

This document will help you conceive the remaining parts of the code we need for video call. So far, we did individual video calls. In this document we will add a few things :

- **fixing the ui for all the calls** : add the panel for all the users present in the video call, add a few buttons, add the chat section
- **group calls** : This is the call you can make inside a chat group. When the user call inside that chat group, all the people receive a notification
- **invitation call** : Like on zoom or google meet. The website generates an url that you can share. Anyone with the url can join the conversation even if he is not registered to the website. If someone is registered, he can also join

Once you finish the point above, I will send you another document for those tasks :

- **video page** : A page where the user can see all his recorded videos
- **fixing bugs** : After you have completed all the tasks for this section, we can go in a meeting and try to fix all the bugs and issues. We will have to add new buttons and functionalities to make sure that the bugs and problems we have found can be resolved.

**\*Later on we will make classrooms. It will be almost the same code as the video calls but the teacher will be able to record the screen and webcam of the students.**

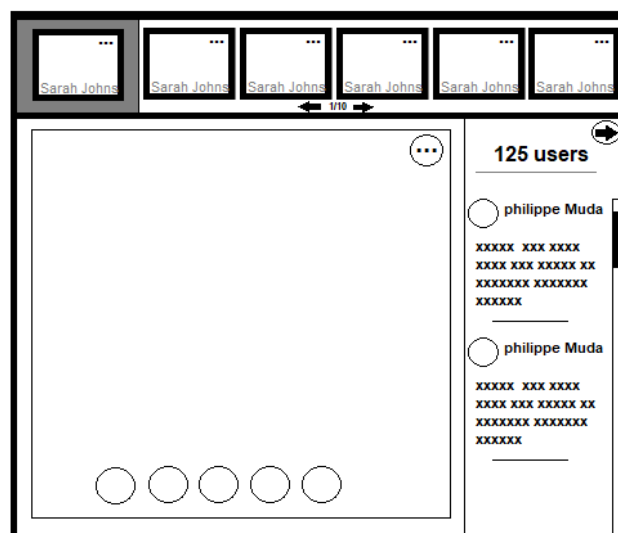
## Fixing the ui for all the calls :

This is a general template that we will use for all the calls, weither its for single, group call or invitation call.

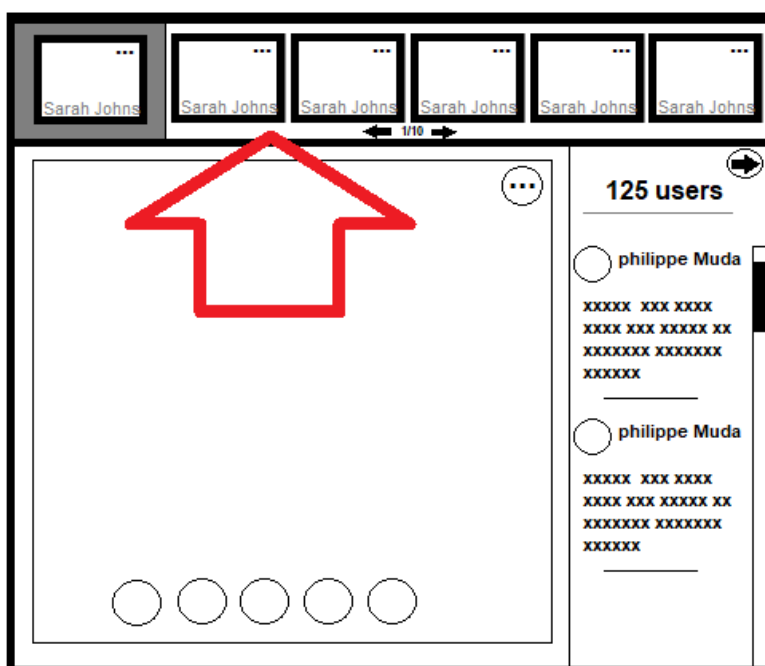
First, if you havent done it, you must make sure that when the user receive the call, the ringing sound most stop. Before, when I answered a call from you, the ringing song was still there. Secondly, you must make sure that if a user is already in a call, another user cannot call him.

If many people call the user at the same time, only the popup call window of the first person who call will appear. For the other caller, a pop-up window will appear with this message : « the user is already in a call ».

There will be two different UI. One for the presenter(the one who starts the call) and another for the participants.This is how the ui should look like in a call now :



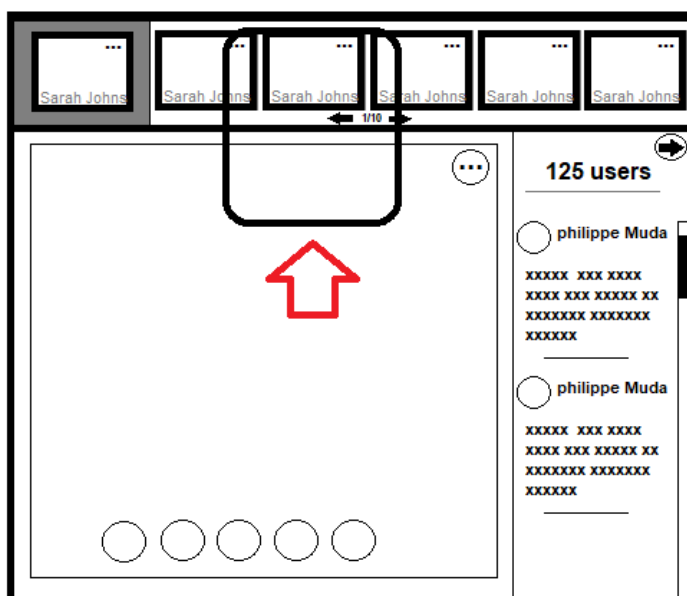
The first section is the band above here :



The squares like on zoom or google meet are the video stream of the people present in the call. On the extreme left in the grey section, there will be the presenter. The presenter is always on the extreme right. Inside the square of the video stream at the bottom you will have the name (Sarah Johns). On the top right there are 3 small points which are the menu.

If you are the presenter, if you click on the dots, a popup window will appear this way :

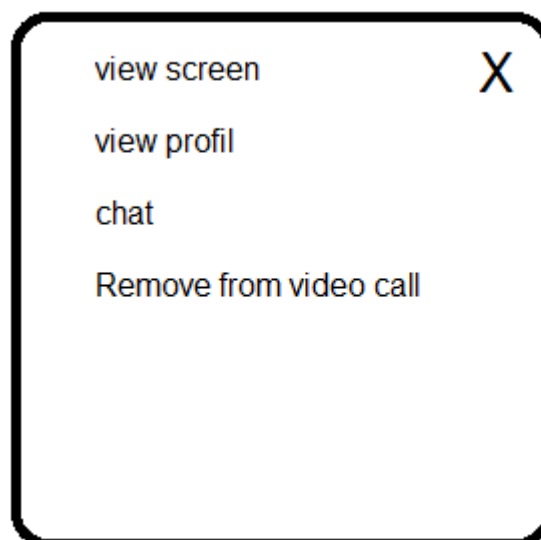
f



Here are the options if you are presenter.it should look like this :

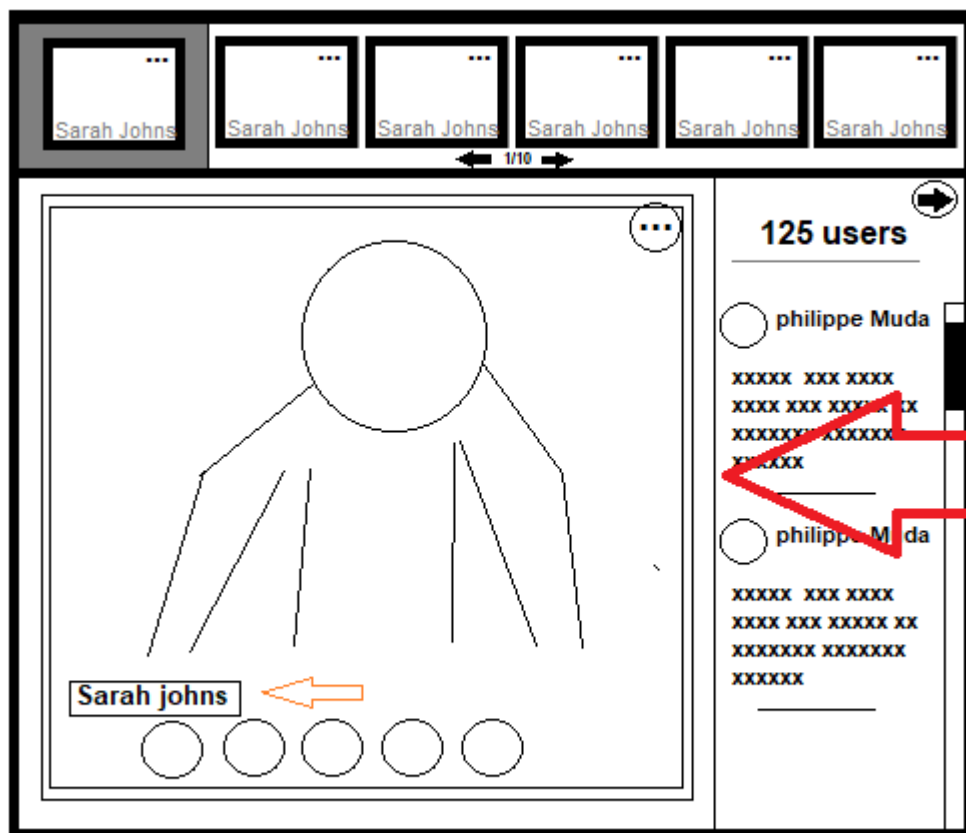


Here are the options :



This above is the options that show if you are the presenter.

**View screen :** When the user clicks on it, he will simply see the video of the person here , just like on zoom :



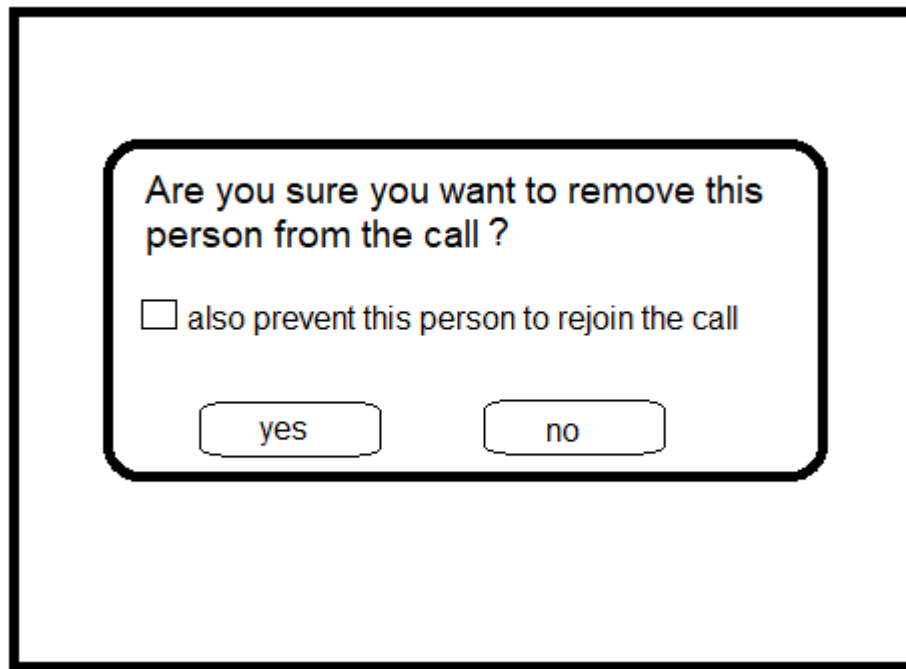
The user can click on other squares on the top and he will see their video in the central screen of the page.

**View profil :** This button simply openup a new tab with the profil picture of the person. If the person is an invited person, this option will not be visible.

**Chat :** this option will allow you to chat with the person. The chat section as you saw will be on the right section of the page. We will talk about it in the next chapter.

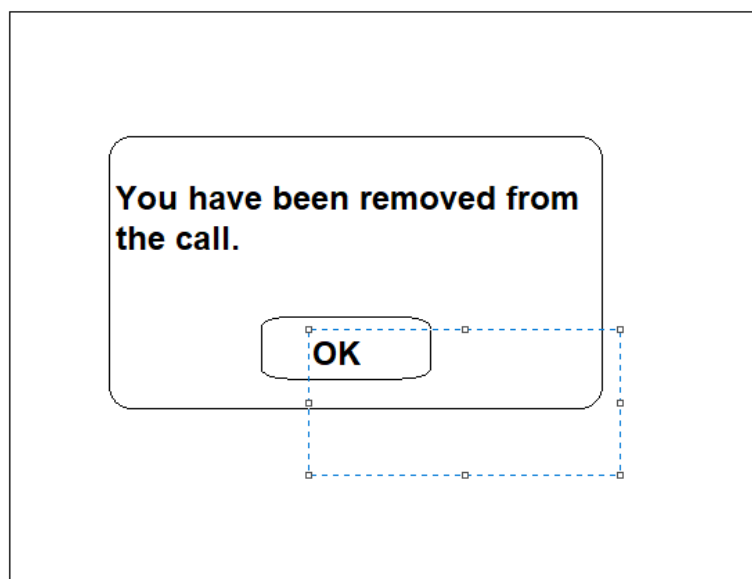
**Remove from video call :** This option only appears if you are the person who started the call. It can allow you to remove the person.

When you click on it, this dialogue box appears :

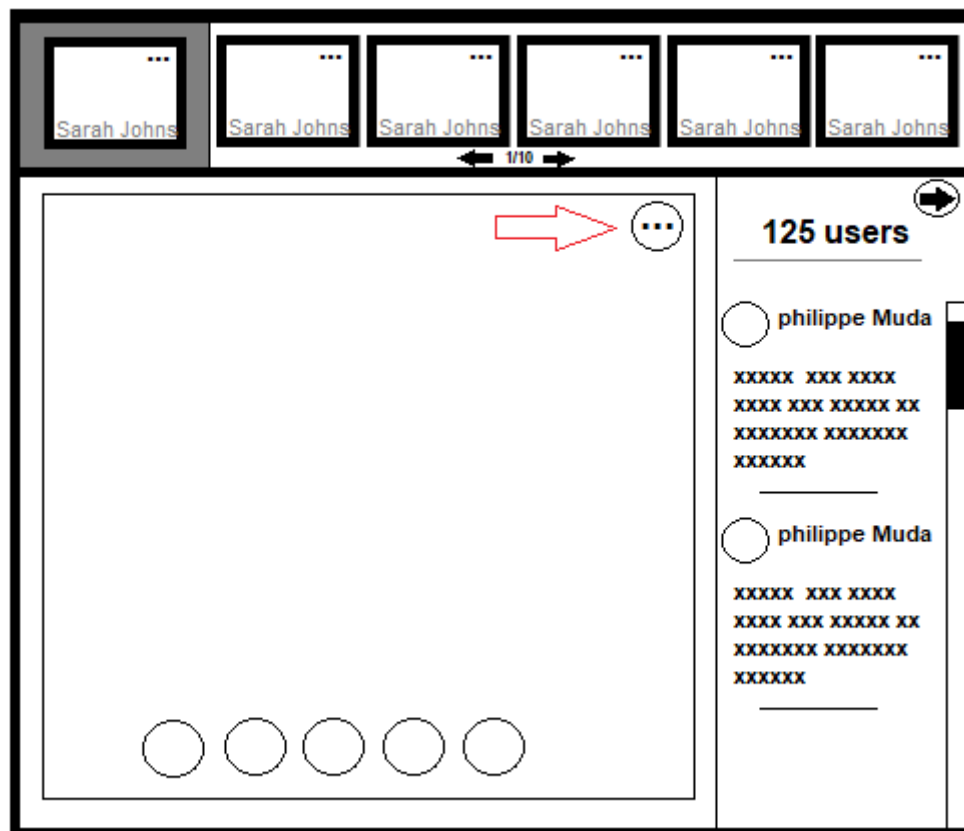


Above is the dialogue that appears when you click on this option. There is also a checkbox to prevent this person to rejoin again the call in the message page. If you check it, he wont be able to click on rejoin video call. If you press no, it cancel and the dialog box closes.

