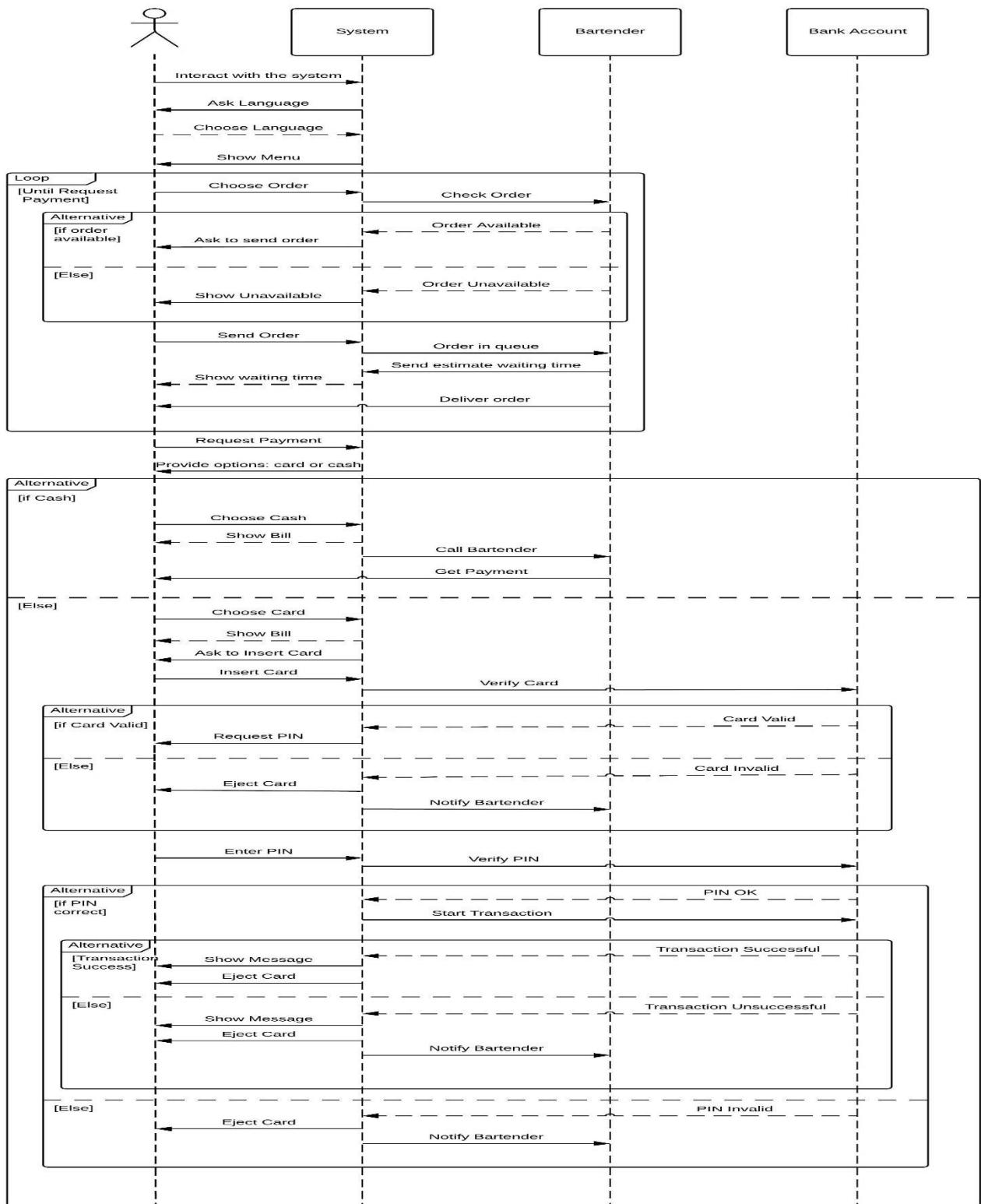
Name	Manage Inventory
Id	UC_08
Actors	System Administrator
Organizational Benefits	Updates the inventory of the product which helps the organization to know about the products and will buy to be stored
Frequency of use	80% of the time the admin check this option for the items update
Triggers	The administrator selects the option to manage the inventory
Preconditions	The administrator is viewing the option in the system
Post conditions	Manage inventory can be selected and will be shown to admin to manage it
Main course	<ol style="list-style-type: none"> 1. System prompts the admin to select manage inventory 2. The admin confirm and save the manage options 3. System shows the option to manage the inventory
Alternate courses	System shows the option for manage inventory
Exceptions	<p>System fails to choose manage inventory</p> <ol style="list-style-type: none"> 1. Notify the admin that an error occurred 2. Return user to select manage inventory option again

Name	Payment
Id	UC_09
Actors	Bank
Organizational Benefits	Increase the sales options by helping the customers to pay their bills
Frequency of use	Every user use to pay after checkout to confirm the payments of the orders
Triggers	The customer selects the options to pay bills
Preconditions	User is viewing the payment option in the system
Post conditions	Payment can be by card or cash and it can be selected & will be shown to user to confirm payments
Main course	<ol style="list-style-type: none"> 1. System prompts the user to confirm payments 2. User confirm to make payments 3. System shows the option for payment service
Alternate courses	System shows the options for payment method
Exceptions	<p>Use decided to call bartender for payment</p> <ol style="list-style-type: none"> 1. See "call bartender" in use case <p>System fails to choose the pay</p> <ol style="list-style-type: none"> 1. Notifies the user that an error occurred 2. Return user to select payment option again

User Activity Diagram



Sequence Diagram

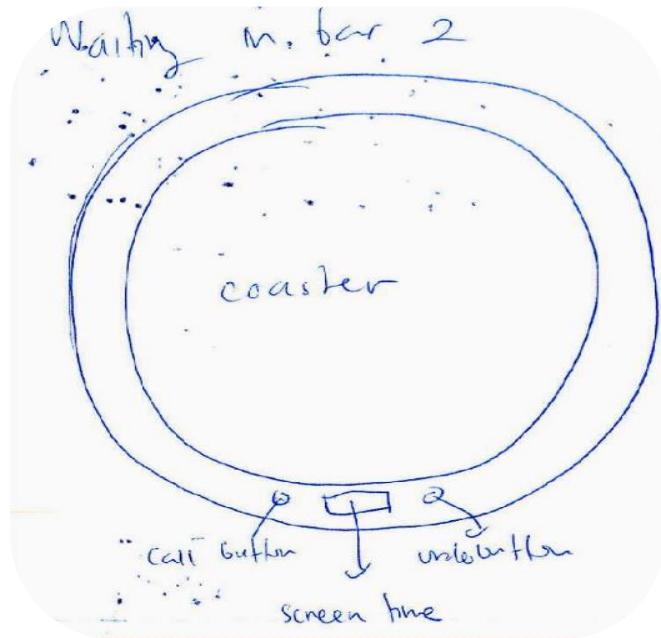


Low Fidelity Prototype (Lo-Fi)

We did the design studio step to come up with a solution which is going to scope our problem.

1. Design Studio

Solution 1: Coaster



Device as menu and tools to communicate with bartender.

