



Real Time Automatic Crowd Sourcing

Presented By

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Introduction

I will review the Idea of this Project, application architecture and Database Modeling by showing Conceptual and Physical Data Models. Although, I will show some services with associated interfaces. And finally, the project implementation.

This project is about Crowd Sourcing Which aim to extract brilliant Ideas from a group of people. There are three types of users:

- A **Monitor User** Creates a Workshop and share an entry key to whom will participate in this workshop.
- A **Participant user** takes the key and participates in this workshop which he can write down his idea and rate other's ideas, ideas are shuffled automatically at the end of each round. Best rated ideas will be automatically chosen and groups are created for each chosen idea to work on it and participants can enter and exit groups, the monitor can kick anyone from a group.
- An **Admin User** manages users their roles and privileges and workshops preferences.

One of the strength of my project, is that the data are always updated automatically in front of the users (the ideas, scores, groups), this is performed using ajax calls, which enable a complete real time application without the need of page refresh or reload at all.

Chapter 1: Application Architecture

MySQL DBMS was used in this web app.

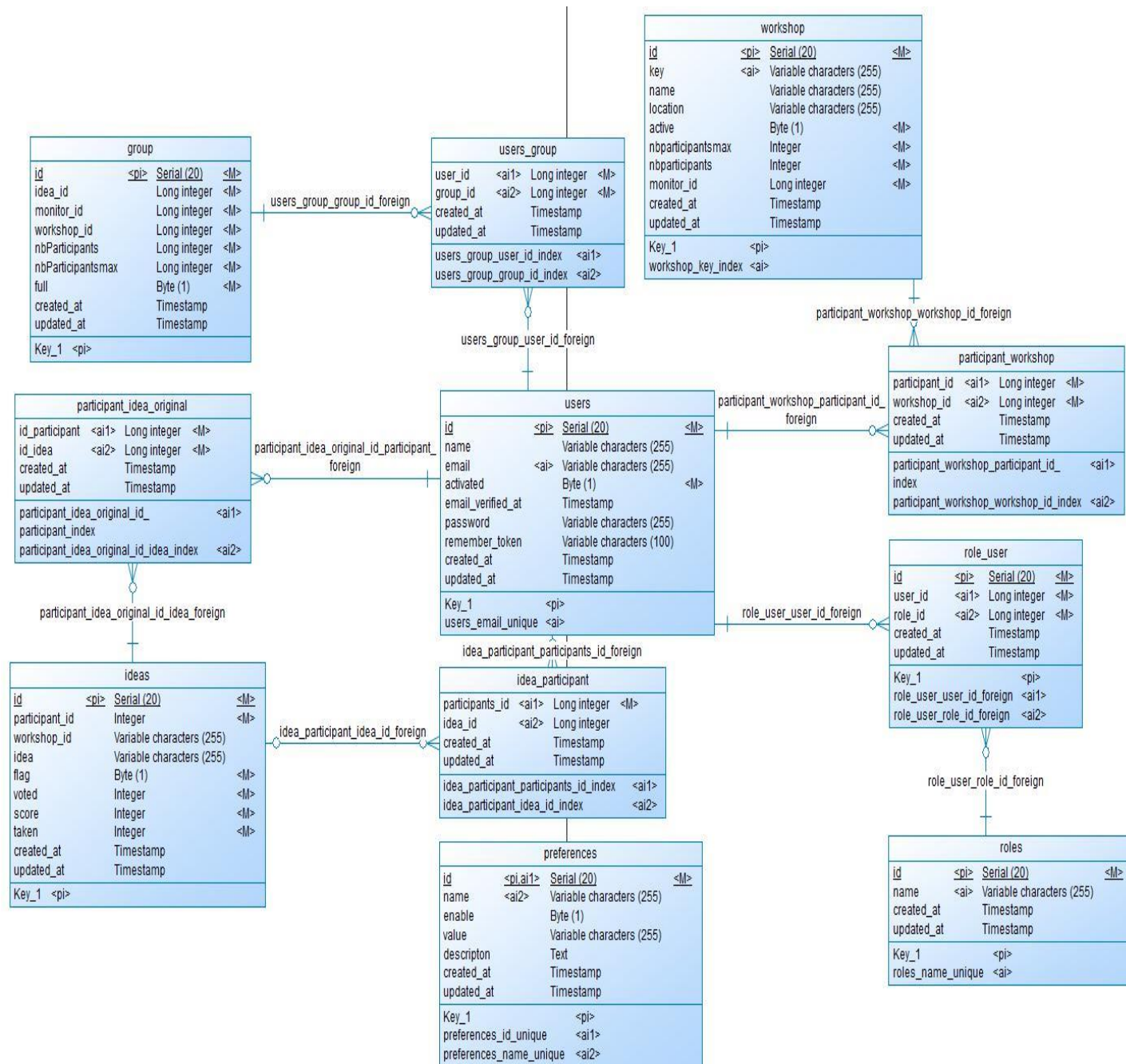
In the application layer Laravel framework (PHP based) is used and contains a query builder (Eloquent).