When the person gets removed from the video call, the video call window close and this prompt appear :



Next we have the views option. Its the button with the 3 red dots. It allow you to select ewhat you want to see in the central section of the screen :



By default, when any user enter a video call. He will see the screen of the presenter (person who started the video call). But he can choose to see other things . When the user clicks this button, he can see select those option :

view presenter screen

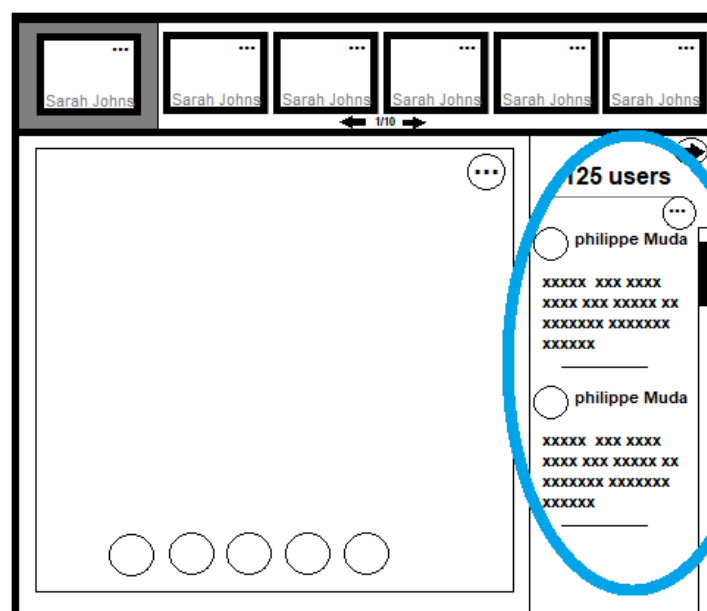
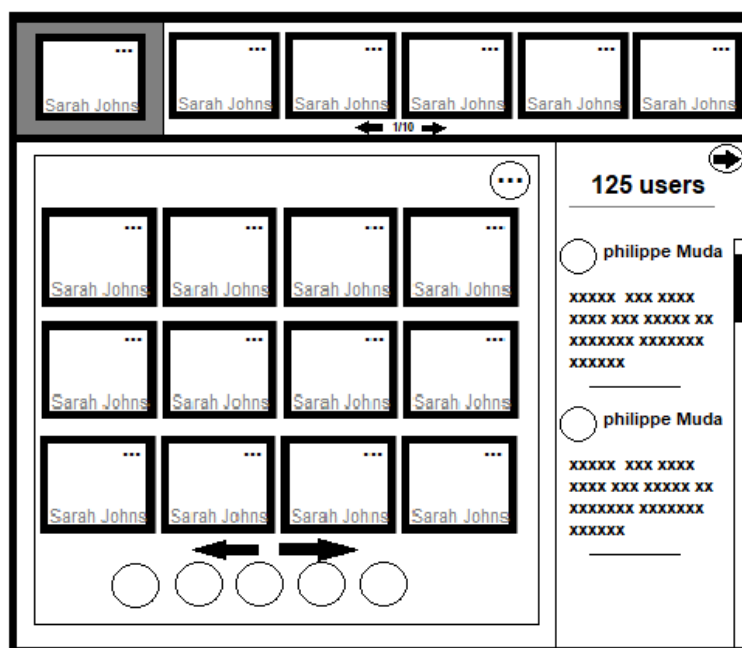
view my screen

Global view

View presenter screen will toggle the view to the person who started the call or the person who is sharing the screen.

View my screen will simply show your own webcam.

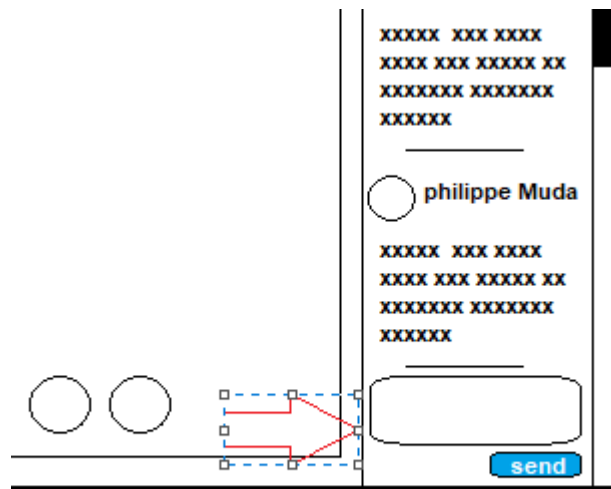
Global view will be like on zoom where you will see everybody present :



As you can see, it just allows you to see all the people present in the meeting, just like the section above. You also have arrows to scroll the list of people.

The next section to do is the chat section here :

This is a simple chat panel like the chat you made on the bottom right on all pages. You can add a section for someone to write here :



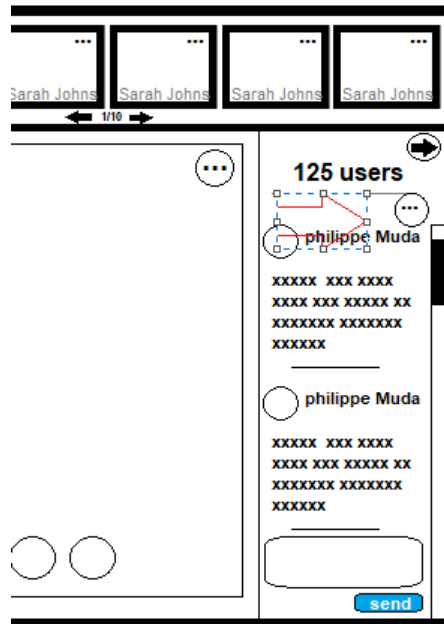
When the person write, his post will appear. Just like a normal chat. There will be his profil picture, his name on the right and below his comment. Make sure than people cannot write more than 200 words.

By default, the panel show the conversation of the whole group. But if you want to chat with someone, so that only you and him see it you can do it too.

By clicking here, you can chat privately with someone alone. Here is a button with 3 dots :



d



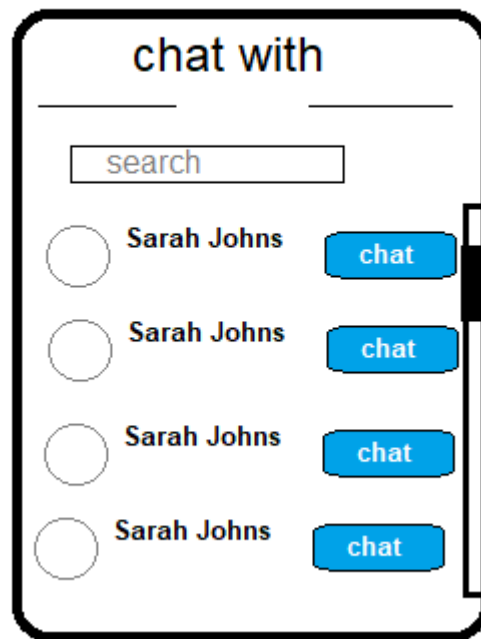
When you click on it, you have these options appearing in a box :

d



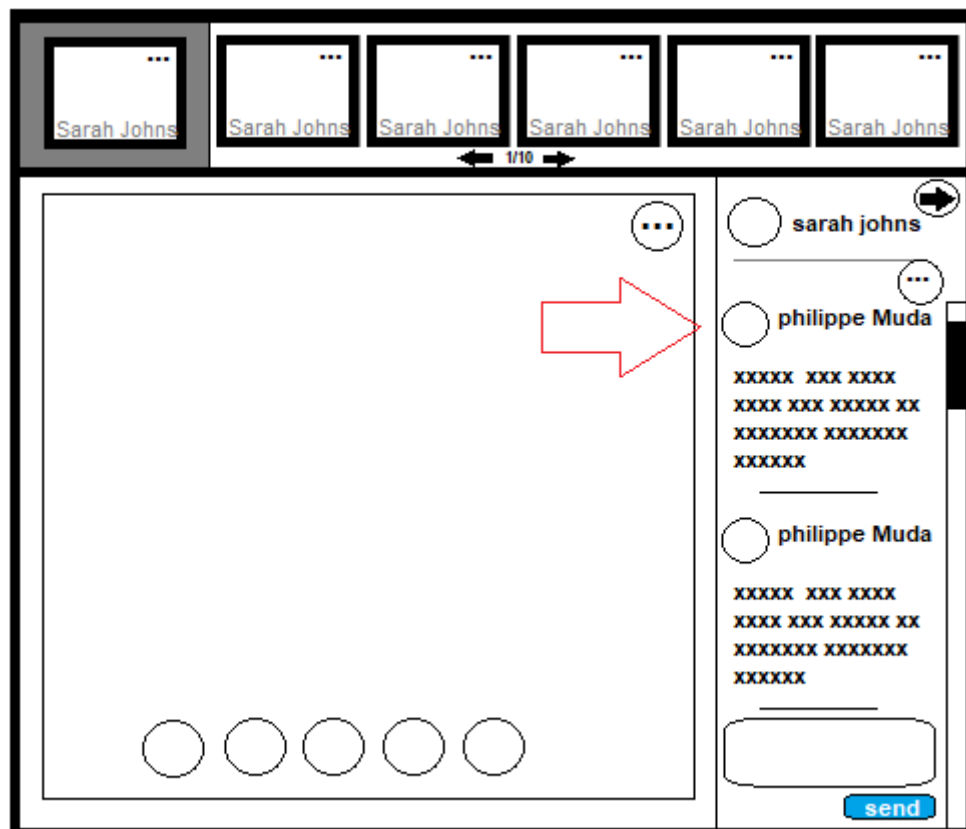
By clicking on main chat, you simply return to the main chat of the video call. By clicking on private chat, another dialogue window appear to allow you to chose which chat you want . When you click on it, the new dialogue box appears this way :

d



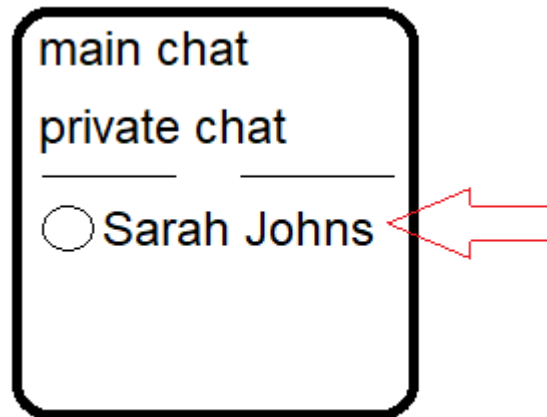
This window shows you a list of everyone present. You can click on chat with one of them and a new private window will appear just for you and him this way here at the same place :

s



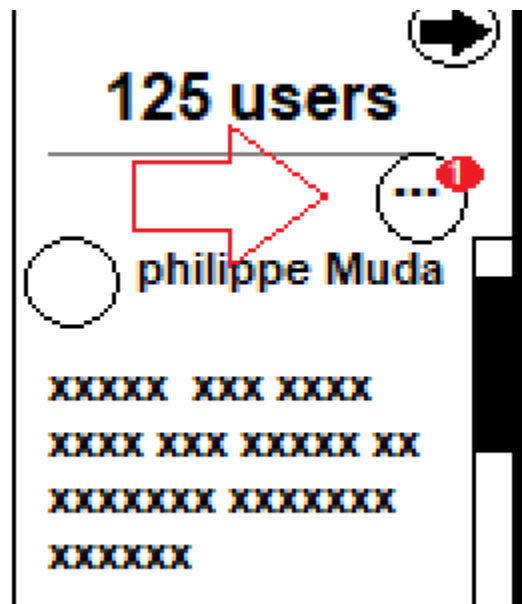
Now that you have started to chat with the new person, next time you click on the 3 dot button, his/her name will be there :

s

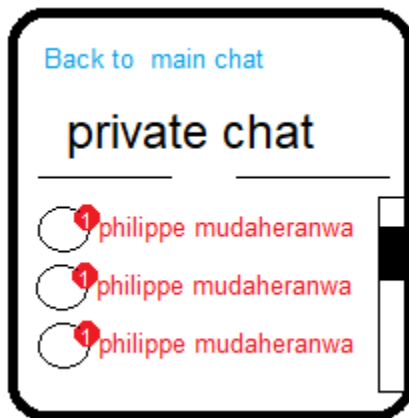


Now, the person who receive the message must have a way to know that someone has sent him a message privately. A red dot with the number of messages will appear here on the button with 3 points when someone send him a message :

g

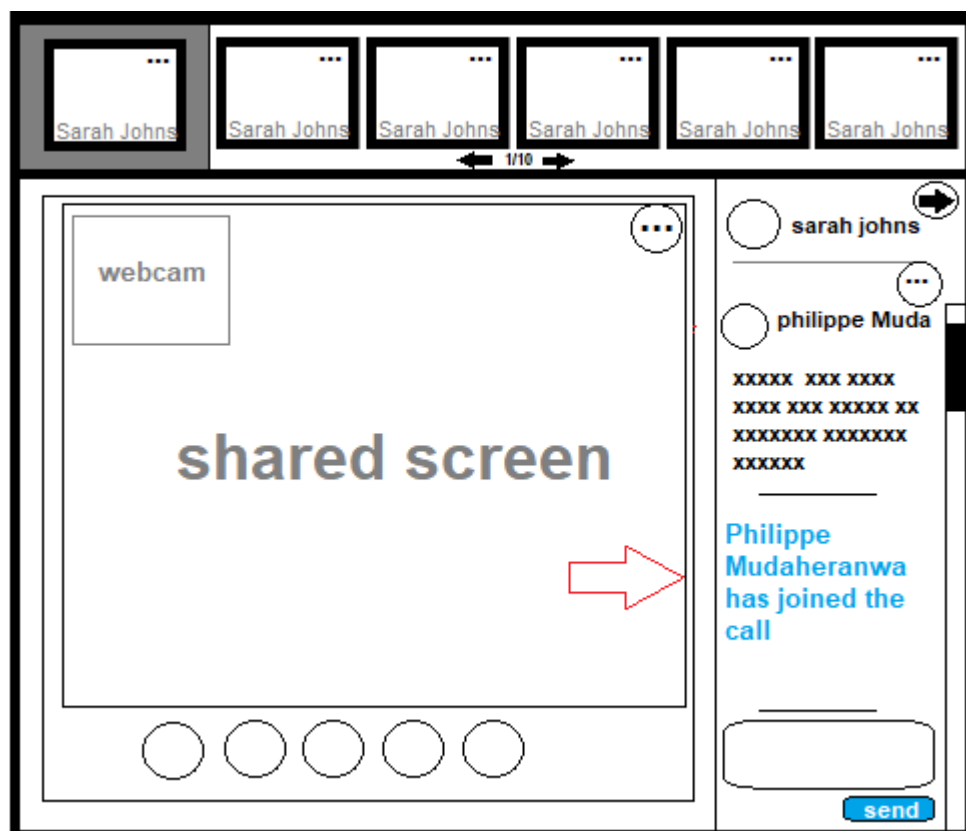


Inside the red dot, there is a number that indicates the number of new message. When he clicks on it, he will see a small panel that appear on the right here to see who sent him a message here :



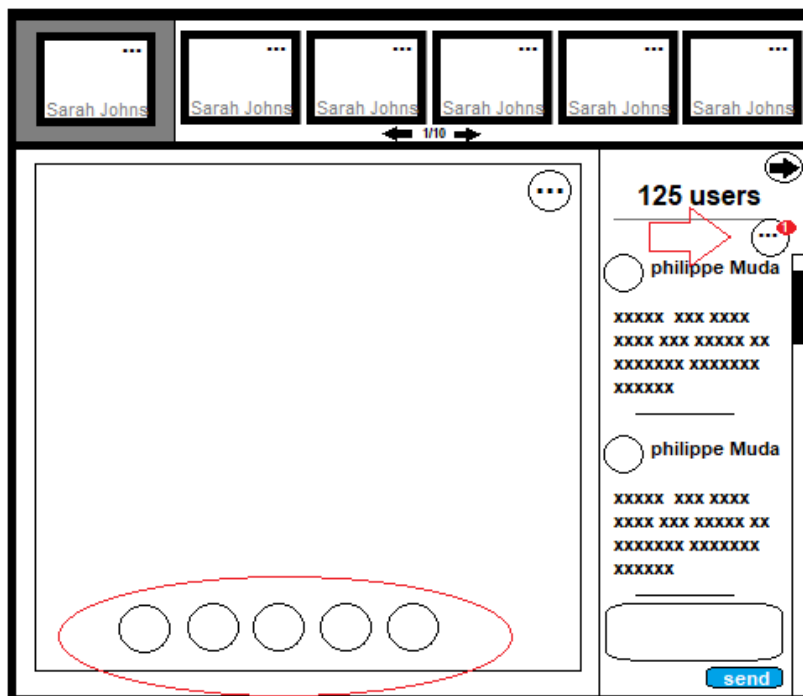
When he clicks on it, he will see who sent him a message below. He will land on the private chat and be able to chat with him if he clicks on one of the chat. On top of the small panel, he can get back to the main chat if he clicks on « [back to main chat](#) »

In the general chat section. When a new person join the video call, a message will appear : « **Philippe Mudahieranwa has joined the call** » :



When a user leave the call, a new message also appear : « **Philippe Mudaheranwa has left the call** » in red.