Design:

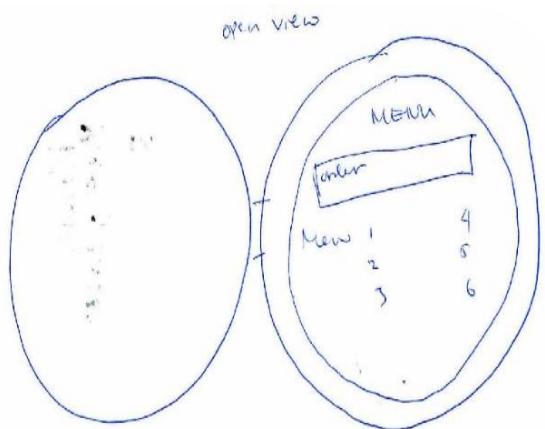
- Circle
- Button
- Screen
- LEDs
- Flip Book Style



red: wanted

green: ready to call

User can pay straight
from the coaster



- coaster can be open and check menu
- order from the coaster immediately
- red and green light indicates availability of bartender

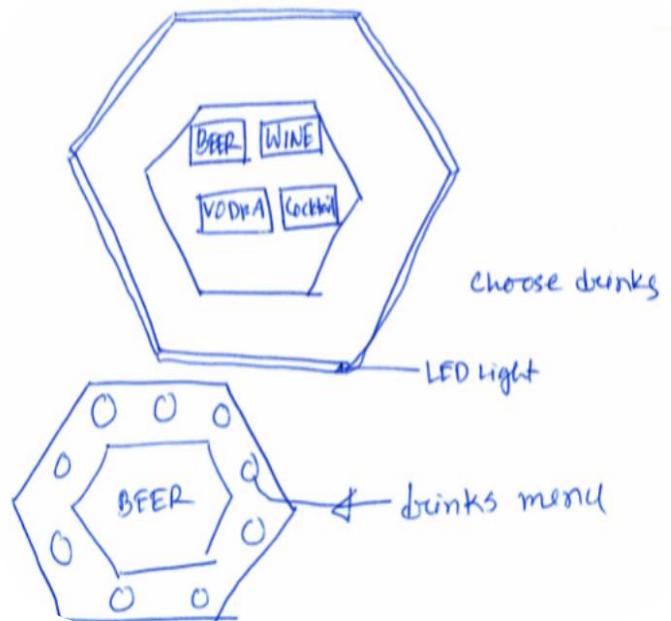
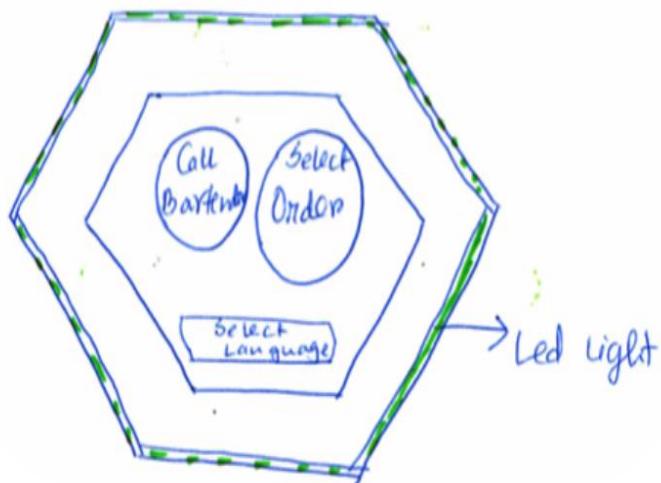
Solution 2: Coaster

Device as an electronic menu and also coaster.

Design:

- Hexagon Shape
- Touch Screen
- Dedicated buttons each sided
- Menu on the screen

Waiting for a drink in Bar

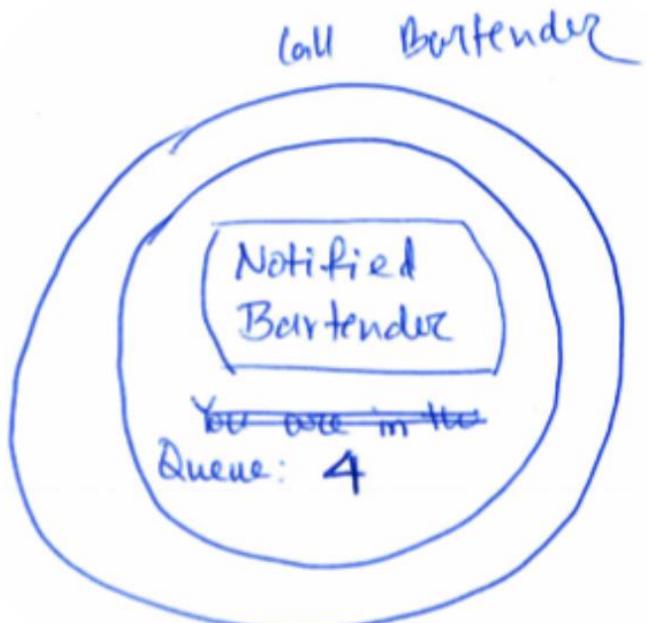


Solution 3: Coaster

Device as an electronic menu and also coaster.

Design:

- Circle
- Touch Screen
- Queuing System

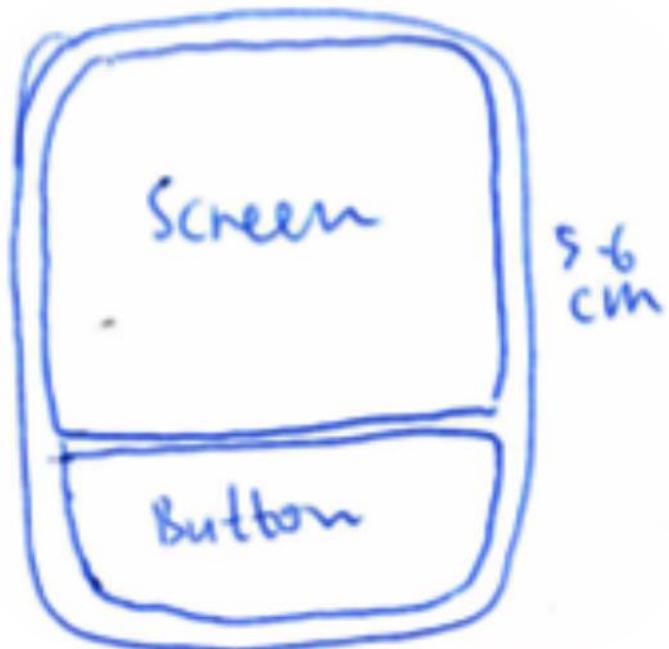


Solution 4: Scanner

Device as an order machine and queue timer.

Design:

- Rectangle
- Button
- Queuing System



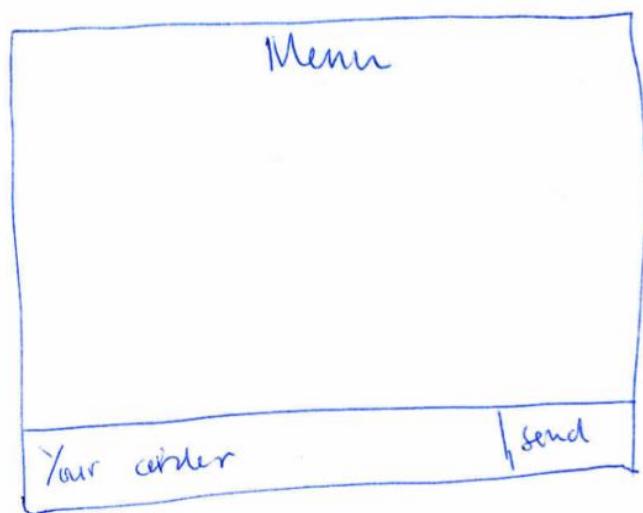
Solution 5: An App

A system that will replace the menu.