They are connected using MySQL Driver.

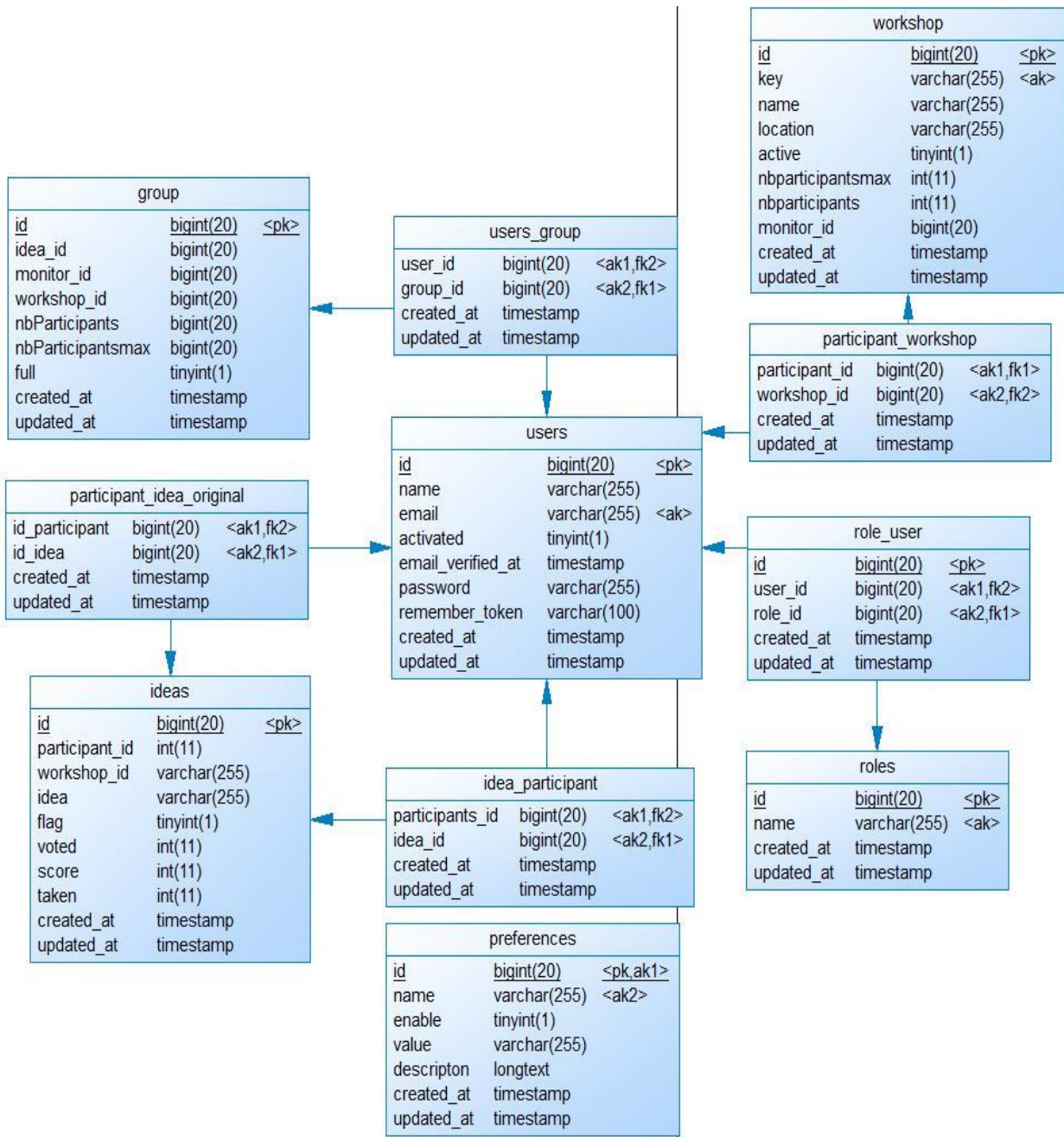


Chapter 2: Database

Conceptual Data Model:

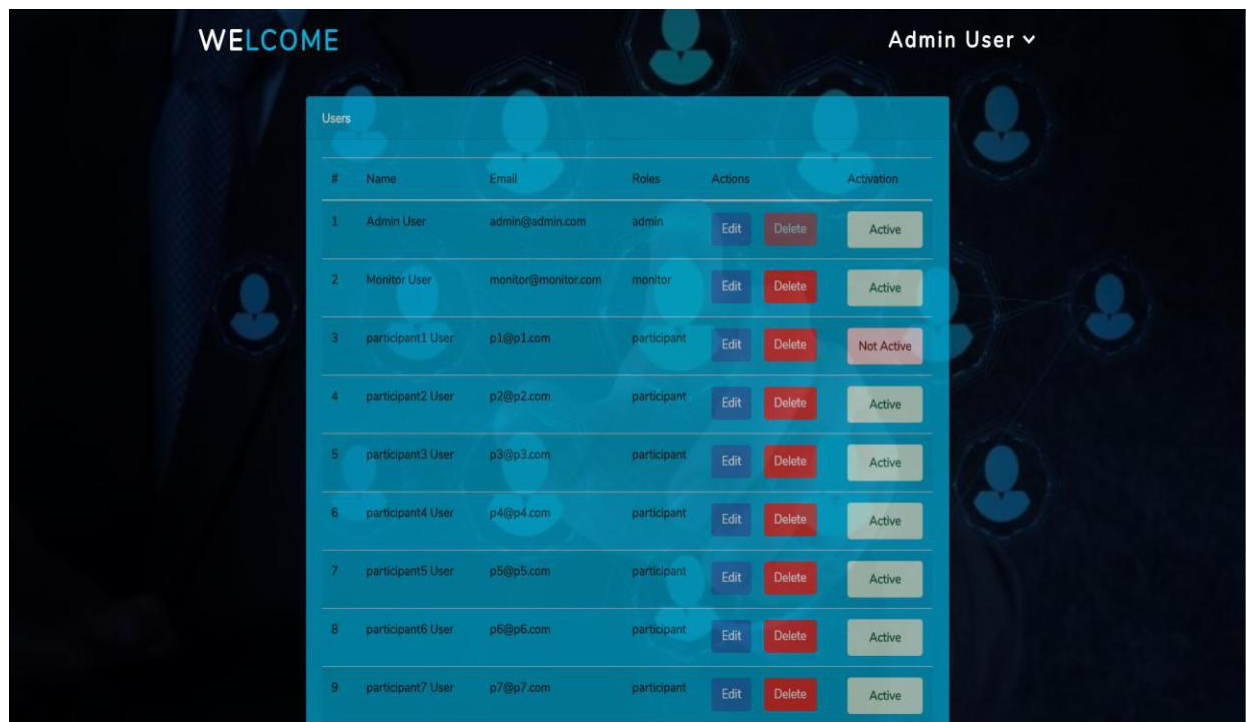


Physical Data Model:



Chapter 3: Services And Interface modeling

- Users Registration and Login.
- Users Management (Admin):



- Create Workshop (Monitor):

The screenshot shows a web application interface for a Monitor User. The background is dark with a network of user icons. The top left says 'WELCOME' and the top right says 'Monitor User' with a dropdown arrow. A central light blue box titled 'Create Workshop' contains three input fields: 'Name of Workshop', 'Address', and 'Number of participants'. Below these fields is a blue 'Create' button.