Finally, we have this section with the buttons. The presenter and the participants will have a different sets of buttons.

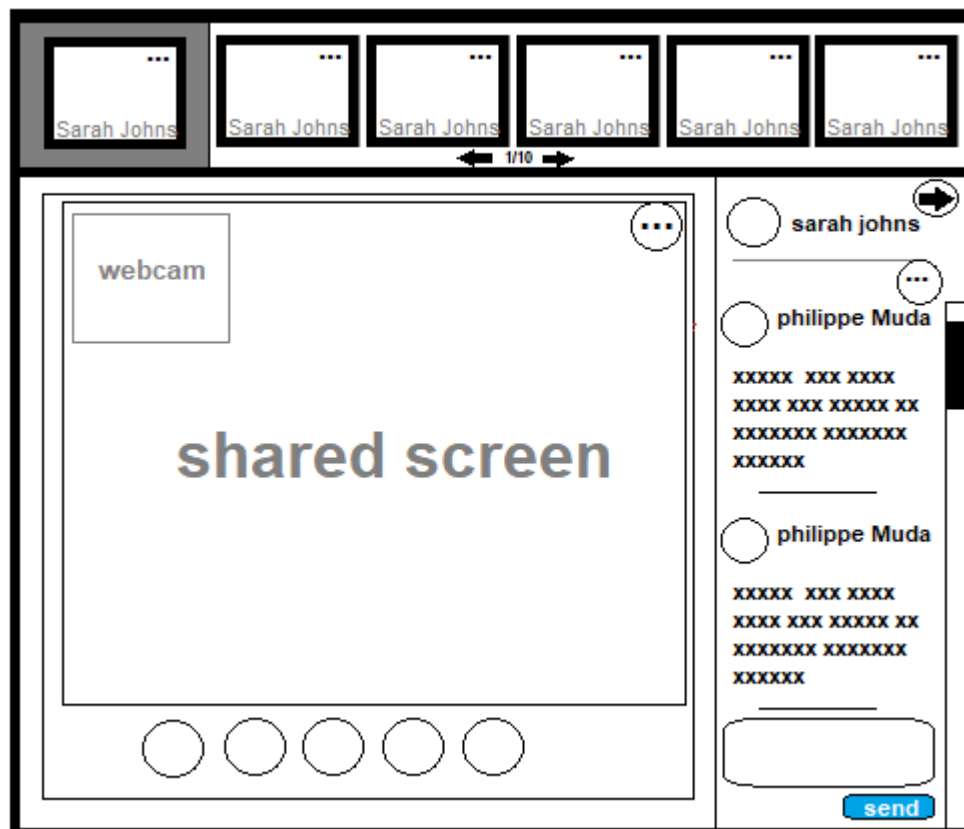


For the presenter, put these buttons, from left to right :

**(camera logo button)** this button will allow you to hide your camera or not. The button is blue initially, if you click on it, it become red.

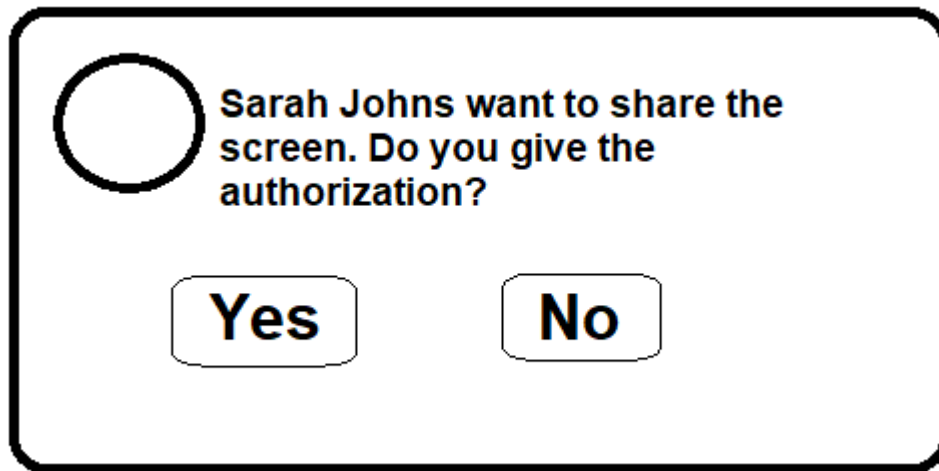
**(audio logo button)** this button will allow you to cut your sound. The button is blue initially, if you click on it, it become red,

**(screen button)** This button will allow you to share your screen. When you share your screen, your screen will appear like that :

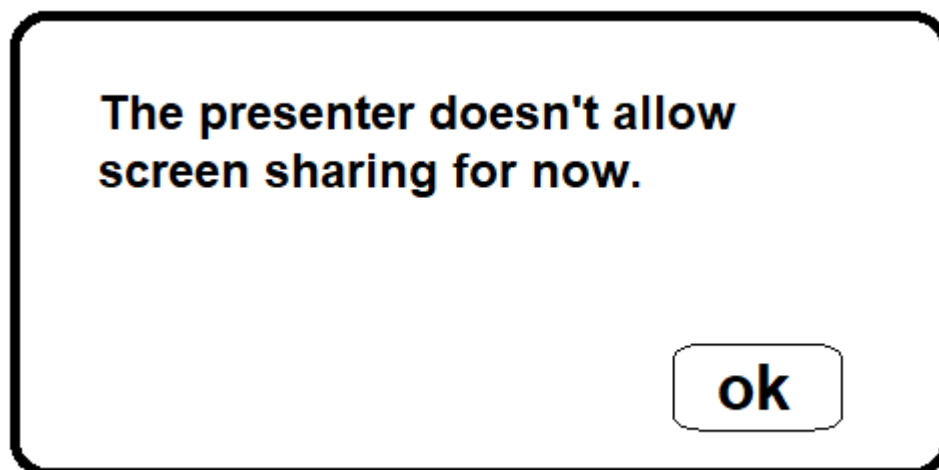


When the presenter share the screen, his screen will appear and on the top left, there will be a small screen to show his webcam. If the presenter, click on the share screen button again, the screen will become again normal and just show his screen like at the beginning of the video call. When the presenter records, make sure that when he share screen, we see the shares screen on the recorded video with the small webcam video on the top left.


Any user can share the screen too. If someone who is not a presenter decides to share the screen. He can press on the button share screen. When he presses it, a popup window will appear to the presenter asking him if he gives the authorization to share his screen :



If the presenter presses no, Then a popup message appears on his screen saying that the presenter refused to allow him to share the screen :



If the presenter allows, this pop-up will appear :



**You can now share your screen**

**ok**

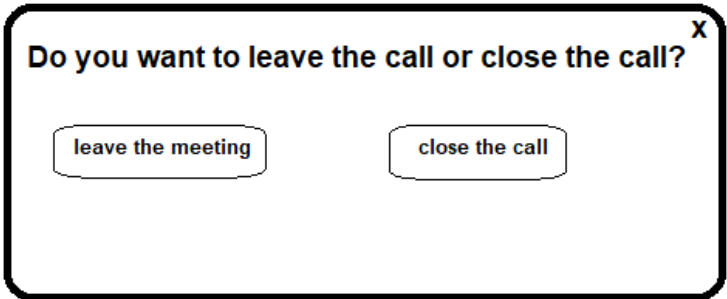
After he presses ok, the normal api window will appear to choose which window he wants to share.

**Remember that in mobile mode, the button to share the screen and record is not available for the presenters or anyone.**

**(record logo button)** The next button is the record button to record the call. You already created the code for that. When he records , it will only be the screen of the presenter and also the video of the shared screen. Only the presenter can record the call. The other user wont have that button.

We will see below that if a person decide to share his screen, first , the presenter will have to agree. When a user presses the button to share his screen, a popup window will appear to the presenter to ask if that user can share his screen. If the presenter agrees, then this user will become temporarily the presnenter and everyone will see his screen with the small webcam screen on the top left.

**( end call logo button)** This button will serve to end the call or leave. When the presenter leaves the call. A popup window appear asking him if he just want to leave the call or he wants to close the whole call for other people too. When he presses that button, this popup window appear :



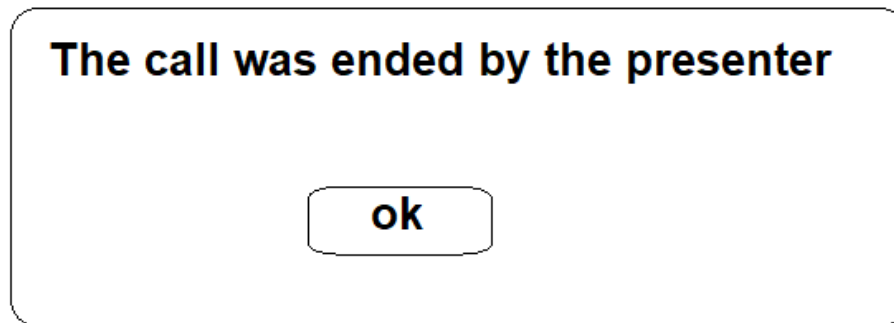
**Do you want to leave the call or close the call?** <sup>x</sup>

**leave the meeting**

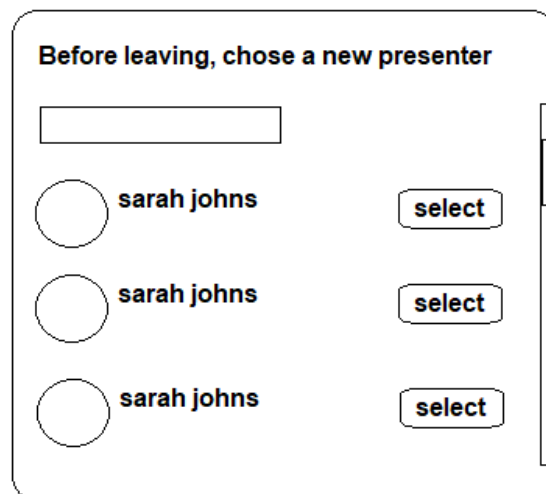
**close the call**



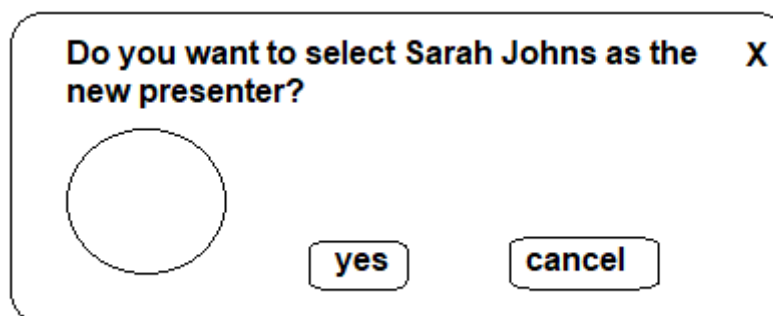
If the user close the call. Then all the users will be disconnected. The video call window will close for everyone and a pop-up window for everyone will appear



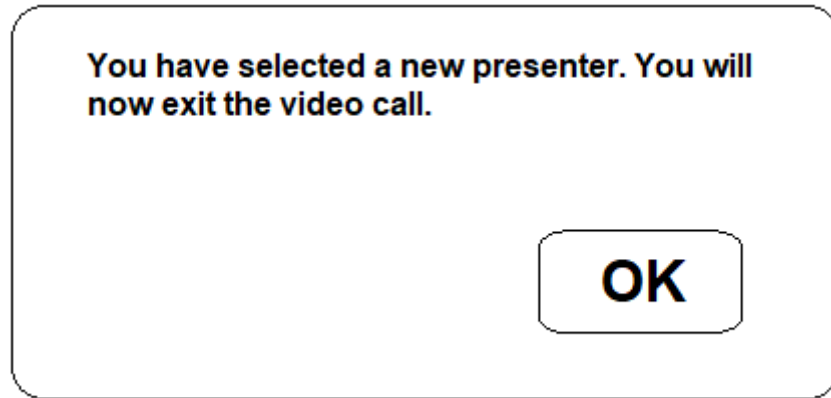
If the presenter leaves the meeting (press leave the meeting) he will be asked to set a new presenter. This person will be the main person of the video call and just be like him. This popup will appear :



Above is a window with the list of all the people present in the video call. At the top there is a small field to search for the person you want. When you write a name, it automatically show all the corresponding people. On the right you can click on the button select and the person will become the new presenter. This pop up window will appear :



If he presses cancel, the window disappears and he gets back to the video call window. If he presses yes. The video call window closes and a final popup window appears :



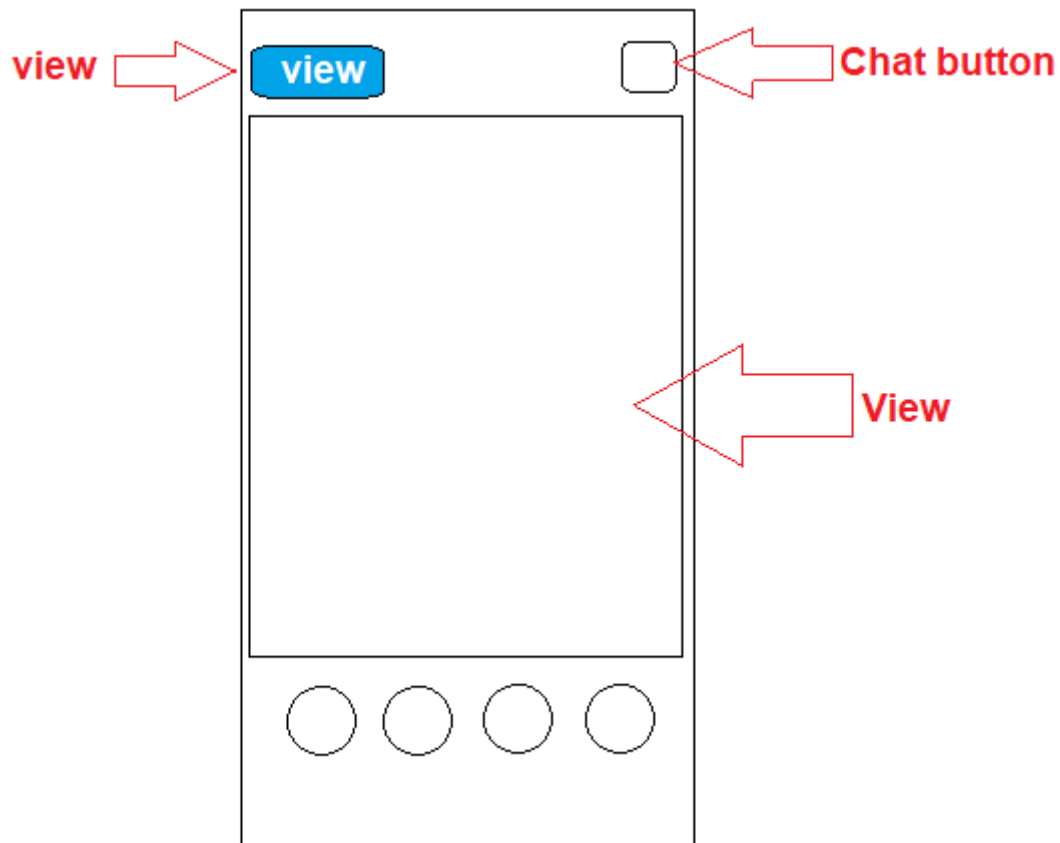
**On the video call button, if the presenter presses the « x » button to exit. The same popup windows will be asked if he wants to end the call or just leave the meeting.**

**If the presenter was recording the video call. The recording will also end.**

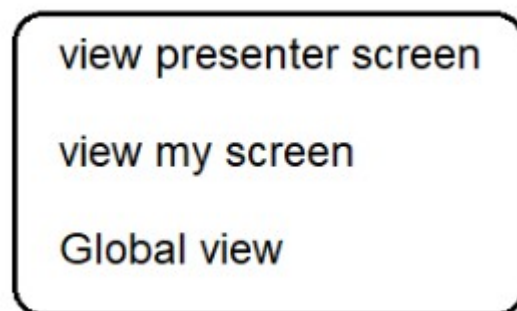
When you finish this part. Let's go in a meeting and let's try to simulate many people to see if there are bugs or other problems.