Design:

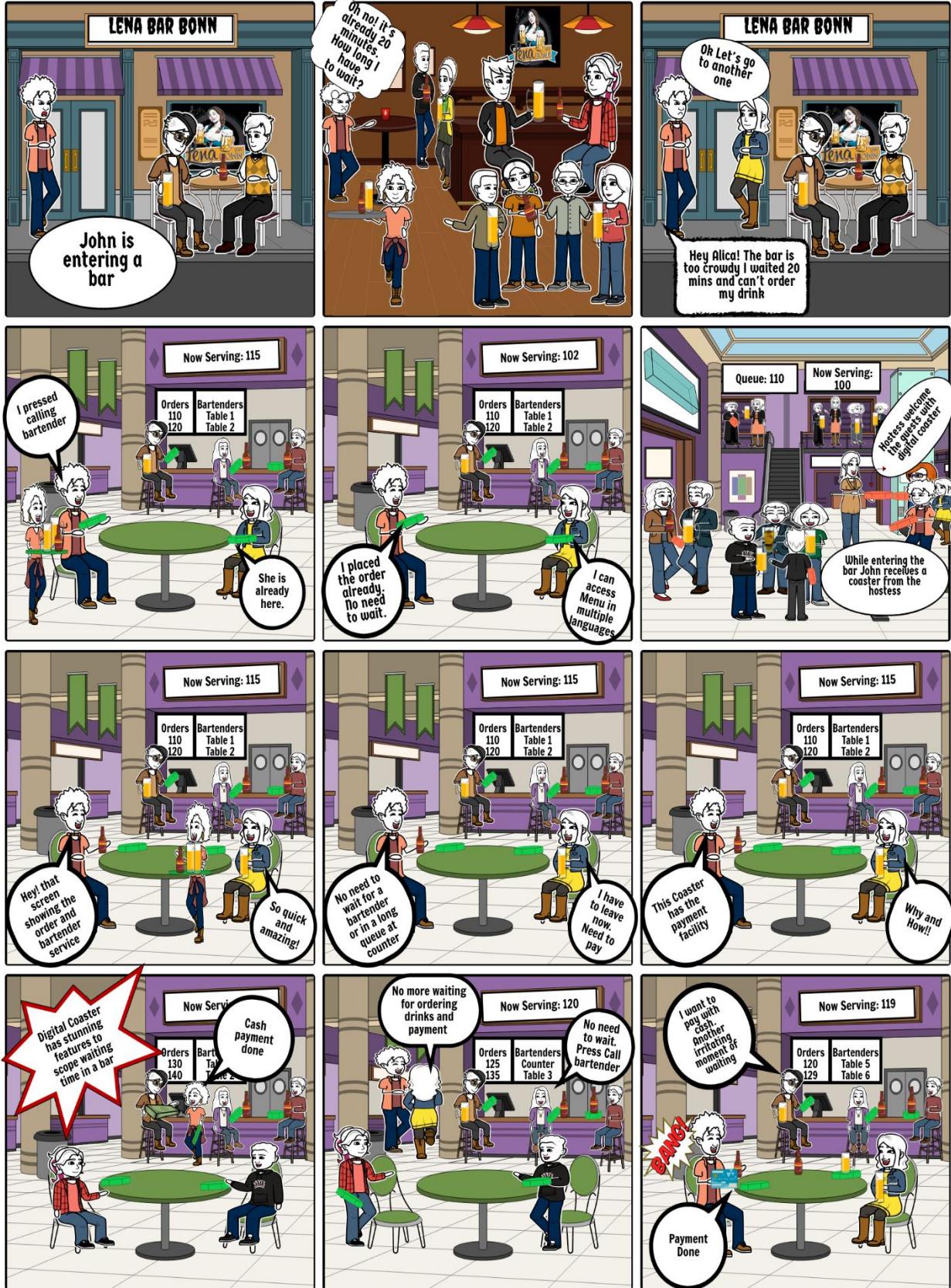
- Application
- On a tablet or phone
- Ordering System

using tablet on each table



2. Storyboard

After the brainstorming is design studio session we decided to combine our solutions and put those in the storyboard and finally building the mockup of the prototype.



3. Lo-Fi Prototype

Below image stated the lo-fi prototype.



User Evaluations of Lo-Fi Prototype

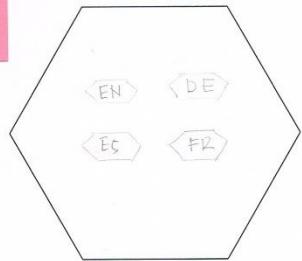
1. Feedback

- Add ability to order while waiting for a table.
- Improve the readability and emphasize the time property in the system.
- Remove the total queue information, only showing the order number.
- Change the LED signifier from red color to yellow for “busy” circumstance.
- Add feature or workaround for location problem mentioned in class. Utilizing the table number as a point of reference.
- Remove the ability to call bartender when the table is not ready.

2. Evaluation 1 – Pilot User

- Purpose of the system is provided to the user
- Based on the user group, we found a user with similar criteria with the target group we are aiming. She occasionally goes to the bar and also experiences the problem that is highlighted in our topic problem.
- Evaluation is done using the Wizard of Oz. We let the user uses the system and provide the user with necessary feedback from the system and additional information if she is confused.
- Throughout the evaluation, the user found it easy to use and she believes that the system has the potential to optimize the waiting time in the bar.
- Feedback from user:
 - Put signifiers in the time
 - Put signifiers in the card/cash
- User found the system:
 - Easy to use
 - Fast enough to understand
 - She is willing to use the system
- Prototype: Changes made after the user feedback.

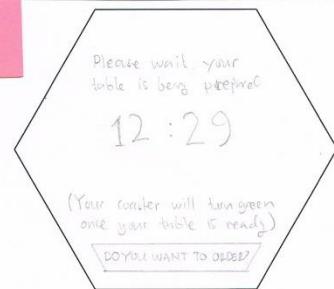
1



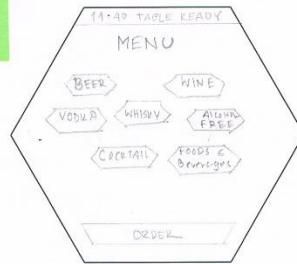
#1



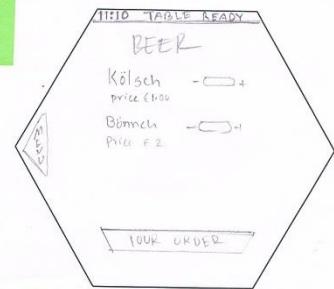
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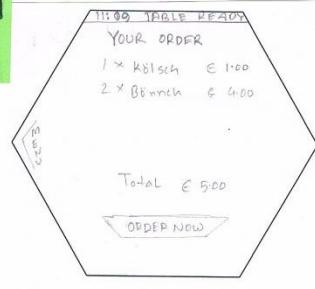
2(b)



2(c)



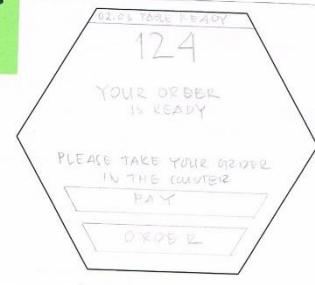
2(c)



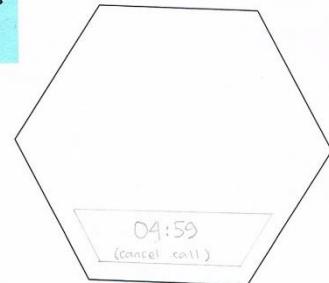
2(d)



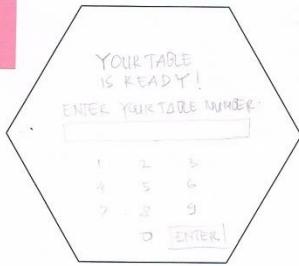
2(e)



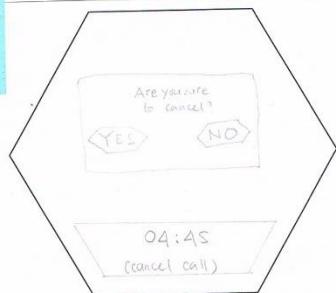
2



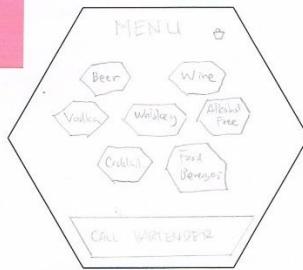
3



3



4



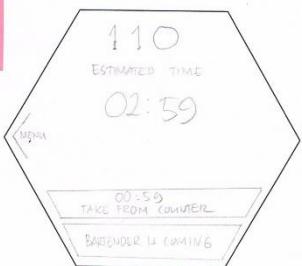
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6