WELCOME

Monitor User ▾

Create Workshop

Name of Workshop

Address

Number of participants

Create

- Participate in Workshop (Participant):

The screenshot shows a web application interface for a Participant User. The background is dark with a network of user icons. The top left says 'WELCOME' and the top right says 'participant1 User' with a dropdown arrow. A small tooltip above the form says 'Press F11 to exit full screen'. A central light blue box titled 'Participate in Workshop' contains a 'Key:' label and a text input field with the value '0aa3a3e03c19db4'. Below the input field is a blue 'Submit' button.

WELCOME

Press F11 to exit full screen

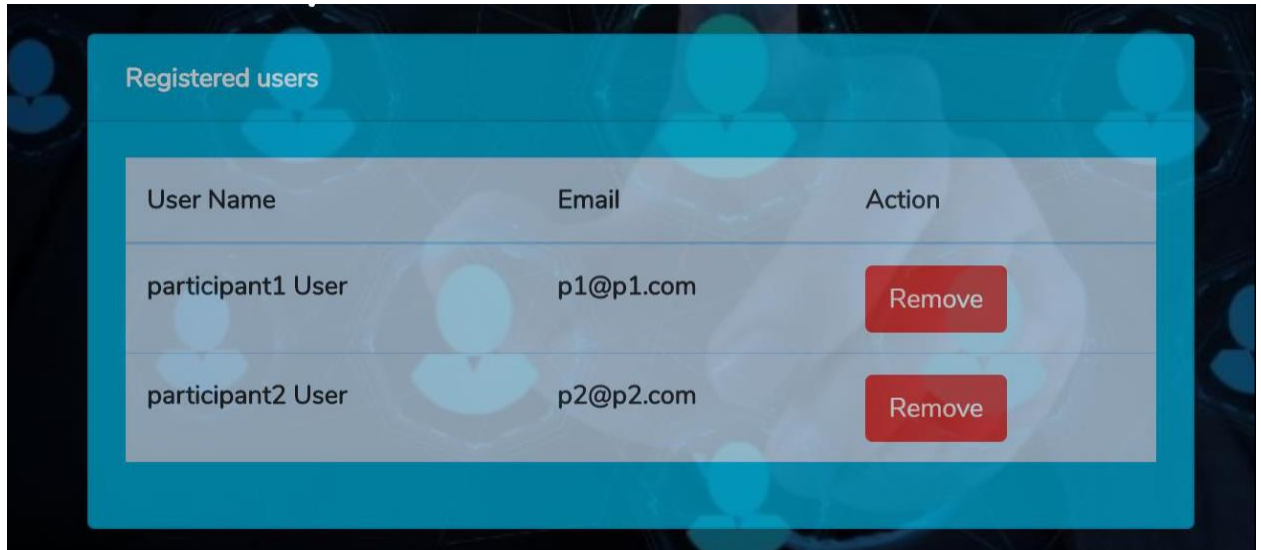
participant1 User ▾

Participate in Workshop

Key:

Submit

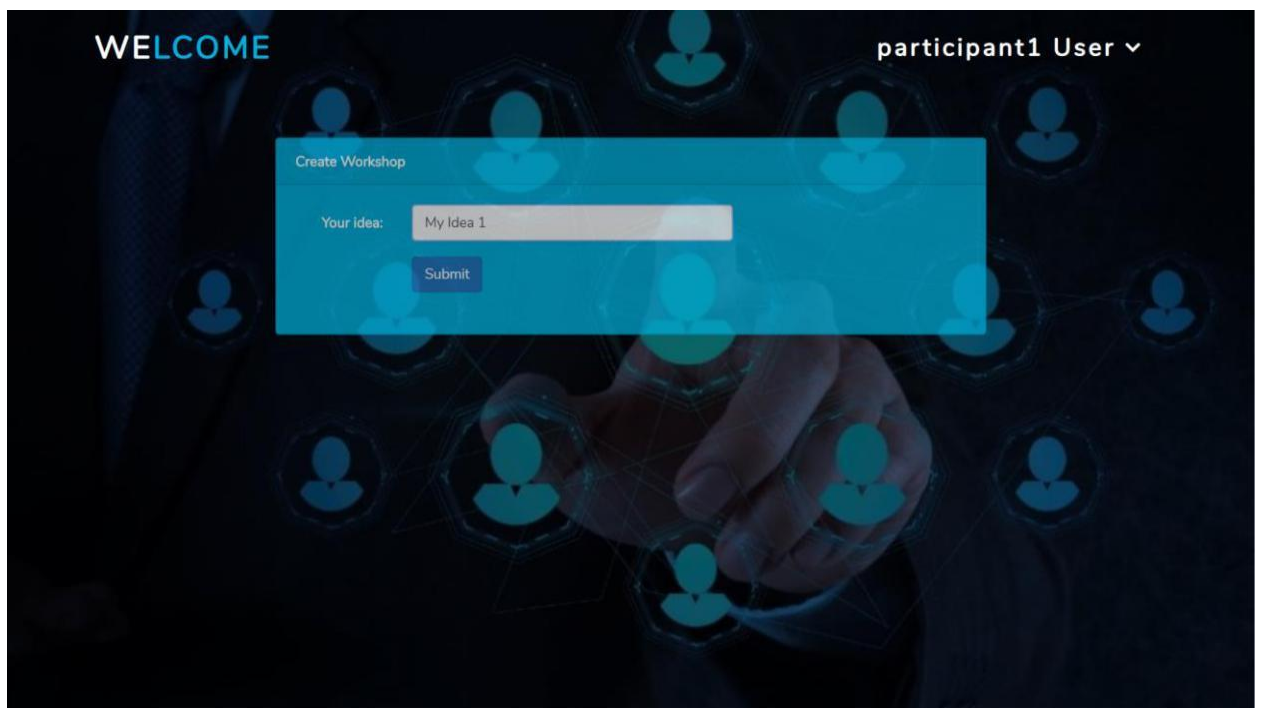
- Review And Remove Users From Workshop (Monitor):



The screenshot shows a web interface titled "Registered users" with a teal header. Below the header is a table with three columns: "User Name", "Email", and "Action". The table contains two rows of user data. Each row has a red "Remove" button in the "Action" column. The background of the interface features a dark blue pattern of stylized human icons connected by lines.

User Name	Email	Action
participant1 User	p1@p1.com	<button>Remove</button>
participant2 User	p2@p2.com	<button>Remove</button>

- Submit Idea (Participant):



The screenshot shows a web interface with a dark blue background featuring a pattern of stylized human icons. At the top left, the word "WELCOME" is displayed in teal. At the top right, the text "participant1 User" is shown with a dropdown arrow. In the center, there is a teal box titled "Create Workshop". Inside this box, there is a label "Your idea:" followed by a text input field containing "My Idea 1". Below the input field is a blue "Submit" button.

WELCOME

participant1 User ▾

Create Workshop

Your idea:

Submit

- Rate Idea (Participant):