### **UI in mobile mode :**

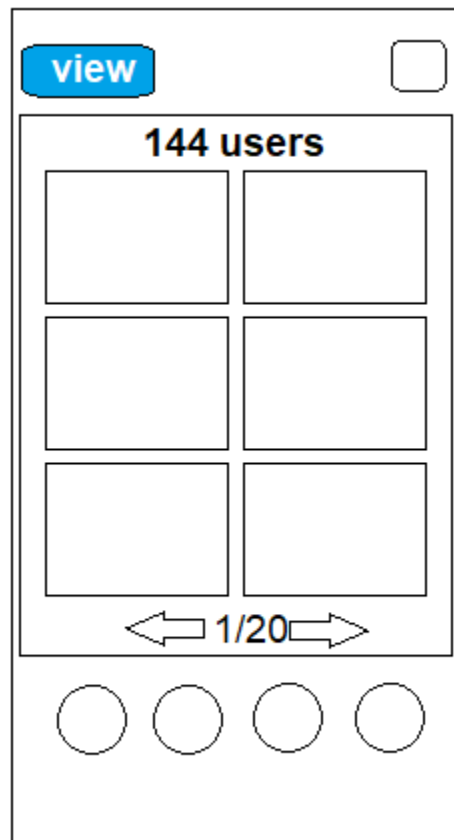
We must also create the same ui but for the mobile mode. It should look like this by default :



First you have the view where the video stream will display just like on the desktop version. You also have on the top left a view button where you can change what you want to see. If the user clicks on it, he will have the same options as on mobile :

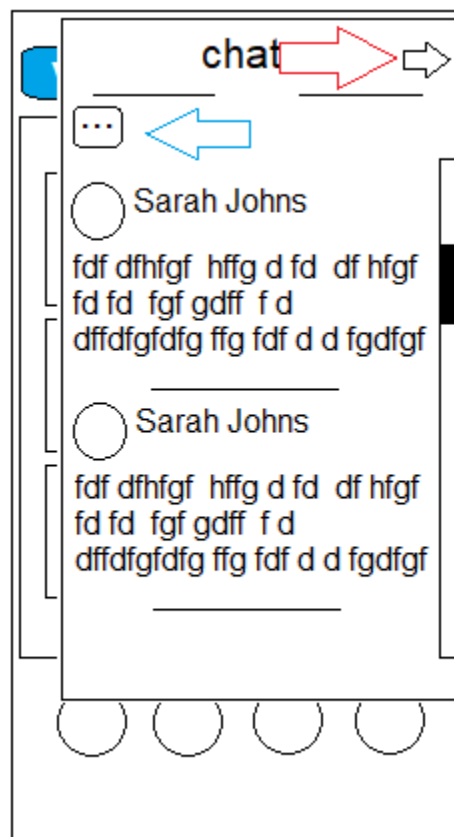


If the user selects global view, he will see the videos of all the people there :



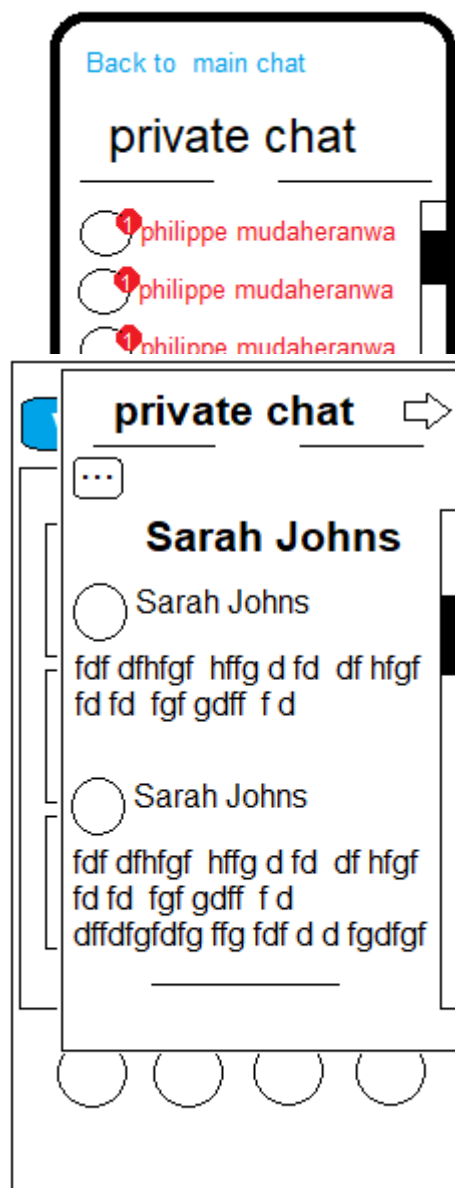
Just like on desktop the user can scroll and see who is there. Dine its a mobile phone screen, we can only show 6 people per

Finally, there is the chat button on the top right. When you



The red arrow shows you a button to close the chat drawer. The blue button shows you the chat option like in mobile. It allows you to move from general chat to private chat. When you click on it, you will see like on desktop a list of the people that you wrote or wrote to you in private chat :

If you click on one of the person, the chat drawer will go to private chat this way :

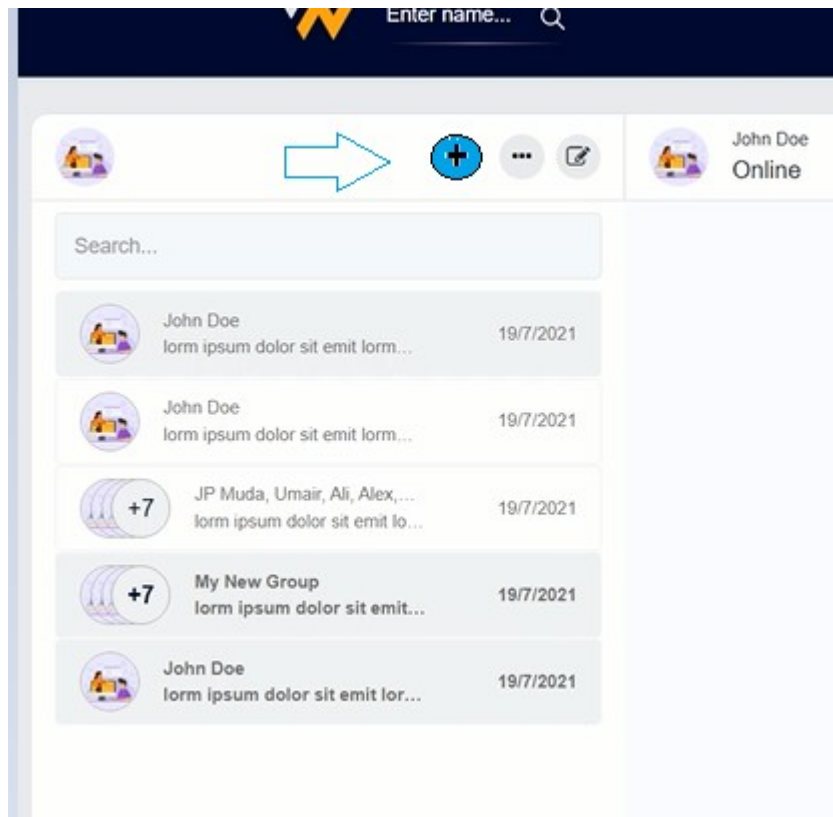


# Invitation call

Now we will make the invitation call code. Invitation calls are exactly like what we do on google meet. You press a button and it will create a url that anybody who has it, will be able to enter it and land on the video call. To remember how it works, just go on [meet.google.com](https://meet.google.com) and see for yourself. We will use the same ui as video call but we will have a url link and a waiting lobby before the people can enter the video call. There will be also a few more option.

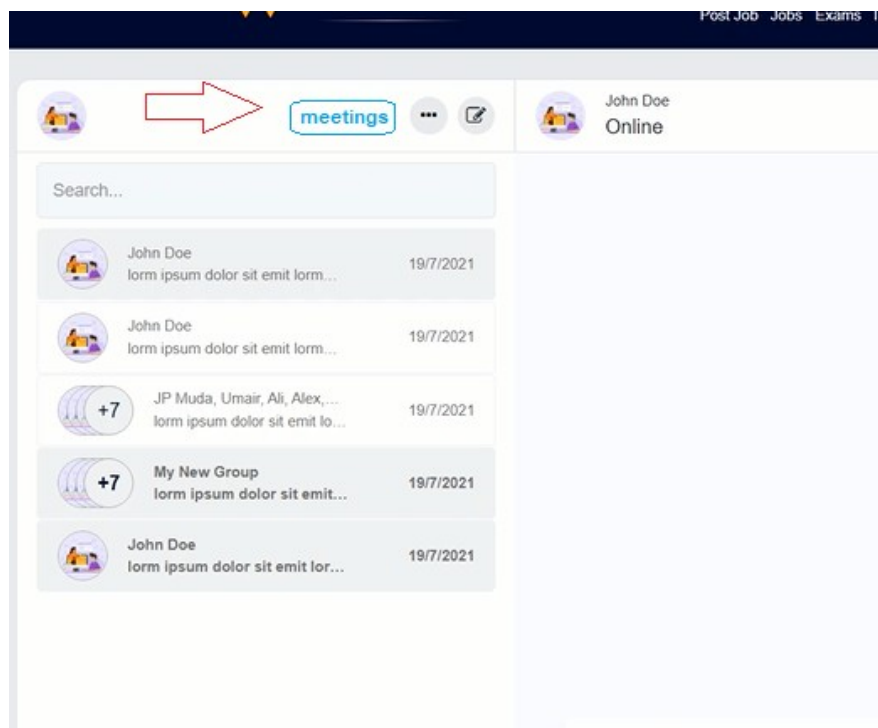
To access this new functionality, you will have to create a new button here in the message page. This can apply to all accounts individual or org :

f



When you click on this button, you will land on a new page :

c




The new page will still have the top navbar, It will look like this :

nomal top navbar here

### My meetings

search




type: meeting

name: meeting aero

date: 31/01/2022

url:  
[workfrater.com/meet/255676](http://workfrater.com/meet/255676)




type: interview

name: rendezvous

date: 25/09/2021

url:  
[workfrater.com/meet/254123](http://workfrater.com/meet/254123)



type: interview


name: rendezvous

date: 25/09/2021

url:  
[workfrater.com/meet/254123](http://workfrater.com/meet/254123)


join meeting:

## What kind of meeting do you want to do?




normal meeting

A normal video call with a presenter and an audience. The call can be recorded.




job interview meeting

A simple job interview meeting between two people.



classroom

A virtual classroom where a teacher presents a course to multiple students. The teacher can record the screen and the webcam of each



exams/tests

A classroom where a teacher can offer tests to do to students. their screen and their webcam will be recorded inside a video.

XX

On the left section (my meetings) will be the meeting section just like the message section on the left on the message page.

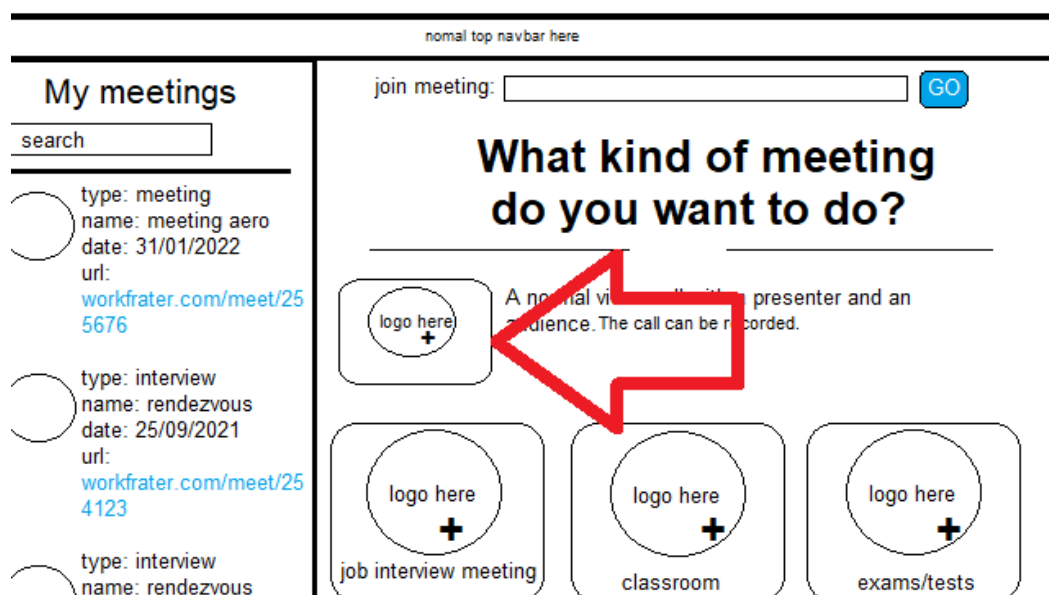
Each label has a profile picture. The profile picture will be chosen when you make a new meeting. Then on the left of the profile picture you will have the type (meeting, interview, classroom, exam/tests.) then below you will have the name you will give the meeting. Below you will have the date the meeting was created. Finally at the bottom of the label you will have the url link of the meeting you created.



The url must have this form for meeting. Workfrater.com/meet/yr6677ttggh each time a new meeting is created the url after meet/ is a random code like yr6677ttggh . Make sure that when another meeting is creating it doesnt have the same url otherwise there will be a bug. Once a URL is used with a specific code, this url cannot be created again.