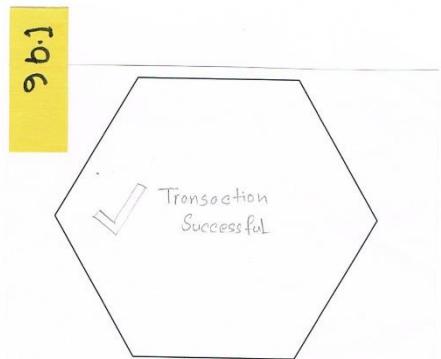
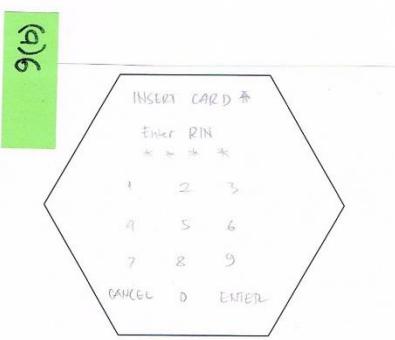
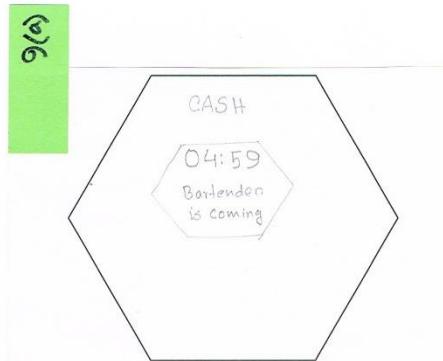
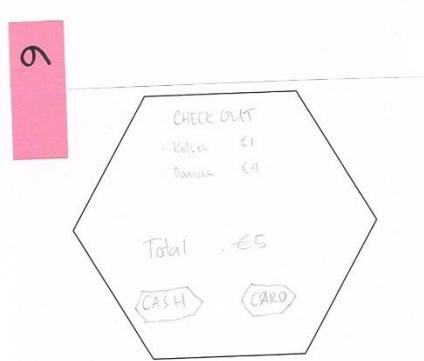


7



8

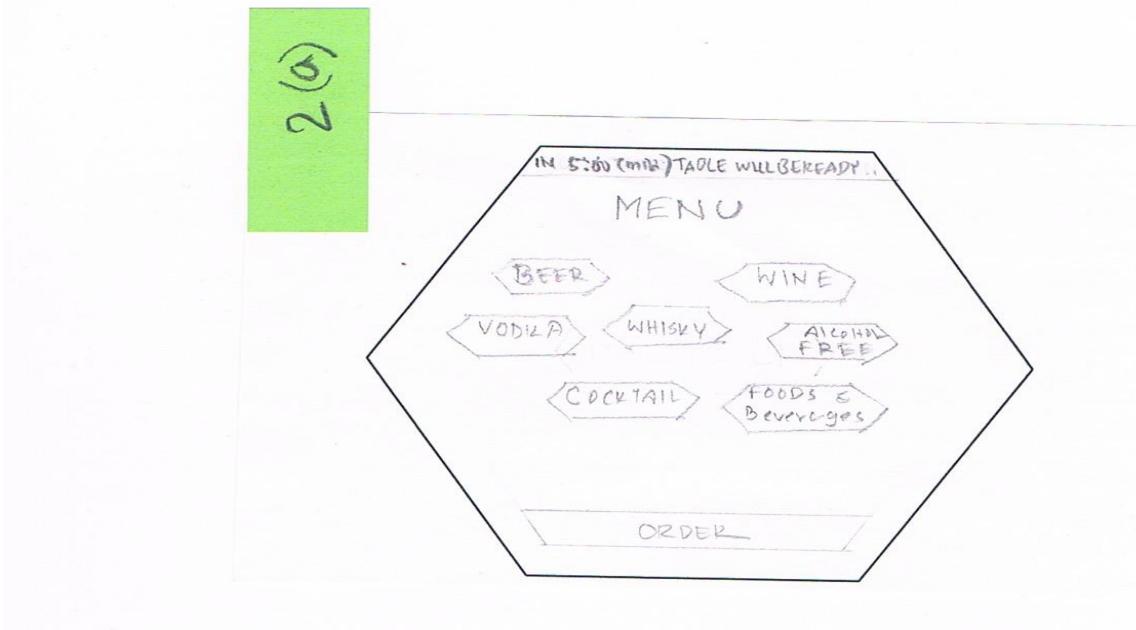




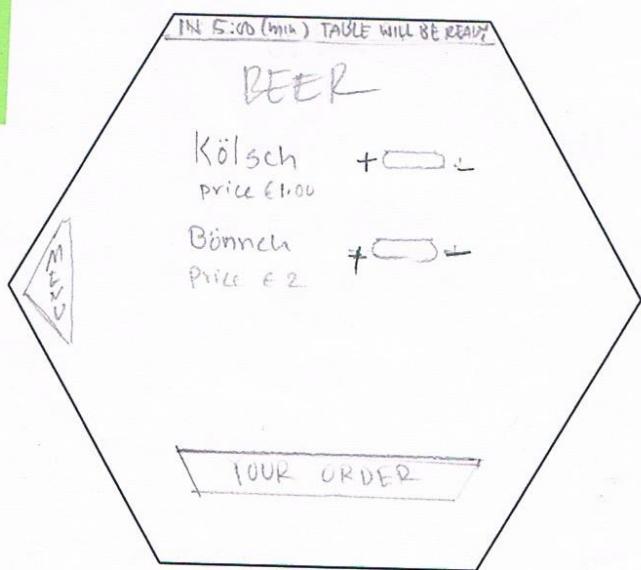
3. Evaluation for first iterations with 4 Users

- Purpose of the system is provided to the users
- Based on the user group, we found users with similar criteria with the target group we are aiming. They occasionally go to the bar and also experience the problem that is highlighted in our topic problem.
- Evaluation is done using the Wizard of Oz. We let users use the system and provide them with the necessary feedback from the system and additional information if they are confused.
- Throughout the evaluation, users found it easy to use and they believe that the system has the potential to optimize the waiting time in the bar.
- Summary of feedback from users:
 - Put more clear information on the things that appear on the screen
 - Instead of Call Bartender, use another name for it based on the activity
 - Put Order Number
 - Change the name on the Order screen to avoid confusion

- Put Language signifiers
- Add scrolling signifiers
- Add option to pay yourself, doesn't have to wait for the bartender
- Add more language options
- Put signifiers for the order when it has been placed
- Add signifiers for the taking the orders from the bartender
- Instead of using Menu button as the option to back, put an arrow
- On the View order screen, put another proper button for the Your Order button
- Feature suggestion: add step indicator for users to know in which step are they now
- User found the system:
 - Easy to use
 - Fast enough to understand
 - They are willing to use the system
 - It might need to take some time to get used to since they are new, but the learning curve will be fast
 - They considered the system is quick enough
 - They found that the system will indeed help them to optimize the waiting time, potentially reduce the frustration of waiting.



