Software Development Proj

Dr. Ensar GÜL

Group 2

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Members:

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Manar Hasan.

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Aim of the project

- To make the communication between people easier and more efficient since it allows them to contact by both voice and video call for many purposes such as, business, studies, or whatever it is needed.
- To allow users to set up videos and audio conferences, live chat, screen sharing, etc.
- To share information and data via meeting calls without being physically in the same place. Saving Time and money. They can communicate from anywhere instead of rent a room or a building or wasting their time in transportation.
- On Bubble platform, students can send a PDF or image of the worked solutions to the teacher. The project is very helpful for education programs since it has all the functions needed.

Functionality of the project

a. **the functions available at the beginning of the project**
  - Invite others to your team.
  - Audio ON\OFF
  - Video ON\OFF
  - Start Screen sharing
  - Start Recording
  - View Full screen
  - Open Chat
  - Raise hand
  - Open Whiteboard
  - Share File
  - Show Settings
  - Show About
  - Leave Room

b. **functions added during the development**
  - Open Profile
  - Edit profile
  - Register
  - Login
  - Logout
  - term conditions
  - Database connection to MongoDB
  - Deploy the project to Heroku
  - Special interface for registered users.

How to install and run the program you have developed

How to use:

As an End-user:

1- Firstly, register an account in the web app: https://bubbleherokuapp.herokuapp.com/RegisterAndLogin
2- Login with the configration you signed up with in the app: https://bubbleherokuapp.herokuapp.com/Login 2-Login with the configration you signed up with in the app: https://bubbleherokuapp.herokuapp.com/Login
3- you also have a choice to log in by using your google account: https://bubbleherokuapp.herokuapp.com/LoginGoogle
4- After Logging you will have a choice to either submit or going to the main page.
5- After choosing submit it will take you to terms and conditions.
6- After submitting Terms and conditions page will appear.
7- If user accepted terms and conditions it will take him to the main page.
8- After going to the main page you will find a rectangle that asks you to enter your room name then join the room.
9- After creating a new meeting you will asked to allow mic and video to be able to interact with the others.
10- Right after giving permission to the mic and video, you will be asked to enter your name.
11- Then you will be joined to the room, and you will be asked to click on\copy the URL to let others join.

OR

You can enter the program and start the call directly without login or register by

1- Open our website page.
   Bubble a Free Secure Video Calls, Chat & Screen Sharing. (bubbleherokuapp.herokuapp.com)
2- Write a room name or you can continue the random name.
3- Enter Join Now
4- Enter the name you want to join with.
5- You can share the room link and send it anywhere.
6- Enjoy using our website

As a Developer:

After downloading the zip file or cloning to the repository:

first thing to do is to open the folder then select the folder from the path, then open it

Go to your terminal and run the following:

- first thing copy the following to your terminal
1. to install npm

```
o  -npm install
```

Finally, to run the app:

```
•  npm start
```

after running the project, terminal page will provide you to the link, then you have to paste it to your browser, and the project will be running

go to your browser: at http://localhost:3000/ and now have a local hosted web app.

4- go to your browser: at http://localhost:3000/ and now have a local hosted web app.

To Deploy The app: we used Heroku but you can use any other like AWS,GCP up to you.

```
•    - For heroku: Login and created an app in Heroku.com, then link the app with the
     github repo and Config Vars with th MONGO DB connection VAR
```

5- To Deploy The app: we used Heroku & azure but you can use any other like AWS,GCP up to you.

```
•   - For Heroku:
•
•         - Login and create an app in Heroku.com.
•
•         - Then link the app with the GitHub repo
•
•         - Lastly, Config Vars with the MONGO DB connection VAR
```