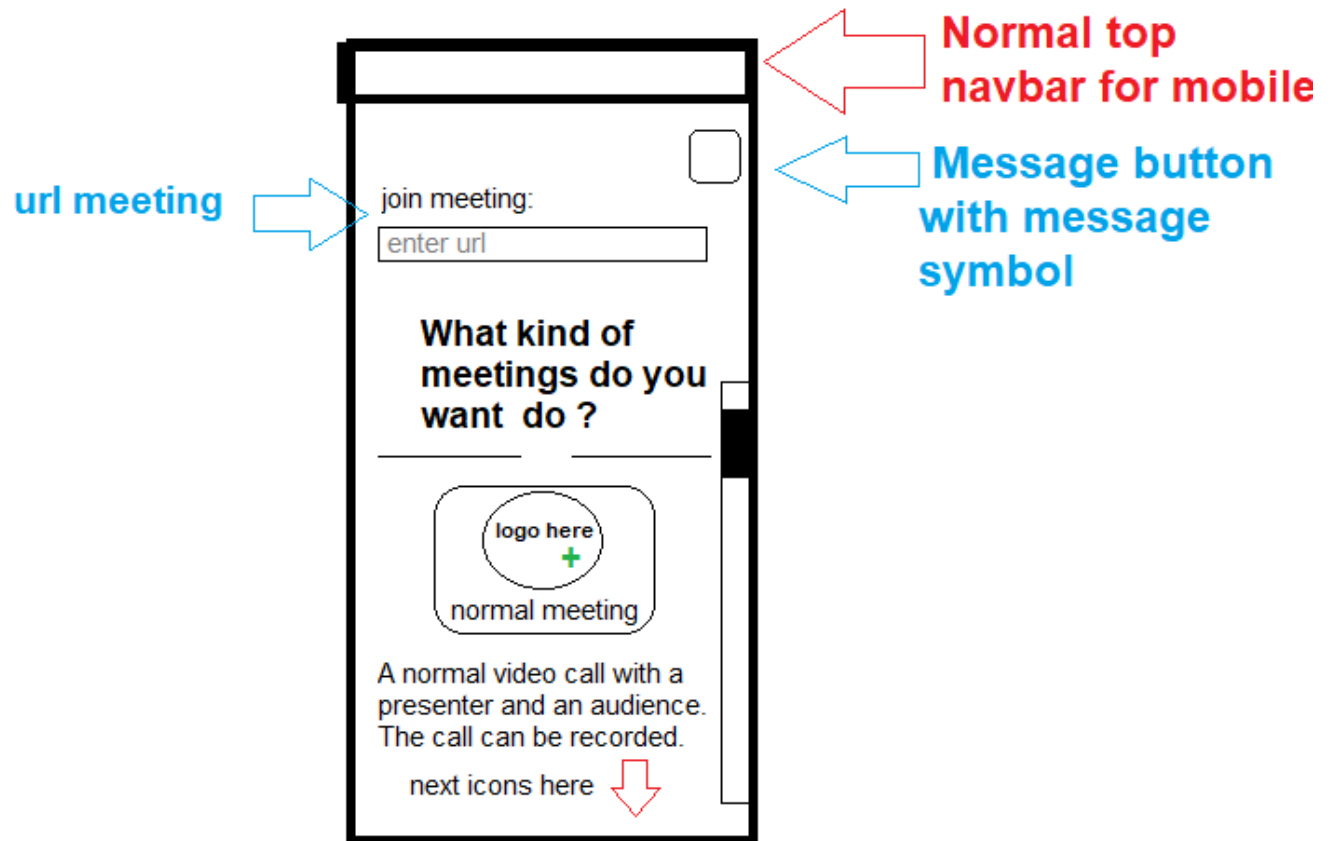
The big section on the right will be where you can create a new meeting. At the top there will be a section to join a new meeting. Its a search field where you simply put the url of the meeting and you will land on it when you click search.

At the bottom, there is big buttons to create the meetings you need. For this document, we will only try the first one here :



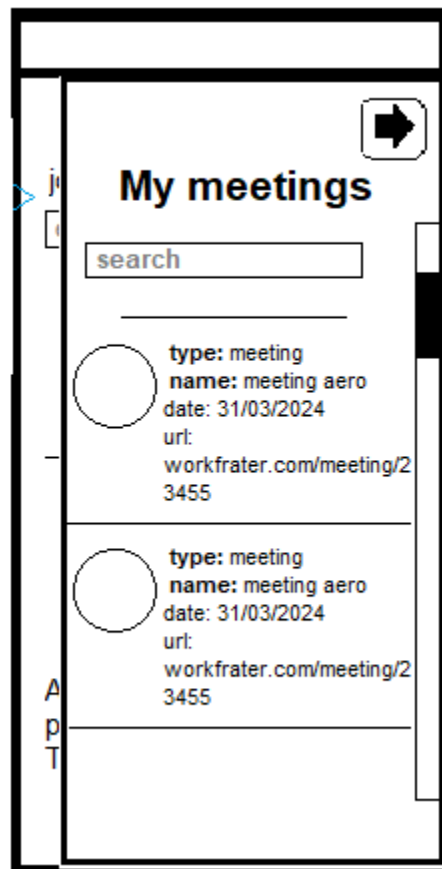
I will send you the logos in a separate file for the button. Simply put the logos there and at the bottom right of the logo put a plus sign in green. For the rest, just create the buttons and we will do the other in the next documents. For now, we will just focus on the first button.

This is how the same page should look on mobile view :



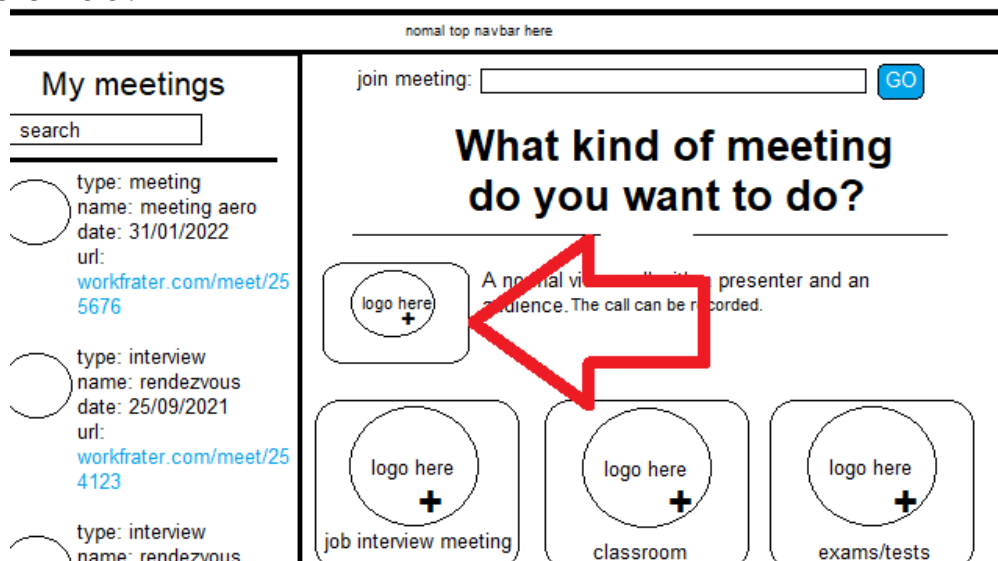
This screen will have the normal top navbar and do not forget the bottom navbar too.

At the top right there is a button to see the list of meetings. When you press on it a drawer will appear :



This screen is the same as the section on the left in the desktop mode. It shows the list of meeting with profil pictures. On the right you have the type, name, date and url just like on desktop.

When you click here :



this new page will appear :

normal navbar

## Create a normal meeting

---

### Basic informations

name of the meeting:

name

background image of the lobby:  
(1600 x 900 minimum)

Profil picture of the meeting:

This is the first page to create a normal meeting. First you have a field (name of the meeting) this is simply the name that will appear inside the meeting section. Make sure that the field cannot take more than 40 letters.

Then at the bottom of this field, the user can add a profil picture of the meeting. Again, this profil picture will appear in the meeting section. When the user clicks on it, a prompt appear to choose an image from your desktop, just like when you add a profil picture during signup. Finally on the left, you will have a background image for the lobby. The lobby is where people will wait before getting accepted to a meeting just like zoom or google meet. The image must be minimum 1600 x 900 so that it can fill the whole page without losing quality.

At the bottom of this page, there is arrows. Since its the first page, the first arrow should be pale and transparent since you cant go back. The right arrow should be transparent and grey too and cannot be clicked on until the person fill the 3 fields.

In mobile mode this page should look like this :


C


normal navbar

Create a normal meeting

Basic informations

name of the meeting:

Profil picture of the meeting:  


background image of the lobby:  
(1600 x 900 minimum)  


As you can see its the same gui as the one on mobile. Put the same functionalites and below also put the arrows.

The next page will look like this :



normal navbar

Create a normal meeting

Accessibilty of the meeting

can someone without an account join the meeting:  
☐ YES ☐ NO

Can people in the lobby enters directly the video call:  
☐ YES ☐ NO



Please use the same model to create the mobile version.

The first option is « can someone without an account join the call ». This option will allow someone who hasn't any account to just join the conversation without having to create an account. He will just enter the url that the presenter will send him and the lobby will appear. Since he won't have an account, the lobby will ask him to add a profile picture just for the meeting. I will show you how the lobby will look in a few paragraphs.

The next option is « can people in the lobby enter directly the video call ». This option will allow the user who is waiting in the lobby to enter the video call directly without the presenter waiting. If the user selects yes, the button to enter the video call will be «join the call » if he presses no, the button for the user will be « ask to join the call ». When he presses it, a popup window will appear to the presenter asking if that user can join. We will see all that in the next section.

Please use the same model to create the mobile version.

The next page is the lobby page :

normal navbar

## Create a normal meeting



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### Lobby options

Do you want a text ticker in your lobby?

☐ yes ☐ No

Text ticker content:



when you scroll down this page you see additional options :



normal navbar

Create a normal meeting

Lobby options

Chat pannel in the lobby?  
☐ yes ☐ No

Can people in the lobby see who else  
is waiting in the lobby:  
☐ yes ☐ No



here I forgot another option you should add. You should add the option : « Can users on cellphone join this meeting ». If its no, then when a user on cellphone try to join this meeting, there will be a prompt saying « the presenter of this meeting doesn't allow joining by cellphone »


Below there are other options :

normal navbar

Create a normal meeting

Lobby options

Add an intro video  
You can add an intro video to your lobby. Participants will see this video when they  
join the lobby. You can either record your video or upload one.



This is the last page so the bottom right button allows you to finish and move to the next section which will be the video.

Now we will talk about the options I put in the pictures above.

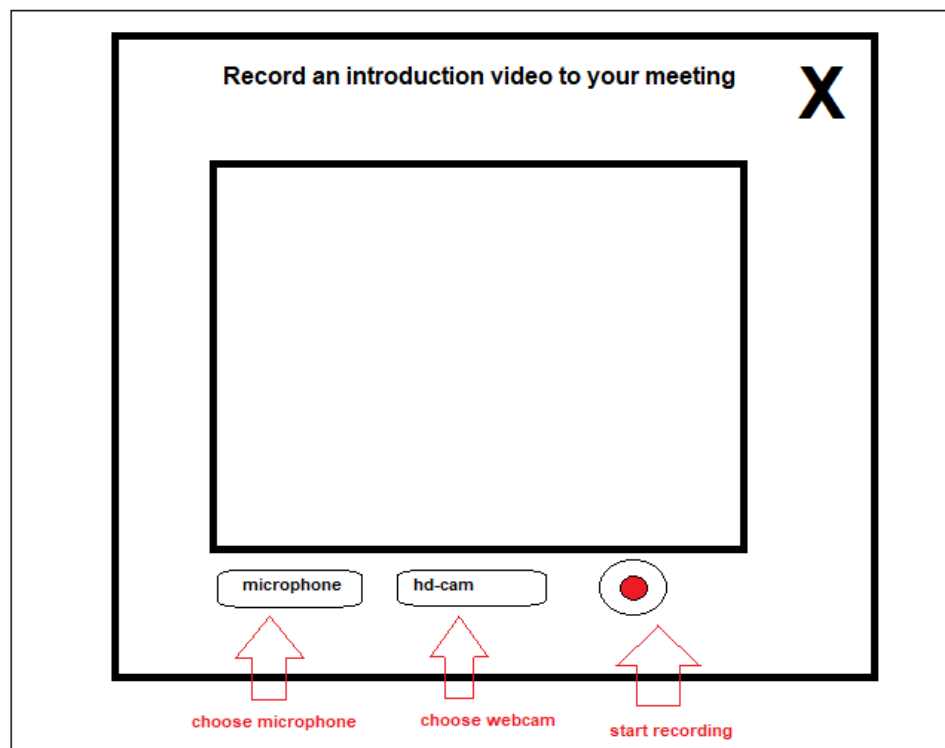
The first question is do you want a ticker in youlobby. As explained previously a ticker is simply a label at the bottom of the screen that will display a moving text from right to left in a loop. If the user clicks yes, the text section for the ticker below will be available and the user will be able to write the text he wants (max 2000 letters). If the user presses no, the text section stays grey pale and the user cannot write. I will show you the the ui of the logo.

The next option on the next page is chat pannel in the lobby. This option will allow people to chat in the lobby. If you clicks yes, it will be available and if not, it will not be visible.

The next option is can people in the lobby see who else is waiting on the lobby. If you press yes , the user who enters will be able to see a list of the other people waiting. If you press no, they wont be able to see it.

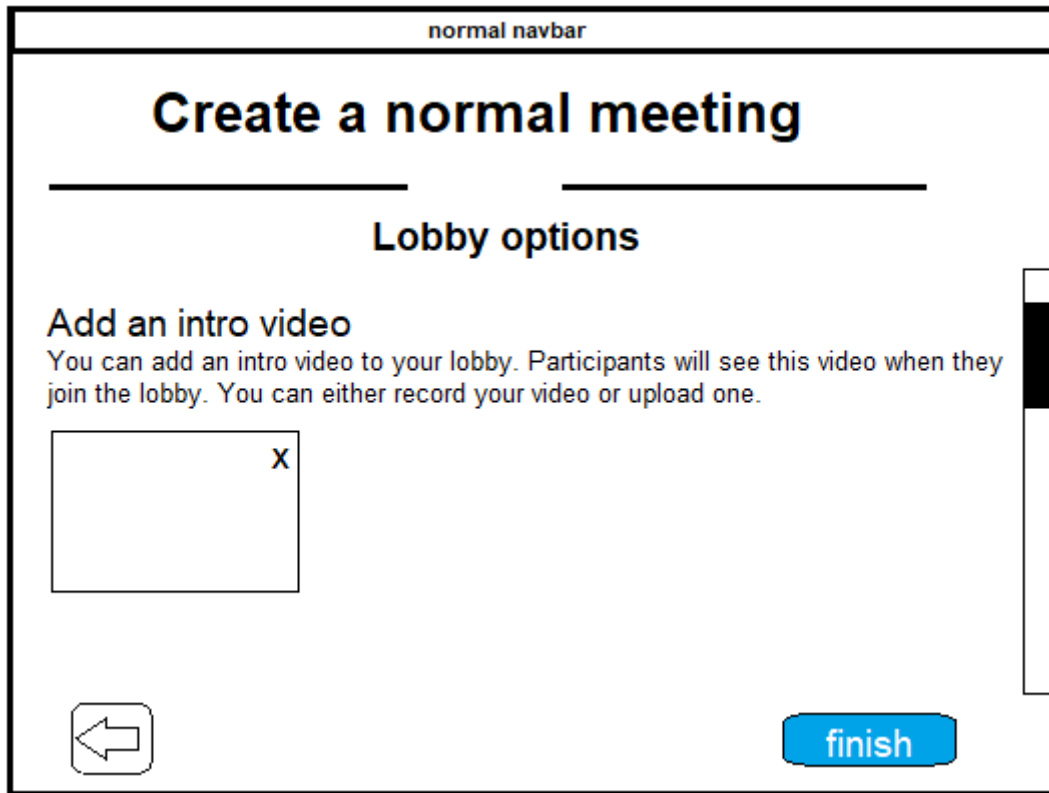
The last option for the lobby is if you want a video to be displayed in the lobby. This video will be available to allow participants to understand what is the goal of the meeting.