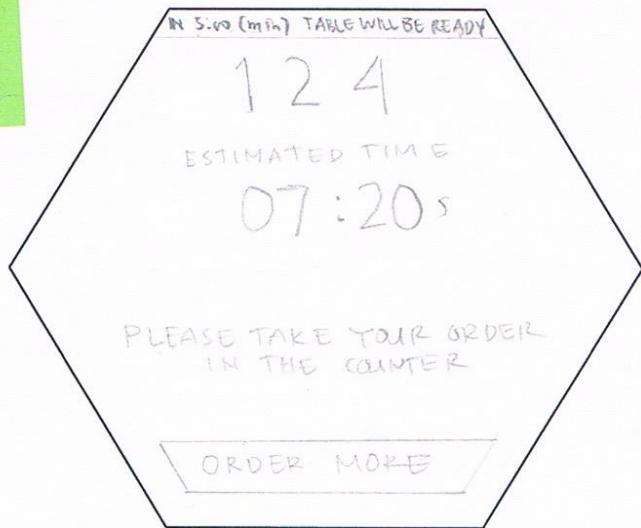
2(b)



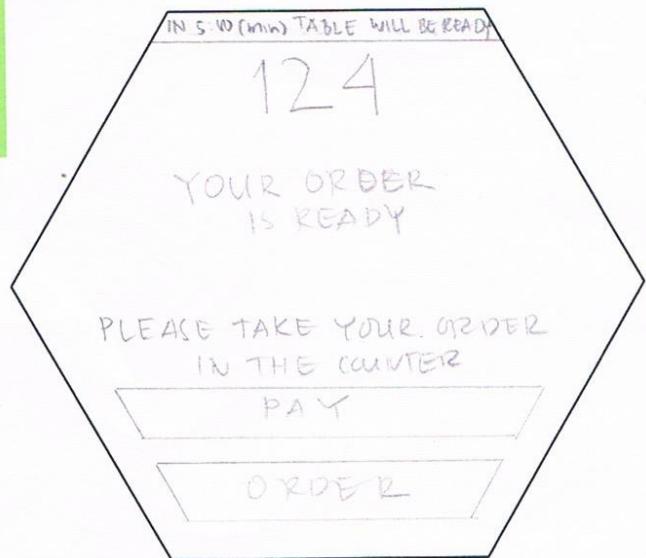
2(c)

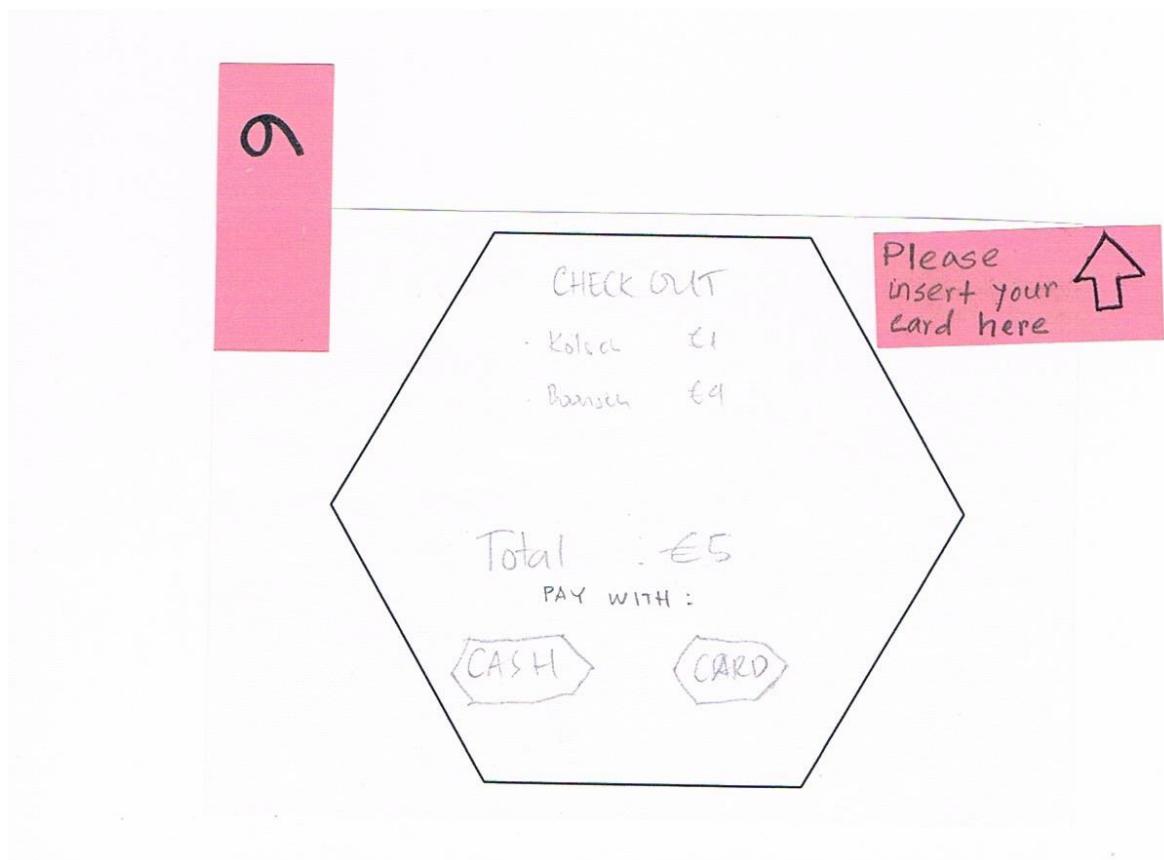


2 2(d)



2(e)





4. Evaluation for second iteration with another 4 Users

- Purpose of the system is provided to the users
- Based on the user group, we found users with similar criteria with the target group we are aiming. They occasionally go to the bar and also experience the problem that is highlighted in our topic problem.
- Evaluation is done using the Wizard of Oz. We let users use the system and provide them with the necessary feedback from the system and additional information if they are confused. The evaluation also involved thinking out loud method.
- Throughout the evaluation, users' impression to the system that they found it useful and they believe that the system has the potential to optimize the waiting time in the bar.
- Summary of feedback from users:
 - One user pointed out related the payment during the standing order (order before users get a table)
 - The same user also mentioned related to the group order

- The user also mentioned the history of his order, it would be better if they know their history and ability to track the past order
 - A user pointed out related multiple order – need to think about the mechanism for the multiple order
 - One user pointed out about a contingency plan where the system does not work
 - One user pointed out the payment system mechanism and security
 - One user suggested to use approximated time rather than put an idea of fixed waiting time
 - One user also mentioned the safety of the device, such as put a deposit to make sure the device will be safe in the future
 - One user found a timer in prototype 2c is misleading
- User found the system:
 - The device will definitely faster than the waiters due to its distributed system
 - Fast enough to understand
 - They are willing to use the system
 - It might need to take some time to get used to since they are new, but the learning curve will be fast
 - They considered the security of the payment method
 - They found that the system will indeed help them to optimize the waiting time, potentially reduce the frustration of waiting