Table which shows tasks for each iteration

Pivotal Tracker Link : https://www.pivotaltracker.com/n/projects/2557168

Date	Week	Task	Assigned to	Done	Estimated time	Actual time
3-3-2022	Week1	-	-	-	-	-
10-3-2022	Week2	Choose the team	All	yes	A week	A week
		Choose the leader				
		Understand the project				
		Search for open sources				
17-3-2022	Week3	A matrix for the open sources that we found, advantages and disadvantages for each one, why we did and didn't use it	Yousra	Yes	2 hours	1hour and half
		Requirement	Sama	Yes	1hour	1 hour
		Features that we have, and we will add	Mesaab	Yes	1hour	1 hour
		What do we expect from our project	Abdulaziz	Yes	1 hour	1hour
		Risk we have and we expect to have in the future	Manar Hasan and shurooq	Yes	1 hour	1 hour
		Copyright issues	Manar Tariq	Yes	1 and half hour	1 hour
24-3-2022	Week4	Draw UML diagrams	Manar Hasan	Yes	3 hours	2 hours
		Project schedule, check the code the design of the code	Yousra	Yes	2 hours	1 and half hours
		Working on style	Abdulaziz	Yes	3 hours	30 minutes
		Project plan document	Manar tariq	Yes	2 hours	3 hours
		Vision and scop document (problem statement)	Shurooq	Yes	1 hour	1 hour
		Vision and scope document (vision of the solution)	Mesaab	Yes	1 hour	1 hour
		search about the available platforms and choose which one is better for us and why did you choose it	Sama	yes	3 hours	1 hour
31-3-2022	Week 5	Setting the video call (pair programming)	Manar Hasan and Mesaab	Yes	4 hours	2hours
		SRS documentation	Sama and Manar Tariq	Yes	2 hours	2hours
		Fixing the chat (pair programming)	Abdulaziz and Yousra	Yes	3 hours	3 hours
		Review the program	Shurooq	Yes	1 hour	1 hour
07-04-2022	Week 6	Searching how we can upload our project on heroku	Sama	Yes	2 hours	2 hours
		Start searching what we should include to our project	Manar Tariq	Yes	1 hour	1 hour
		Change the entire interface (put our mark on it)	Abdulaziz, Manar Hasan, Yousra	5 hours	6 hours	
		Test the changes on chat box	Shuroq	Yes	1 hour	1 hour
		Test the program in the mobile version	Mesaab	Yes	1 hour	1 hour

14-04-2022	Week 7	Gathering information for login and searching how linking can be done	**Abdulaziz , Yousra**	Yes	3 hours	3 hours
		Search what we need to make our program to mobile version	**Mesaab**	Yes	2 hours	2 hours
		Edit the share link page	**Sama**	Yes	1 hour	1 hour
		Design new logo for our program and find a new name	**Manar Tariq**	Yes	2 hours	2 hours
		Search for a database that we can use it in our program, why we chose it and how much time is needed to design and link it	**Manar Hasan and Shurooq**	Yes	3 hours	3 hours
21-04-2022	Week 8	**Midterm week**				
28-04-2022	Week 9	Design the login and register pages	**Yousra and Abdulaziz**	Yes	3 hours	4 hours
		How we can pin/unpin feature?, what we need?, how much time it will take? What is it? what its benefit to our program? why we did consider this feature?	**Manar Tariq and Mesaab**	Yes	2 hours	2 hours
		Check the design after implementing	**Sama**	Yes	1 hour	1 hour
		Learn about MongoDB	**Manar Hasan and Shurooq**	Yes	2 hours	2 hours
		Implement pin/unpin feature	**Manar Tariq**	No	0	0
05-05-2022	Week 10	**Holiday**				
12-05-2022	Week 11	Design view profile page and edit profile page	**Yousra**	Yes	2 hours	2 hours
		Make a video describing our app. How it can be used, what its features. Etc	**Abdulaziz**	Yes	1 hour	1 hour
		New interface page for registered user(contain logout , profile button)	**Sama**	Yes	1 hour	1 hour
		Design database for profile page and login, register page on MongoDB using localhost	**Manar Hasan Shurooq**	Yes	2 hours	2 hours
		Learn how to link the database with the visual studio code		Yes	3 hours	3 hours
		Design welcome page	**Mesaab**	No	0	0
			Manar Tariq	Yes	2 hours	2 hours
19-05-2022	Week 12	**Holiday**				
26-05-2022	Week 13	Edit and organize our GitHub repository	**Manar Tariq**	Yes	2 hours	2 hours
		Prepare the report	**All**	Yes	3 hours	3 hours
		Prepare the presentation	**All**	Yes	4 hours	4 hours
		Test the program	**All**	Yes	6 hours	6 hours
		Complete the project schedule	**Yousra**	Yes	1 hour	1 hour
		Link the database to the cloud	**Manar Hasan , shurooq**	Yes	2 hours	1 hour
		register and login, and view profile and edit profile page, learn how to link it to the cloud		NO	2 hours	5 hours and couldn't do it
		Upload the last version of the program on Heroku	**Sama**	Yes	1 hour	hour

Missing parts / the features you intended to include in your software but could not implement them. Give reasons

a- Implementing the program in a mobile version

   We found that implementing the program to a mobile application needs a lot of time and effort, we had to learn a lot of new things, and it cost too much. These difficulties that we couldn't comprehend made it impossible for us to do this feature.

b- Pin/unpin feature

   We tried to implement pin/unpin feature, but we couldn't because our programming knowledge is not enough.

c- Dragging files into the chat was impossible to develop because it needed JavaScript and none of the team members knew it. Also, we needed to understand the whole chat code in order to modify it which was troublesome in most parts.