If he presses upload, the windows prompt to upload a video will appear. Make sure that the video are less than 300mb and only file videos can be uploaded. If the user presses record, a popup window to record



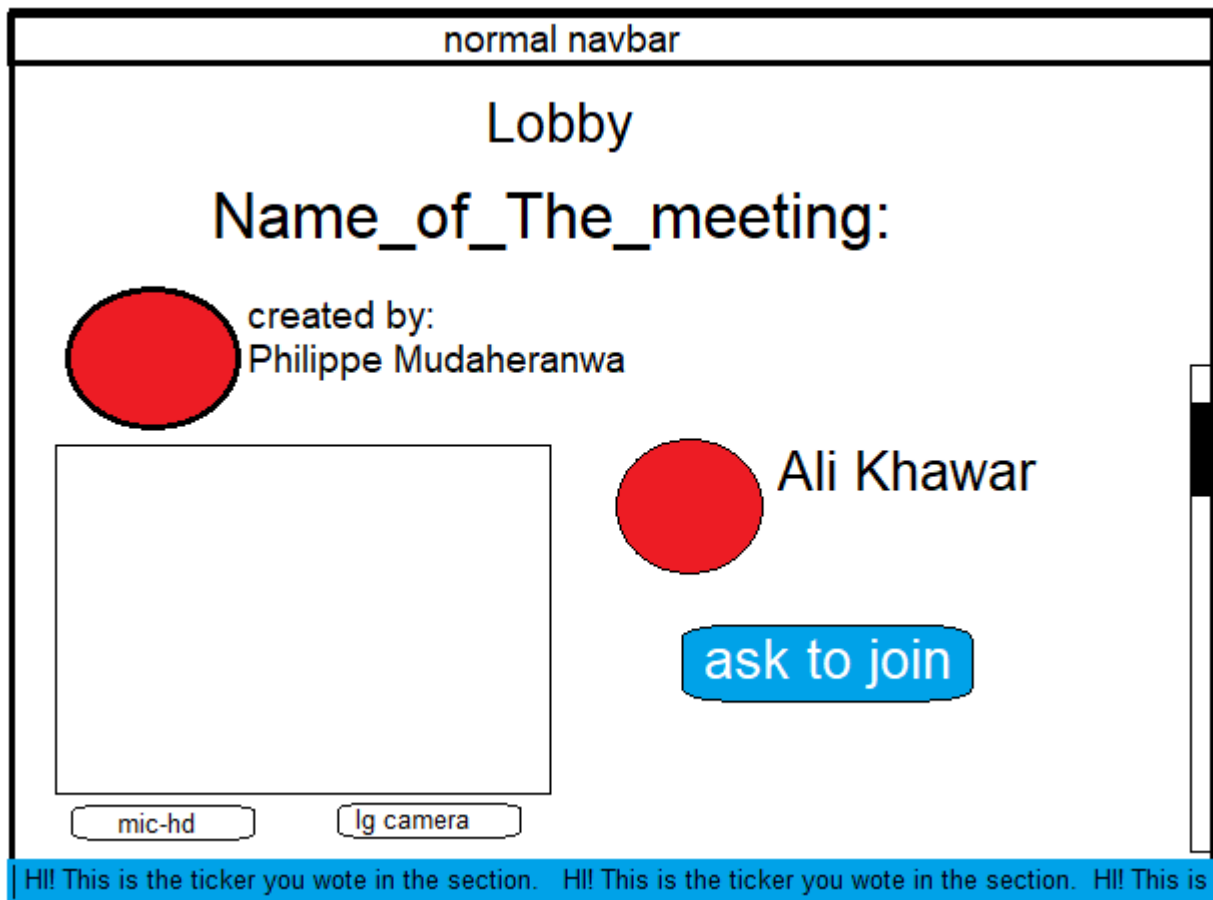


This is the window that appear to record the video. He can choose the microphone he wants to use and webcam he wants to use. On the right there is a button to start recording. When the user presses it, the recording start. The red circle becomes a red square to stop the recording button when the user has finished. When a video is uploaded or a video recorded, the page becomes like that with a thumbnail of the video :

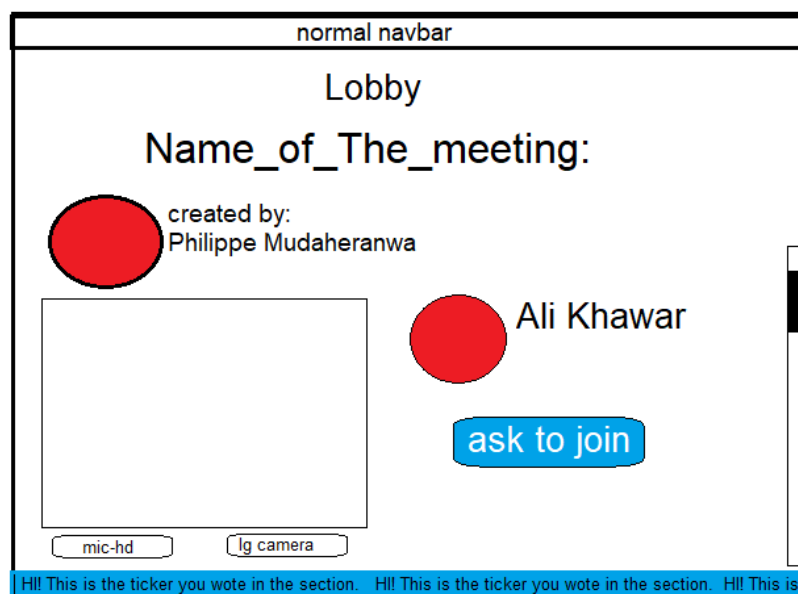


If he presses on the « x » on the thumbnail of the video. The upload and record button reappear and he can either reupload or record.

So finally, this is how the lobby will look like for a participant **who has an account** who enter :

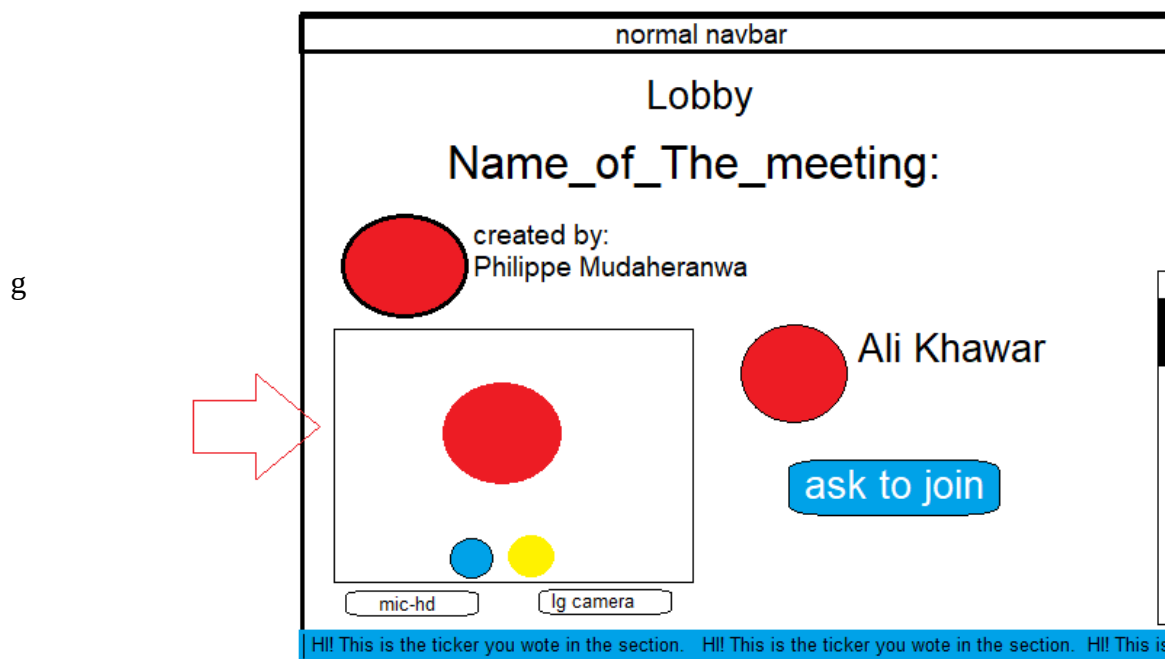


If you scroll down the lobby page, this is what you see :



On top you have the word lobby to indicate you are on the lobby page. Below you will have the name of the meeting that the creator of the meeting has entered. Below you will have the profil picture of the person who created the meeting and then « created by : », the name of the person who created the meeting.

Below, there will be the view of the camera here :

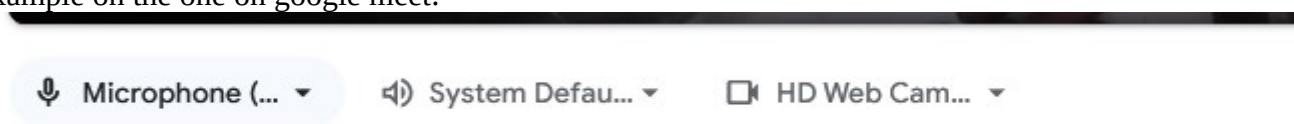


It simply a window where you see your camera, just to make sure it works. By default. Its closed and the red circle is your profil picture. Below at the bottom of the screen, I have put in blue, the button for microphone. You can put any microphone logo you want. In yellow I have put the video camera. Those two buttons are disabled by default.

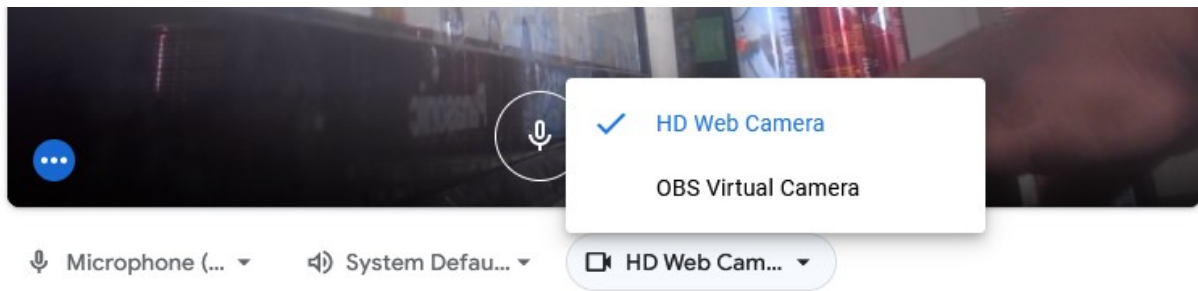
Below the screen there is the options to choose the microphone and camera you want to use for the meeting here :



Just like on google meet, if you click on them, you can choose the ones that are available. Take example on the one on google meet:



if you click on the button, it gives you the choice :

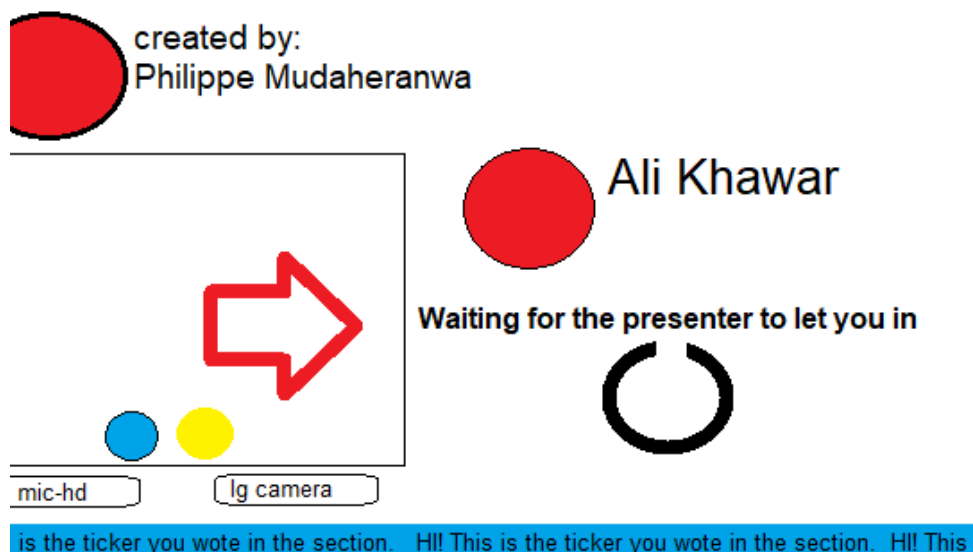


On the right of the screen, you have this small section :

d

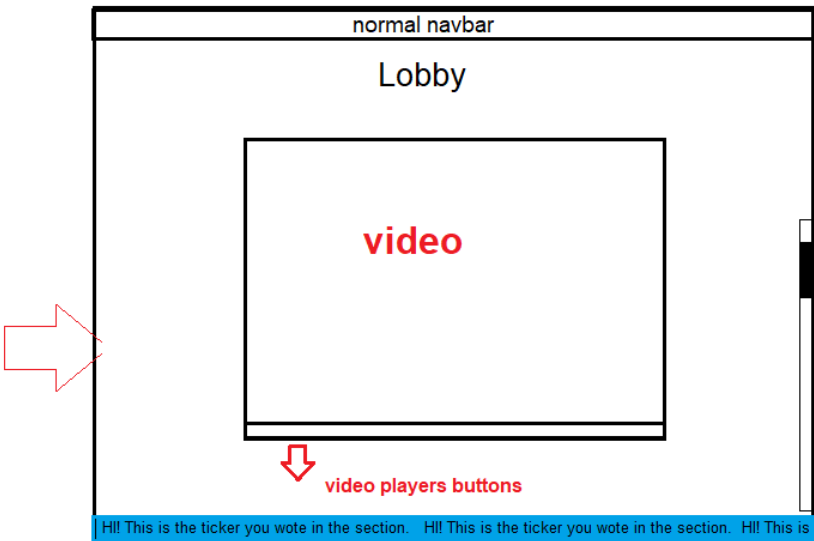


It simply show the profil picture of the person who want to join and his name. Below there will be a button ask to join. Once the user clicks on it, it will change and become this way :



The black circle I put in should be a blue loading circle. The presenter will receive a notification that a user wants to join. If the presenter accepts a popup window will appear with the video call.

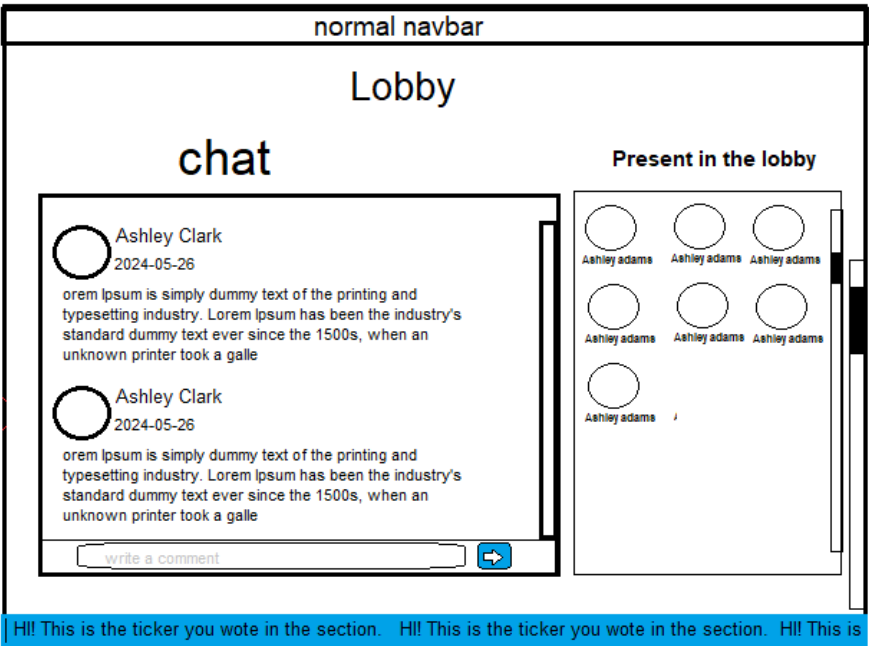
Now, if you scroll down at the bottom of the lobby page you should see other elements :



Above will be the presentation video that the presenter has recorded. You can use the same video frame as the welcome page of workfrater. If the presenter, has not uploaded or recorded any video, obviously the video frame wont be there.