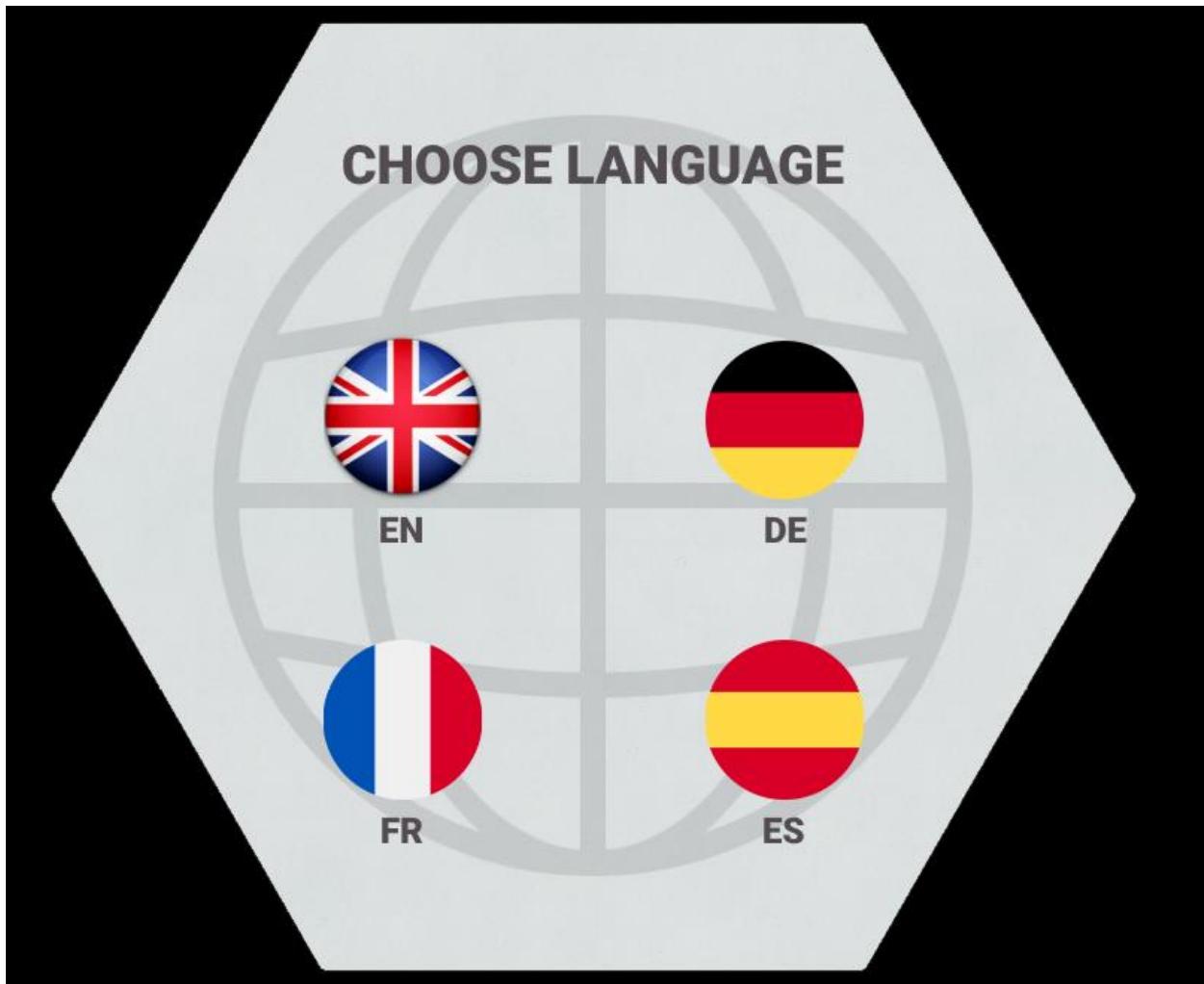
After the second iteration of user evaluation, we rectified our design in the medium fidelity prototype.

Medium Fidelity Prototype

Below there is an example of how the screen of the device will look like. In the attachment, the main flow of the medium fidelity prototype has been shared.



Me-Fi_Prototype_M
ain_Flow.pdf



1. Evaluation 1-5 Users

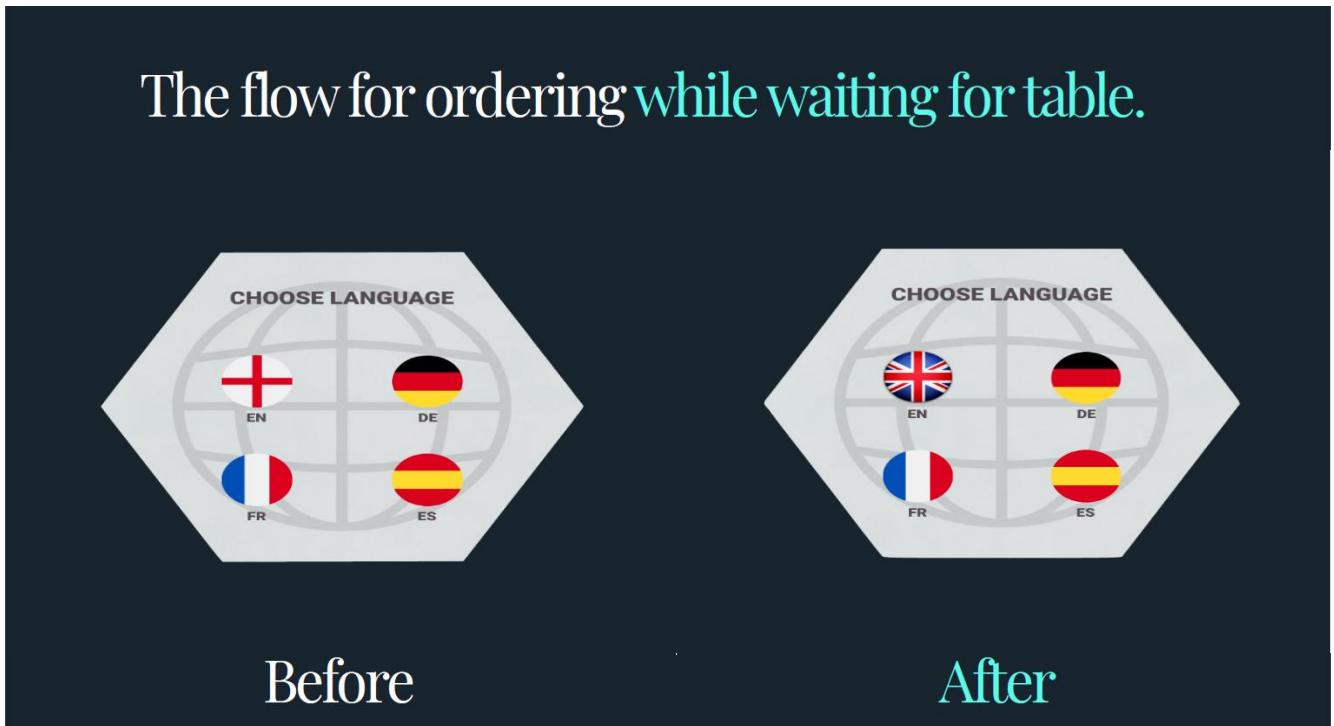
- Purpose of the system is provided to the users
- Based on the user group, we found users with similar criteria with the target group we are aiming. They occasionally go to the bar and also experience the problem that is highlighted in our topic problem.
- We let users use the system and provide them with the necessary feedback from the system and additional information if they are confused.
- Throughout the evaluation, users found it easy to use as a first time user of the system
- and they believe that the system is going to optimize the waiting time in the bar.
- User Found the system:
 - User-friendly
 - Easy for the first time use
 - Simple and appealing to the users.
 - Colors are aesthetic
 - Shapes are ok
 - The font is simple and readable
 - They are willing to use the system
- Summary of feedback from users:
 - There is a typo of 'Order'
 - Flag for the 'EN' language is misleading.
 - 'Your Bill ' this button is not clear
 - Rename Order again for example Repeat Order
 - For adding and removing no of items (+) and (-) sign can be swapped
 - Missing Transaction successful or Failed message for card payment.
 - Signifiers of the slider in the menu screen
 - Images of all menu items need to be unified.