d- We had some difficulties in database. Firstly, we were in a mess regarding to the MongoDB Because it was the first time that we deal with it. Therefore, we tried to connect our project with the local host and then figured out that we should connect our project to the Mongo Atlas. That is why we needed more time to learn about Mongo Atlas. After that we had difficulties in connecting the Mongo dB atlas to the VS code. Then we figured out that we cannot connect it to the VS, instead we should connect it to the Heroku. we could connect it but unfortunately, we could not insert the User information from the Application to the database.

e- There were some challenges related to working as a group as this is the first time working with such a big group and new people, so this brings a few difficulties as to coordinate tasks and brings more responsibilities to the group because responsibilities are shared and holding accountability becomes a bit harder.

experience gained (experience you have gained as a group and as an individual. The risks you encountered and how you solved them.). Each project member should write his/her own experience.

Yousra M A ALAKLOUK(Leader):

 As a project manager, I faced to many things. I'll try to give a clue to everything I learned during this course. Firstly, I needed to know what responsibilities that the scrum master or project manager needs to counter all the obstacles of the project. It was my first time taking the leadership, so I had to squeeze my mind many times for the sake of giving proper tasks to my team. I was trying my best to push each member to do his best in what he is capable of doing. I dug a lot on the internet to find a good open source and I made comparisons (matrix with advantages

and disadvantages) for the open sources that I found, then I choose the best one. In the early weeks, I learned how to use VS Code and made a Project schedule, Moreover, I checked the design of the code, learned how to use the scrum and GitHub. In favor of dividing the work among the team so each member can see what his task is.

I and my friend Abdulaziz worked on the interface with a lot of effort. We changed the entire interface (put our mark on it) and it became specular. In spite of the changes, we made in the interface. we wanted to make something new like designing the login and register pages.

With the purpose of doing this, we learned and gathered information about JavaScript, CSS and HTML for a week then we implemented the register page with a suitable style that matches the interface and its colors. Also, we linked the pages of the register and login to our program.

Besides the changes, I made to the interface. I Implemented a new design "view profile" page and filled it with User information that he can add. In order to have information for each user who uses this application.

I was afraid that when I hair a task to someone he will not have the ability to do it. So I needed to learn about all the team tasks so I can explain to them what they should do and how they can do that. I've learned how to use Pivotal Tracker for assigning tasks for the team members. Also, each week I had to check and see what is the progress my team made during the week and what is the suitable tasks I can assign them that fit their knowledge.

Shurooq:

 As a group i think we gained experience in working with large group member for the project it can be a challenging task in some ways but luckily my teammates and I worked well together even though we paced   individually when it comes to completing our tasks. As a group I think we connected well together, and we did not give each other a chance to get angry or cause a problem towards each other. In addition, the tasks were equally distributed among the 7 members. To summarize the communication between the team was great. As an individual i gained knowledge regarding the mongo dB while I was learning it for one of the tasks and learned that project management is definitely not an easy job because you should stay up to date consistently and the smallest mistake could lead to a project failure. The risks we faced as a group were that one of the members didn't do his tasks fully and we had trouble contacting the person which made it difficult for us. since we had to fix it by passing his tasks to other member. this kind of risk can cause project failure. I didn't face any individual risk.

Manar Hasan:

It was the first time for me to work with a group of 7 members, I usually work with less. Therefore, the work was somehow not stressful. Also, it increases the amount of information and help that we share among us. For the tasks, I had to learn new things like Mongo dB , Heruko and GitHub which I'm happy for learning them.

the risk I faced as an individual was it took a lot of time from me to learn about mongo dB cloud and how to use it, how to connect it with cloud .. I also knew late that I can connect the mongo dB with cloud rather than the local host which lead for me to lose a lot of time, I successes with connecting it but it failed to insert the user information to the database. because my task at the beginning was not related to coding but at the end I had to deal with the coding part and to learn more time .. so my risk was related to time management!

Abdulaziz Alhussein:

Firstly, I've learned how to manage the tasks that I got in order to do what I'm required on time without any delay. Also, I've figured out how to change some parts of the code with the aim of modifying the style of the interface we had. It was really difficult at the early stages since I didn't know where I should make the changes. However, I've read the code *many* times and after I understood it I found out where I can make the changes to the interface such as adding Pictures, changing colors or font. Modifying something in the open source wasn't easy since it was my first time doing that.

Since our Course is focusing on how we have to manage a project and deal with its complexity, I and my friend Yousra worked on the interface with more effort. therefore, we changed the entire interface (put our mark on it) and it became shinier. In spite of the changes, we made in the interface. we wanted to make something new like designing the login and register pages. With the purpose of doing this, we learned and gathered information about JavaScript, CSS and HTML for a week then we implemented the register page with a suitable style that matches the interface and its colors. Also, we linked the pages of the register and login to our program.