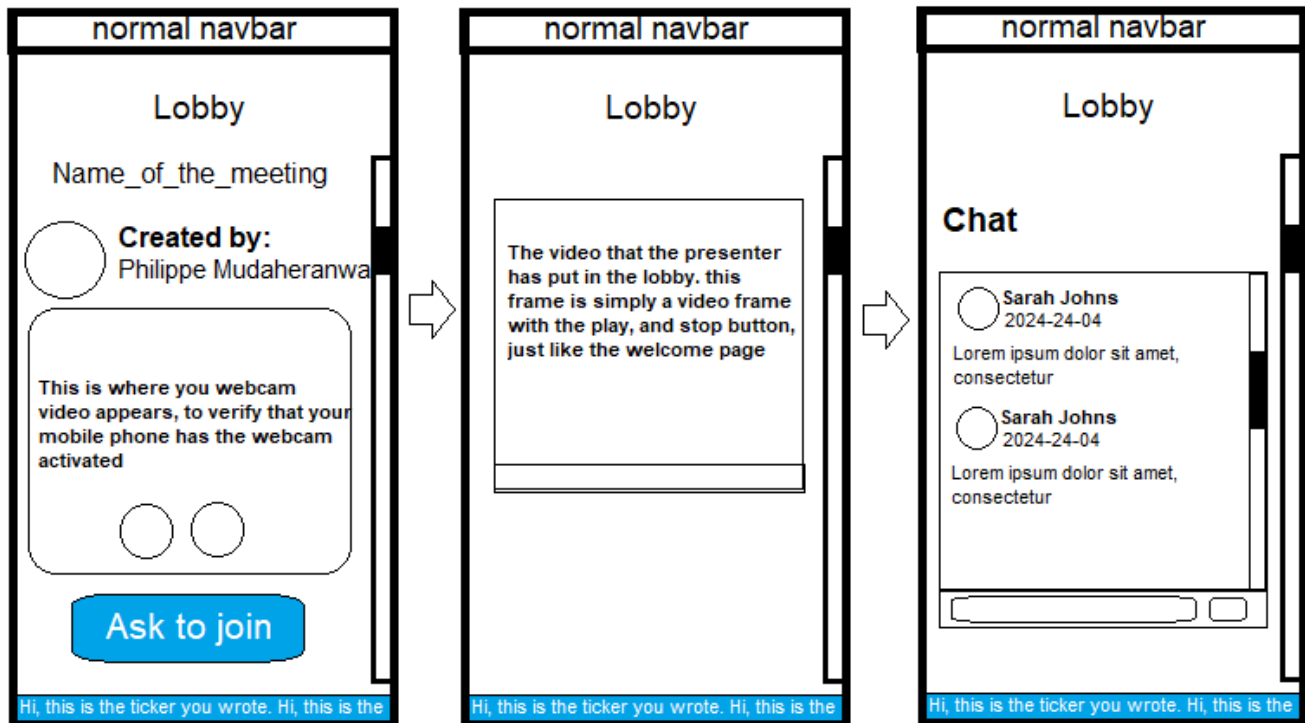
Then below this section, there will be the chat section :

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Again, if the creator of the meeting hasnt select the option for chat, the chat section wont be there. The same for the option to let people see who else is in the meeting. If this chose is not selected, the user wont see it.

Now, in mobile mode, the lobby for a participant who has an account should look like this :



Its almost the same as the desktop version. On top, you will have the lobby title. At the bottom, you will have the name of the meeting that the presenter has chosen. Below, you will have again the profil picture of the presenter, and his name.

Below, you will have a video stream of your webcam, to make sure that your webcam works. If there is no webcam stream, you should display a message in the video frame saying « Make sure that your mobile device's camera works and that you have authorised workfrater to use it.

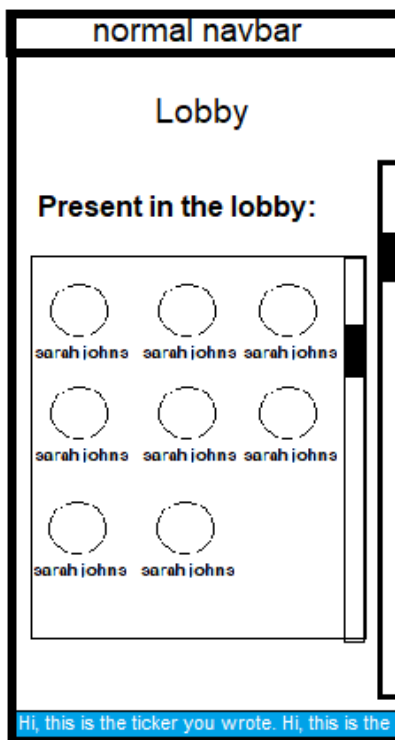
In the video frame, there is two buttons. The one on the left is again the microphone one, and the one on the right is the webcam one. It allows you to disable or activate them. If the person is accepted in the meeting, his webcam and microphone will be activated or not depending if he pressed the buttons, Just like on zoom.

Below there is a blue button « ask to join ». If you press on it, just like on the desktop site, a circular loading circle will happen and there will be a message « Waiting the presenter to let you in ».

Below, there will be the video that the presenter has created with the normal option, play, stop, etc...

Below there will be the chat section. Its a window with all the chat dialogues just like on the desktop version. You can scroll down to see the dialogue. And there is a section at the bottom to write a comment yourself and a button on the right to send it. Remember that the chat section should only be visible if the presenter has allowed it.

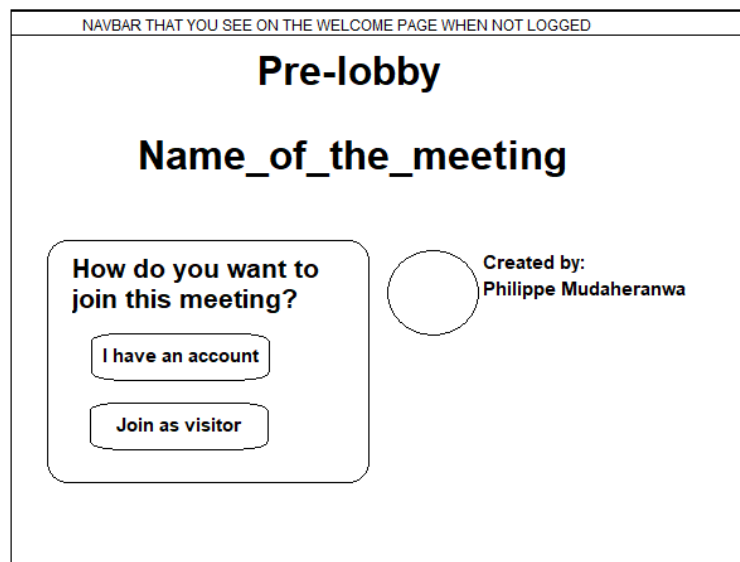
Below again, there will be a list of all the people present in the lobby waiting :



Remember that even in the mobile mode there is a ticker at the bottom with the message that the presenter has put.

Now, I will describe the lobby for the user who doesn't have an account and who simply enters the url directly on his browser. Once he enters the url, he should see this page :

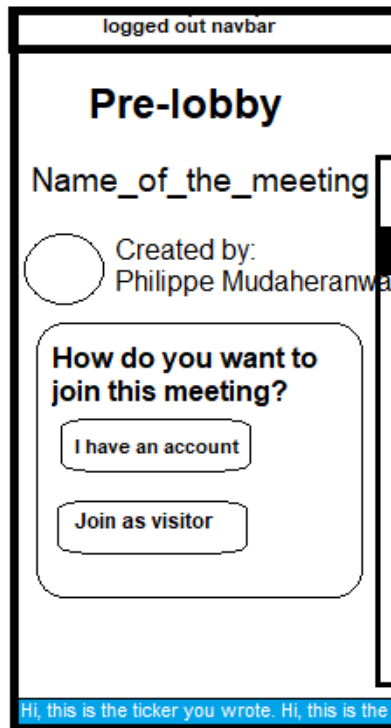
f



It's simply a page that will ask the person if he wants to join as a visitor or with an account. There is a container on the left with those two options. On top, there is the name of the meeting that the presenter

has chosen. On the right, there is the profil picture of the presenter and his name. The background image of this page should be the background image that the presenter has chosen in the option menu while creating the page. Dont forget the ticker at the bottom,

It should look like this in mobile view :



If the user press « i have an account button », this prompt will pop-up asking him his credentials :



NAVBAR THAT YOU SEE ON THE WELCOME PAGE WHEN NOT LOGGED

## Pre-lobby

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Do the same for mobile. If he enters the right information, he will enter on the lobby page normally like in the previous chapter in this document. If he inputs the wrong information and he presses login, the login and password container becomes red and shake, and he must restart.

The next option is « join as visitor ». If he presses this button, he lands on a new page

S

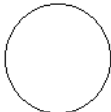
NAVBAR THAT YOU SEE ON THE WELCOME PAGE WHEN NOT LOGGED

## Pre-lobby

### Name\_of\_the\_meeting

Choose a name:

choose a profil picture:



select a picture

Enter lobby

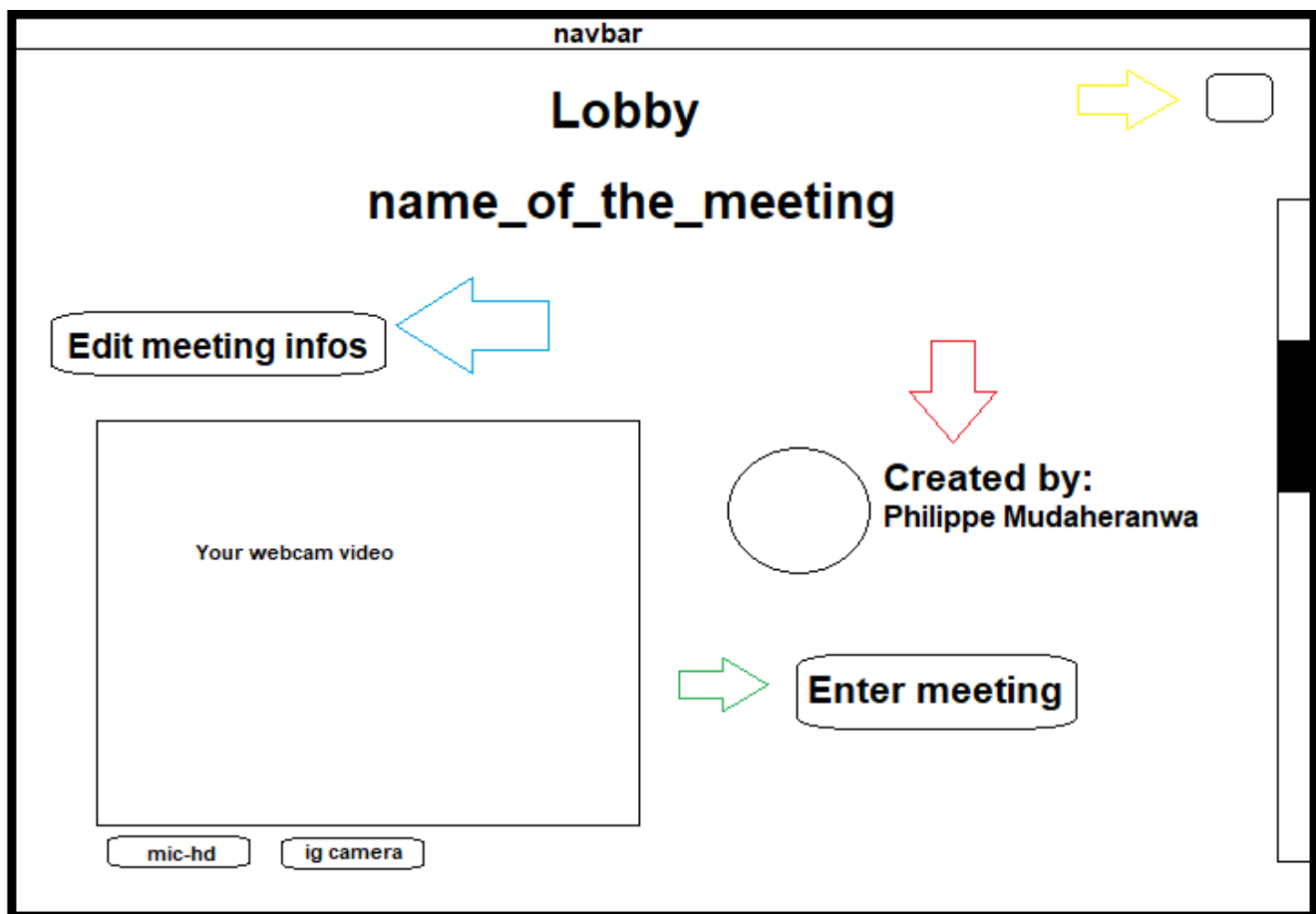
The user must choose a name for the duration of the meeting. The user must enter a name with more than 5 letters. If he inputs less than 5, the field becomes red and there is a red message « the name must

have more than 5 letters ». Then below there is a button to select a picture. When he presses the button, the normal window navigator appears and he can select a picture file. Just like in the signup process. The image will appear in the circle. If the user doesn't select any picture, we can find a default 2d picture.

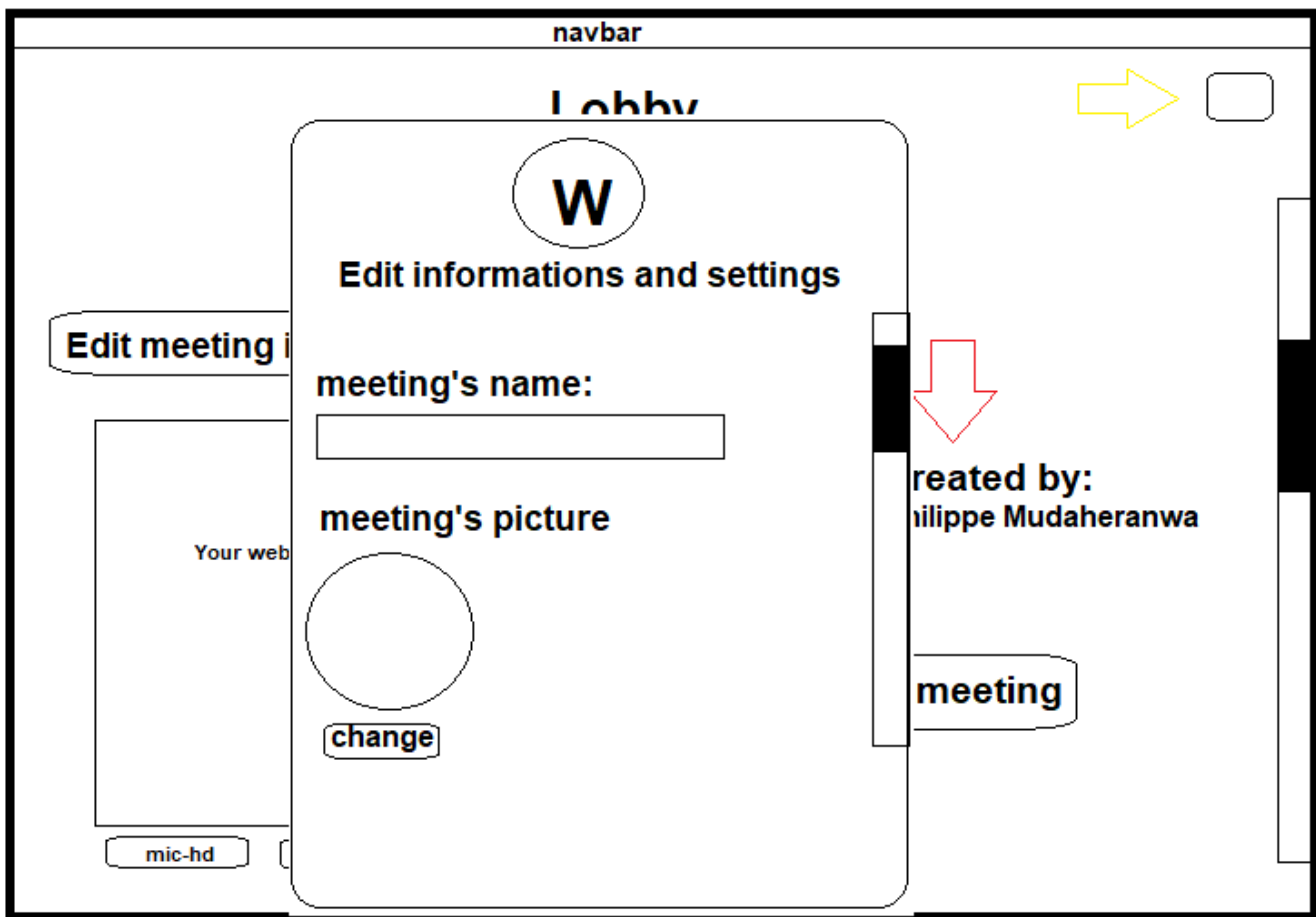
Then at the bottom right there is an « enter lobby » button. When he enters the lobby, it will be the same gui, but he will be a visitor.