2. List of Changes

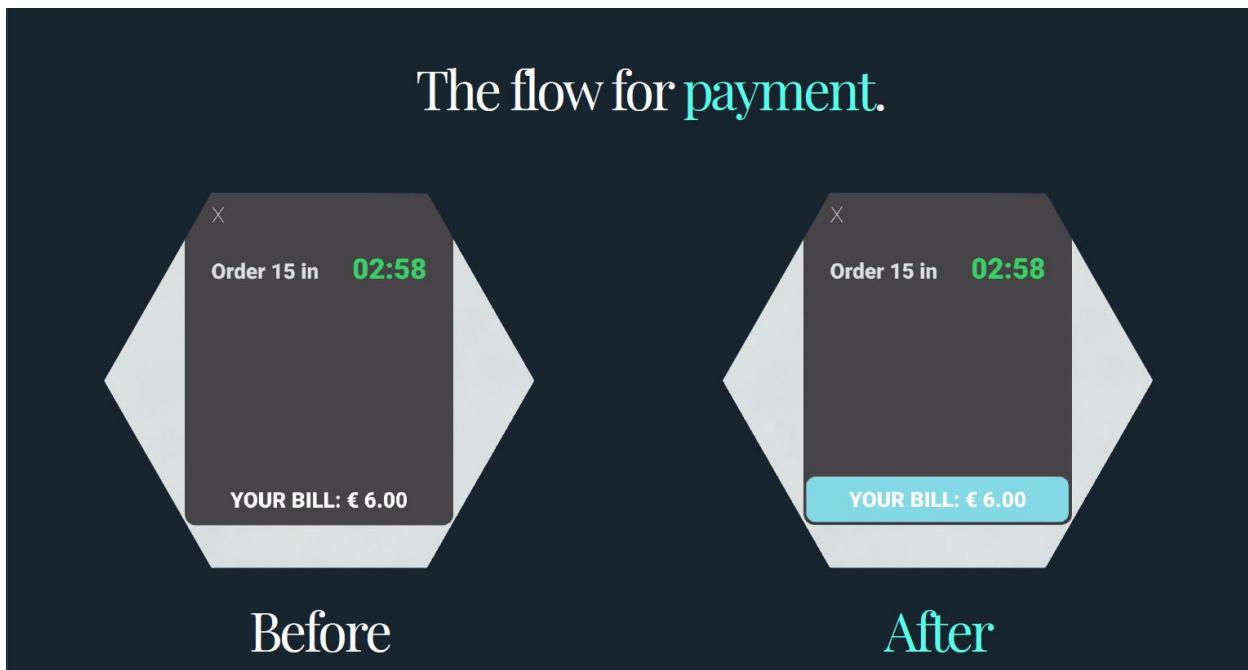
After the user's evaluations, we have pointed out the following changes.

- There is a typo of 'Order'
- Flag for the 'EN' language is misleading.
- 'Your Bill ' this button is not clear
- Rename Order again for example Repeat Order
- For adding and removing no of items (+) and (-) sign can be swapped
- Missing Transaction successful or Failed message for card payment.
- Signifiers of the slider in the menu screen
- Images of all menu items need to be unified.

The changes of Medium Fidelity Prototype have been incorporated in our prototype. Changes Images have been stated below.

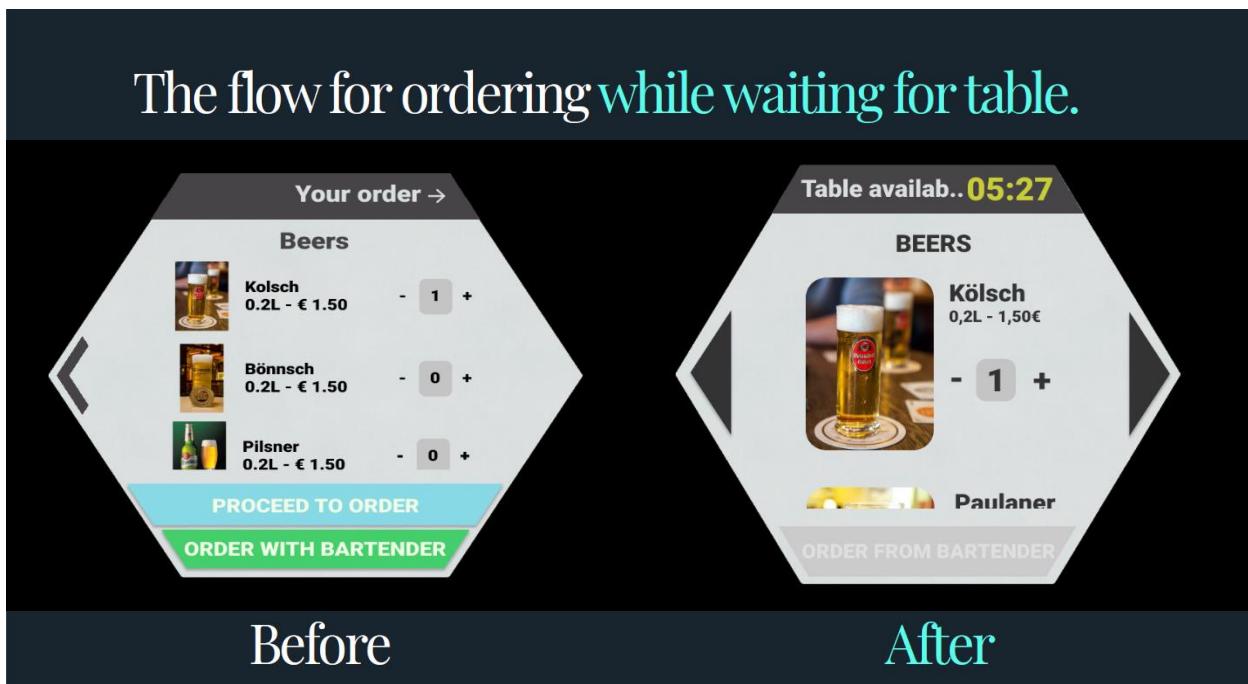


The flow for payment.



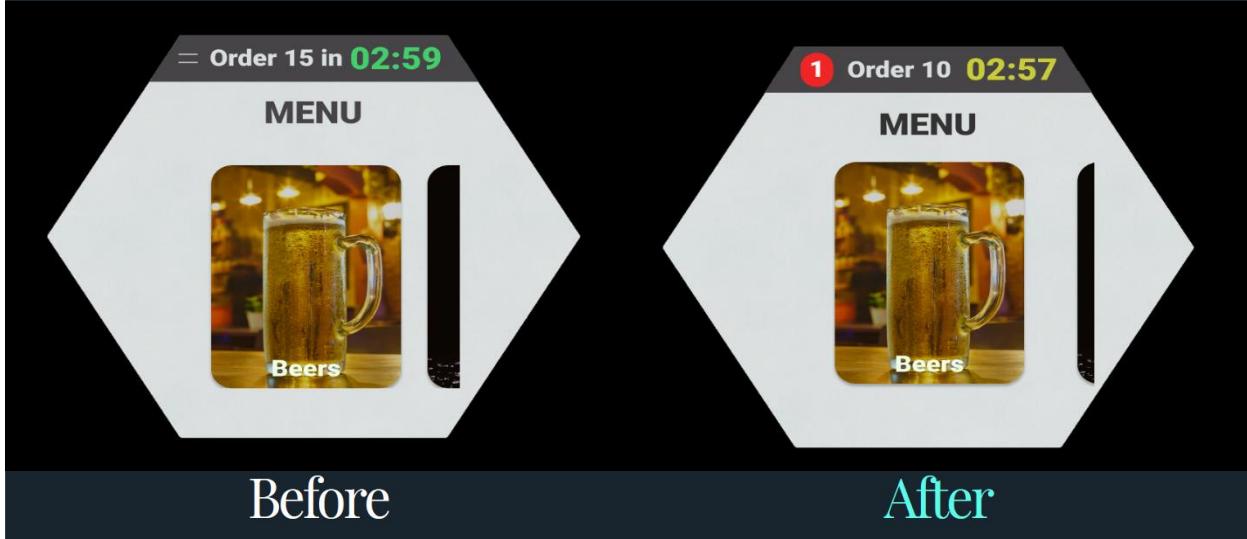
High Fidelity Prototype

After the user evaluation, we made our High Fidelity prototype. As our proposed solution is a digital coaster and we couldn't make the complete hardware, we improved our software prototype and the whole flow of the prototype will be the features of the final proposed solution.



Change the menus for each items in where user will feel to identify their choice by focusing on image of the items.

The flow for ordering while waiting for table.



Notification icon has been modified. In medium fidelity, notification information was shown as a Hamburger Menu and in final prototype we modified that as a no on top left of the screen.



In medium fidelity, insert card option was misleading and it has been modified accordingly in final(High) fidelity prototype.

The flow for ordering while waiting for table.