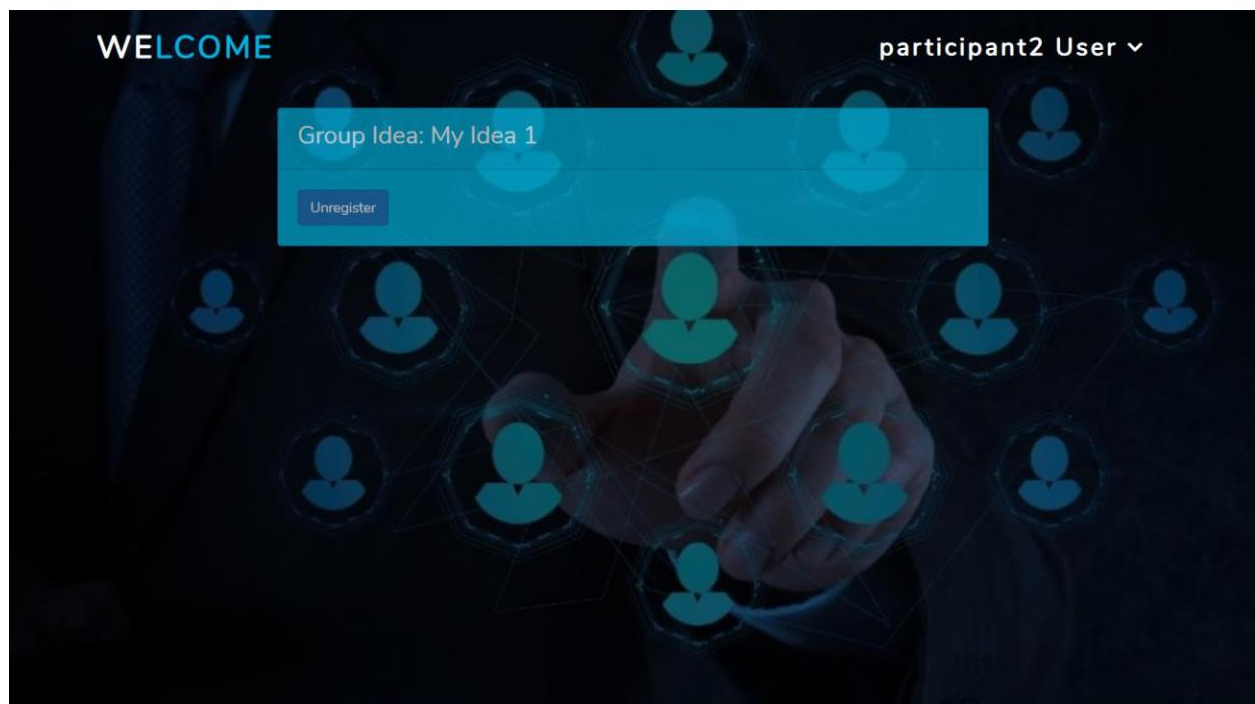
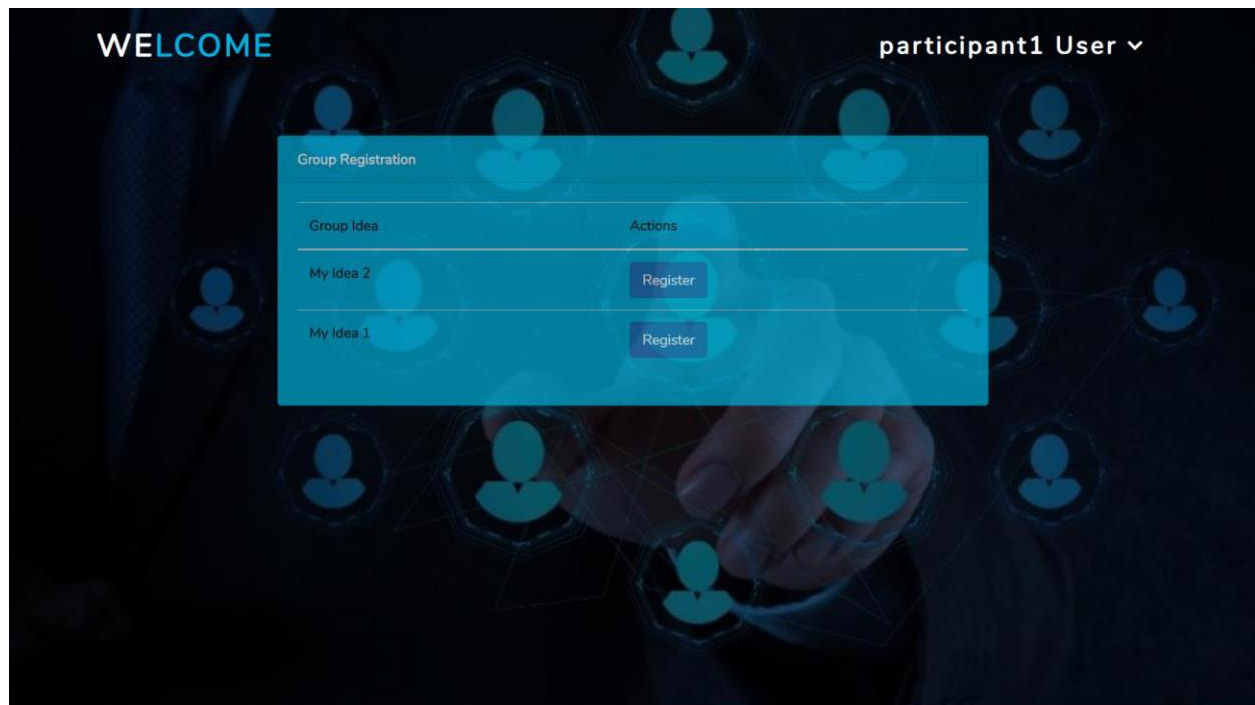
The screenshot shows a web application interface for a participant. At the top left, it says "WELCOME". At the top right, it says "participant1 User" with a dropdown arrow. The main content area is a light blue box with the title "Submit your score". Inside this box, there is a label "Idea: My Idea 2" above a horizontal progress bar. Below the progress bar is a text input field containing the number "4". At the bottom of the box is a blue button labeled "Submit". The background of the entire page is dark blue with a network of white icons representing people.