Now we have to do the lobby for when the presenter enters his own lobby he made. Since it's his own lobby, it's there that he will be able to change the parameters of his own lobby.

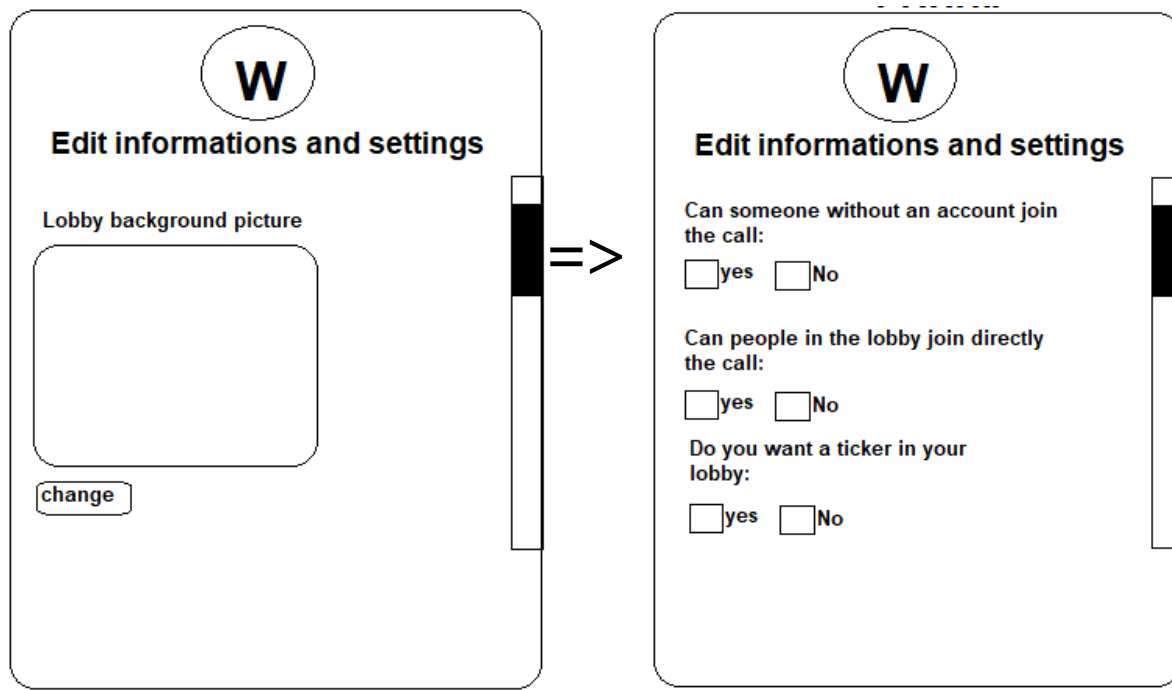
It should look like this :

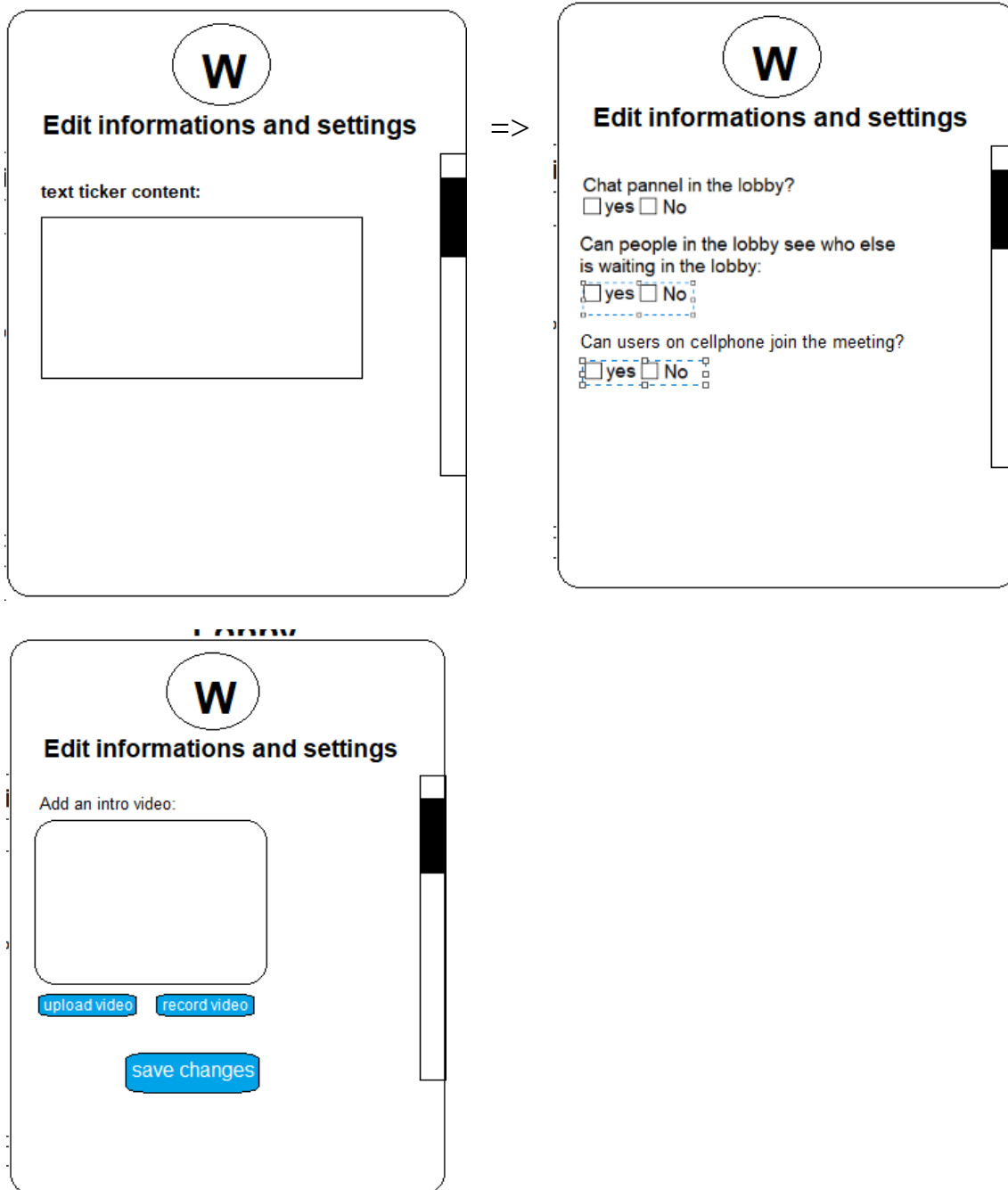


You have the button « enter meeting ». Since it's your own meeting, you just need to press it and the video call popup will appear. The lobby is almost the same as a participant's but there are a few differences. First you have a button to edit the info and settings of the meeting (blue arrow). When you press it, you will be able to edit your meeting. A pop-up appears like that :



You can change the name and profil picture, if you scroll down on this popup window you can change additional settings. When the popup window appears, make sure that all the settings that were set will be there. The user will be able to change thm. Here is how it should look like :





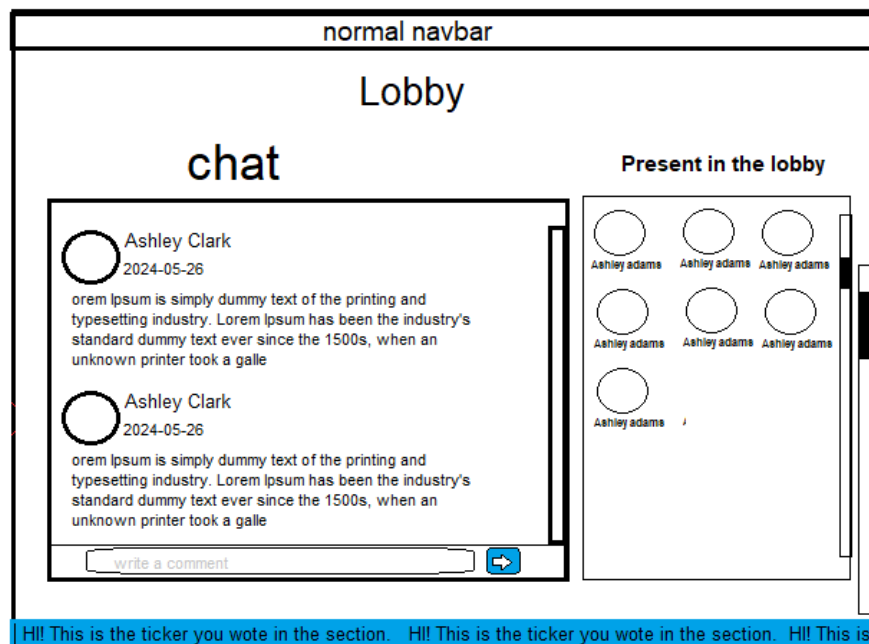
This was for the button to edit changes. When the user presses save changes, all the settings change and the new settings are updated.

Now, if we continue down below the lobby for the presenter, it should look like this :



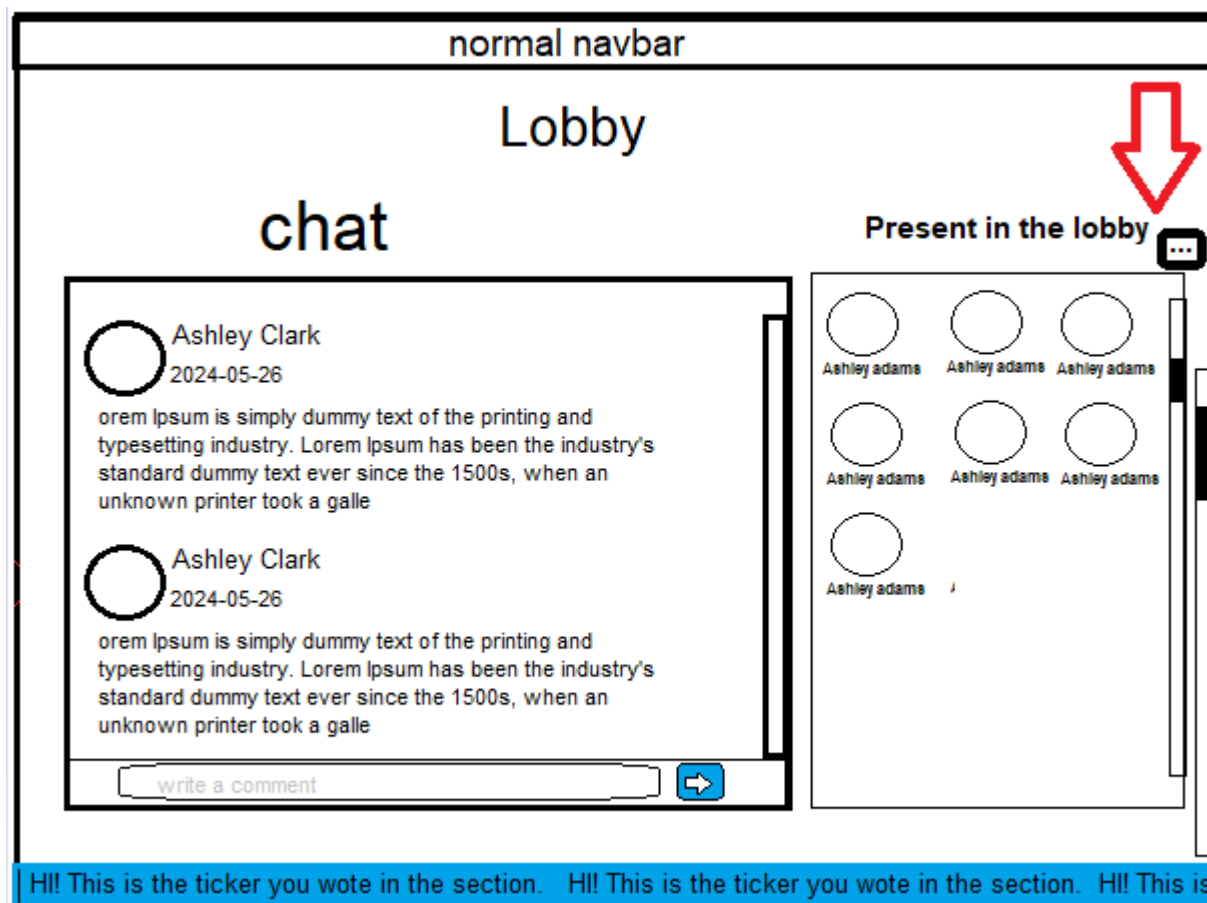
It will be the section for the video, if the presenter has added one. Its the video player with the video that the presenter has added. Then below there will be the same section with the chat section and the people present in the lobby :

v



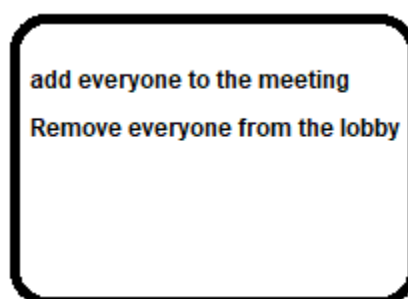
Since you are the admin, the chat section and the lobby section will always be visible. So this was how the lobby appear if you press the meeting as the presenter (the person who created the meeting).

In the « present in the lobby section », you will be able to see who is there. Make sure that it constantly updates, this way, when a new person join the lobby, we will see it. You should add a few options here :



When you click on that button, you will have a small pop-up that gives you a few options :

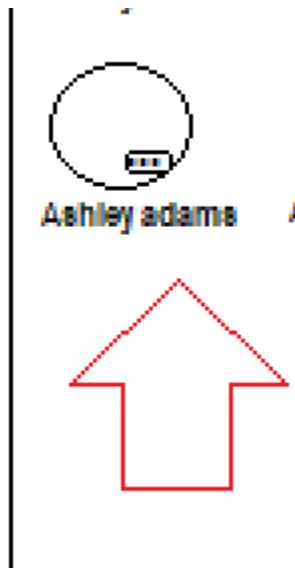
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If you press the button « add everyone to the meeting », everyone waiting in the lobby will join the meeting. Of course if they join the video-call, they will no longer be in the lobby. The pop-up window for the video-call will appear. If you press « remove everyone from the lobby ». everyone will be kicked out from the lobby ».

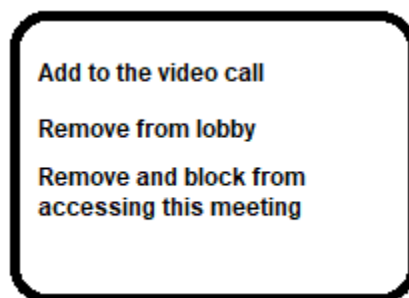
If you hover your mouse on one of the profil picture in the lobby, there should be a 3 point button that appears like that :

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When you press on the 3 points buttons, options appear :

f



The first options allow you to add the person to the video call. He will join. The other option « remove from lobby » will make him get removed from the lobby. The last option « remove and block » will not only remove him from the lobby, but he will not be able to join the meeting. If he tries to join the meeting with this account, a popup account will appear with the message that he cannot join this meeting.