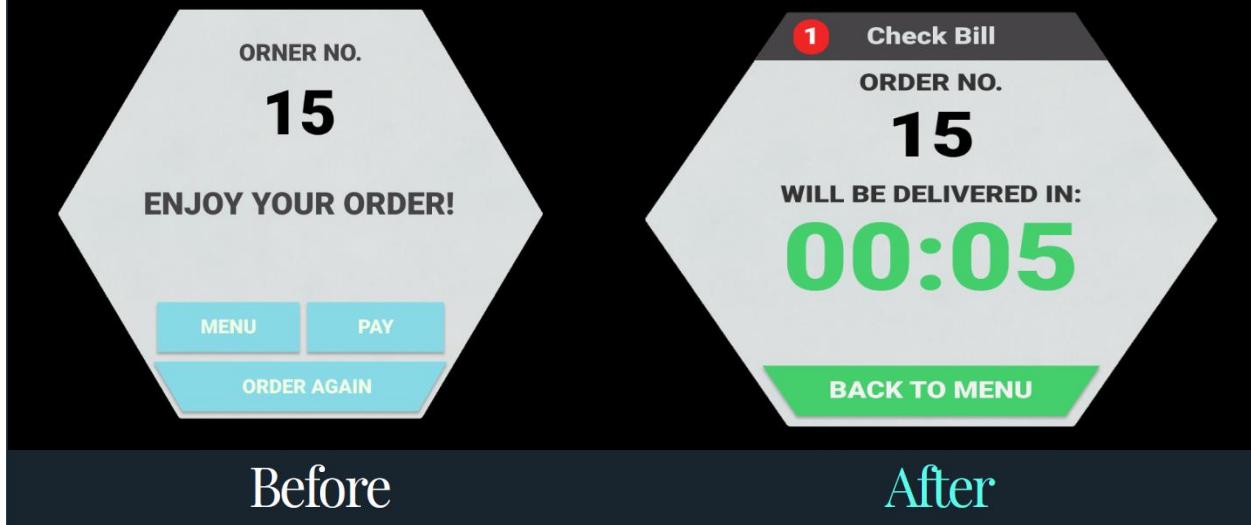


In medium fidelity, we used more than 5 colors and we have decreased and stick with 4 colors in our final (High) fidelity prototype.



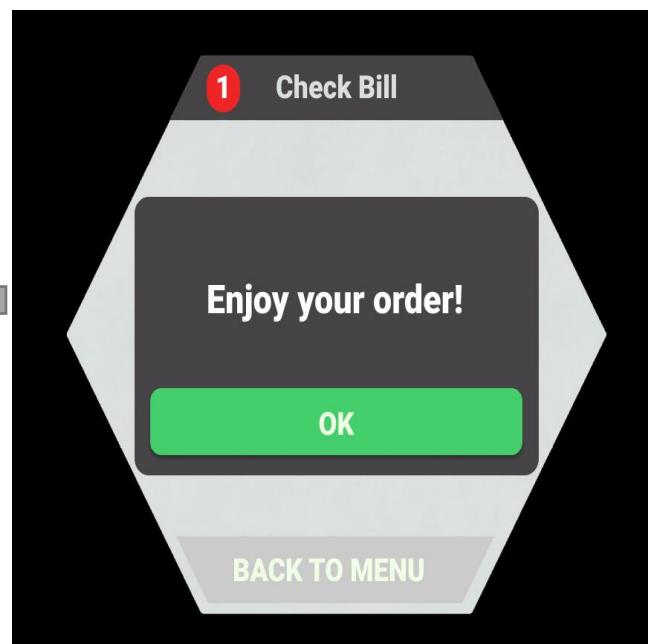
Modified and updated the misleading information as well as spelling mistakes with more concise user centered design.

The flow for ordering while waiting for table.

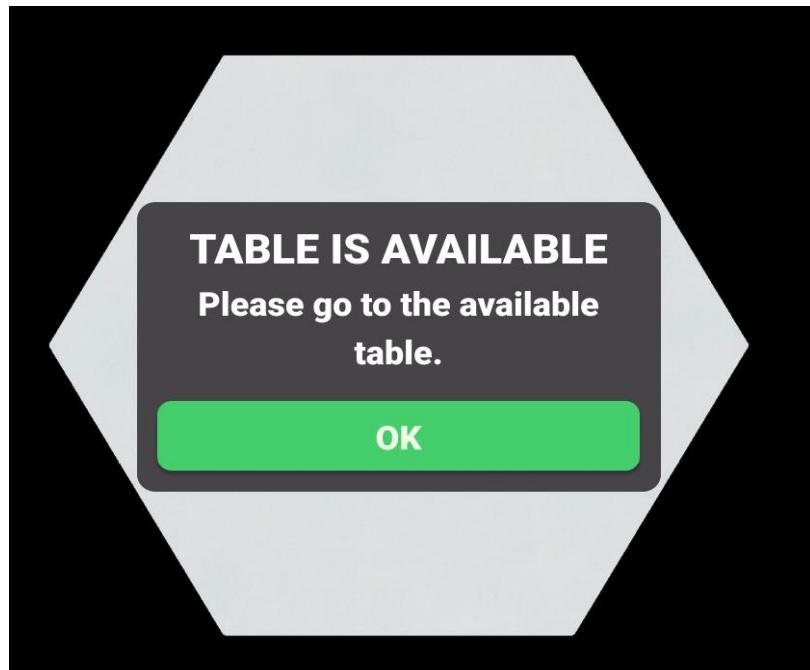


Before

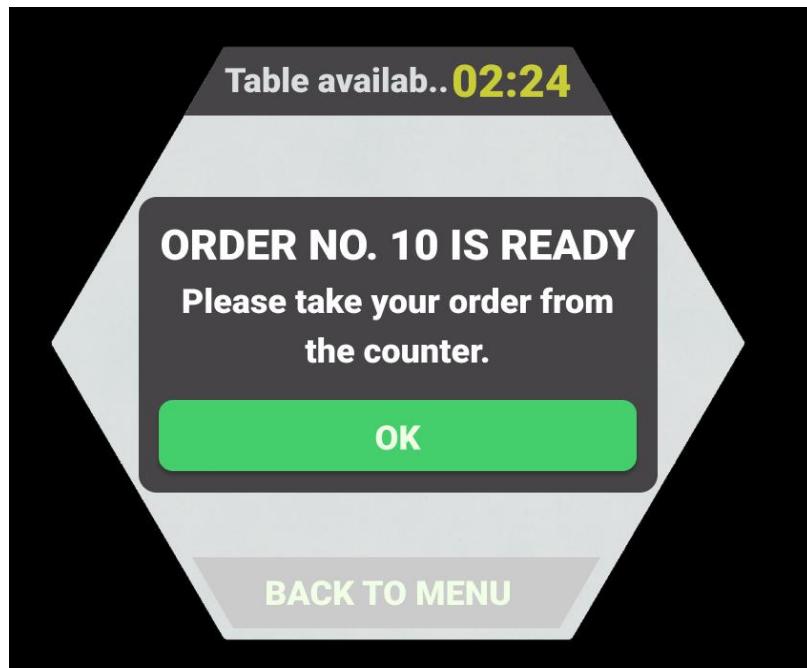
After



When the table is ready the system you also inform the users to draw their attention by a pop-up notification.



When the users need to receive the order from the counter system will also explicitly draw the attention through a pop-up message.



Conclusion

Tired of waiting in lines at bars. Our proposed coaster will be got your back for placing drink orders. Sounds great! But what do Bars get out of it? Well, Coaster streamlines the orders and drink-making process, since bartenders can make drinks that have already been ordered while others can figure it out what they want. As the system also ensures payment option, it also means there will be no waiting time or declined credit cards holding up things and if you don't have the system has an option to inform bartender that the user from one particular table wants to pay cash as his or her card isn't accepting. Hopefully, our prototype will be implemented and it will perform just like it sounds!