Also, when I dealt with some tasks with some team members, I saw that while working not alone will make solving the tasks simpler since there is more than one person thinking, giving opinion, discussing the task and how to accomplish it. Working as a team and having the spirit of a team worker is one of the best experiences I gained during this course.

Finally, I've learned how to record a tutorial video that shows how you can deal with our program and how you can use it from the beginning to end, with detailed explanations of all the features we have in this project. By using Sony Vegas Pro program to do the montage.

Sama Alfares:

This project was very helpful as this was the first time working with a group, a leader, new people and on a big project, so there were a lot of new experiences and challenges. As for working with a group it was better because there were a lot of people that could help and if you get stuck on something you would be able to hear many opinions and solutions so this lead to learning new things and exchanging information and knowledge with other people. For the project this was the first time working with an open source and modifying it, at first we thought it would be better but then we learned that this would require more work than anticipated because we would have to learn all the code and understand that person' writing style and meaning with every line of code which isn't very easy but eventually we learned and understood what was happening and could easily modify the code to our needs. For me personally I learned how to deploy a project on Heroku and keep updating the project as we go on, and about requirements more because before it was a bit difficult to understand especially non-functional requirements, also I became familiar with css, html and javascript. Overall it was a pleasant experience and very helpful to see a glimpse of what it would be like when we work and in the real world.

Mesaab Al Abdulrazak:

 Throughout this semester I was happy to work with a group with this huge number of students, we learned from each other and help maintain the project throughout this term. It was a cool experience that gave me a lot of information about the environment that I could face in the future while working in a company. As a group we faced some problems at the beginning because it was a new issue for us but passing by time, we managed the tasks. As an individual almost my tasks was theoretical so I need to collect information for my group members to finish their tasks.

I learned more about how I could make a contact or conference app, what tools I need and requirements and codes and databases and uploading certain features to our app. At the end I want to thank all my team members and the manager Yusra for her great work as a leader for our group and thank Dr.Ensar for giving us this chance to try working on a project with couple of students.

Manar tarek ahmed :

-As an individual:

1- I learned how to go out of my comfort zone sometimes, by doing some tasks that i thought it didn't match with my personality\abilities, but it turned out that I'm capable to do anything with the hard work, good searching, friend's help and of course an amazing leadership

2- I learned how to respect other's perspective, and there is always another way of doing things that i may not know

3- how to search well in a scientific way, and how to use many resources to find the answer that I want

4- I learned that quality is much important than quantity

5- it's ok to ask for help and always be open to learn and develop myself

6- how to be Professional "ethically", and separate between my personal issues and work

7- Dialogue etiquette, punctuality

8- a lot of things about my field as a software, such as how to work on visual studio, how to use database "in general"

9- in general, I discovered my abilities in this course, I learned how to choose and implement right tasks of my abilities

10- take responsibility of my task, and if there's anything i couldn't do i would first ask my manager then if it was a little hard or takes time, I'll replace it

As a group:

-the main thing that i learned as a member in a group is that we all have to work as we're one member, one soul "as a harmonic team". we have to think as a team and we always have to put the project as a priority, cause we all have the same goal which is learning how to manage any project as a professional software manager

I also learned how to respect everyone's opinion and that anyone of the group have a perspective and that perspective should be well heard and respected

In addition, i learned how to work in sequence, and that all of our tasks are related somehow, and each task may affect other tasks by anyway "butterfly effect"

- Dialogue etiquette, punctuality

Risks:

1- risks related to technology:

- not having enough knowledge with specific programs/ devices / websites so it was taking much time to learn it first

- unexpected errors/ damages / stop, in my work so i sometimes had to repeat and start a new work again

- working in an environment that may have a bad internet connection so the work may be slower

2- risks related to delivering/ uploading the work:

- having my tasks related with other member's task and should be done after he/she finished his/her work so if he didn't finish his task earlier, it may cause a delay in my task

- having other projects/ assignments to be done in other subjects/ classes so it may cause a delay in delivery also

- miscalculation of time and scheduling so it may affect the time delivery and quality of work

- not having previous knowledge of a specific task so that and extra step will be added to implementation which is learning about the task first

Appendix Source codes (provide GitHub link)

GitHub Organization:

https://github.com/ProjectManagementt

GitHub Repository for pdf and links and all files during the semester (inside the organization)

https://github.com/ProjectManagementt/MeetApp

GitHub Repository for Source code:

https://github.com/ProjectManagementt/mirotalk

GitHub Repository that has our code for every iteration:

https://github.com/ProjectManagementt/BubbleApp