- Real Time Ideas Rating and Top ones Review (Monitor):

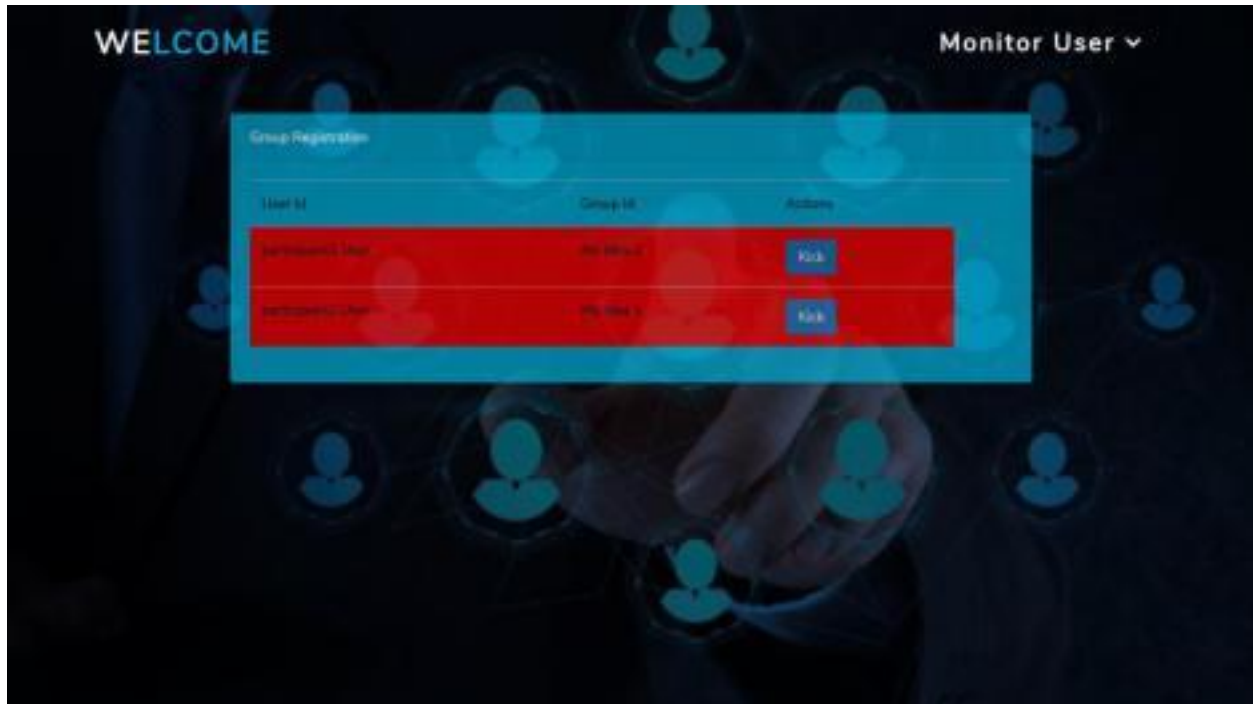
The screenshot shows a web application interface for a monitor. At the top left, it says "WELCOME". At the top right, it says "Monitor User" with a dropdown arrow. The main content area is a light blue box with the title "Voting". Inside this box is a table with the following data:

user id	Idea	score	number of vote
participant2 User	My Idea 2	4	1
participant1 User	My Idea 1	3	1

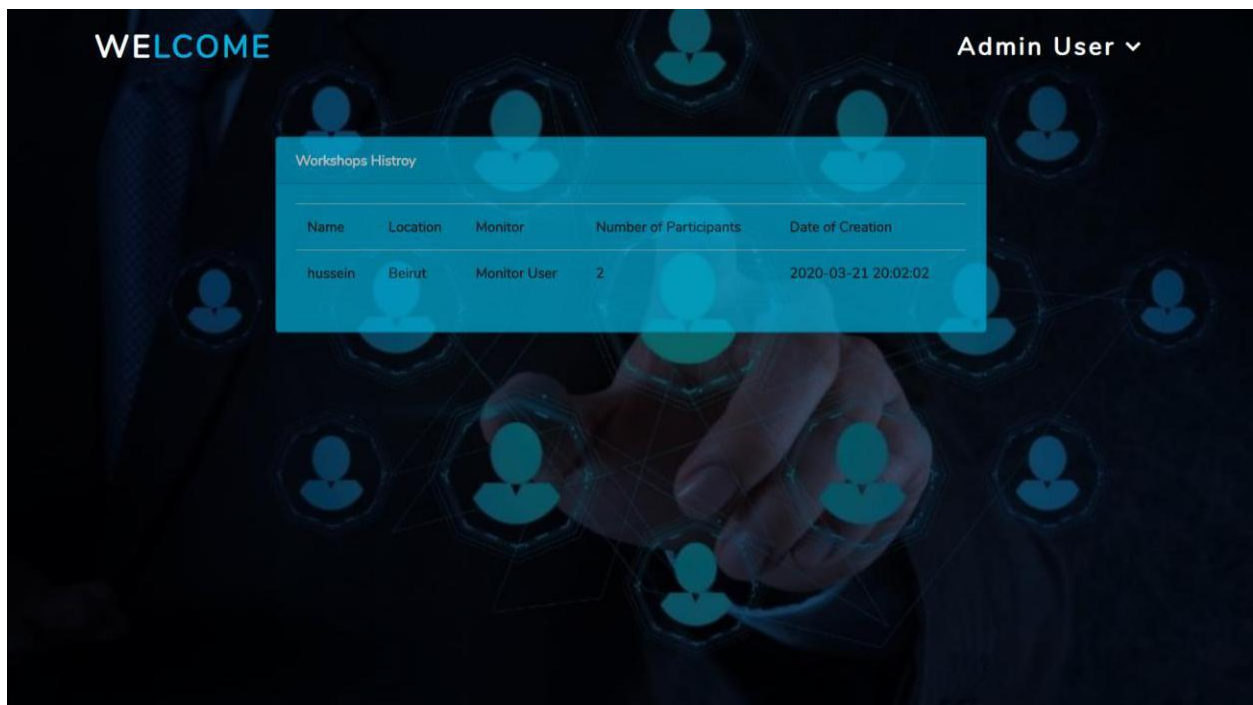
- Group Registration (register/unregister)(Participant):



- Group Registrations and remove (Monitor):



- Workshops History (Admin View):



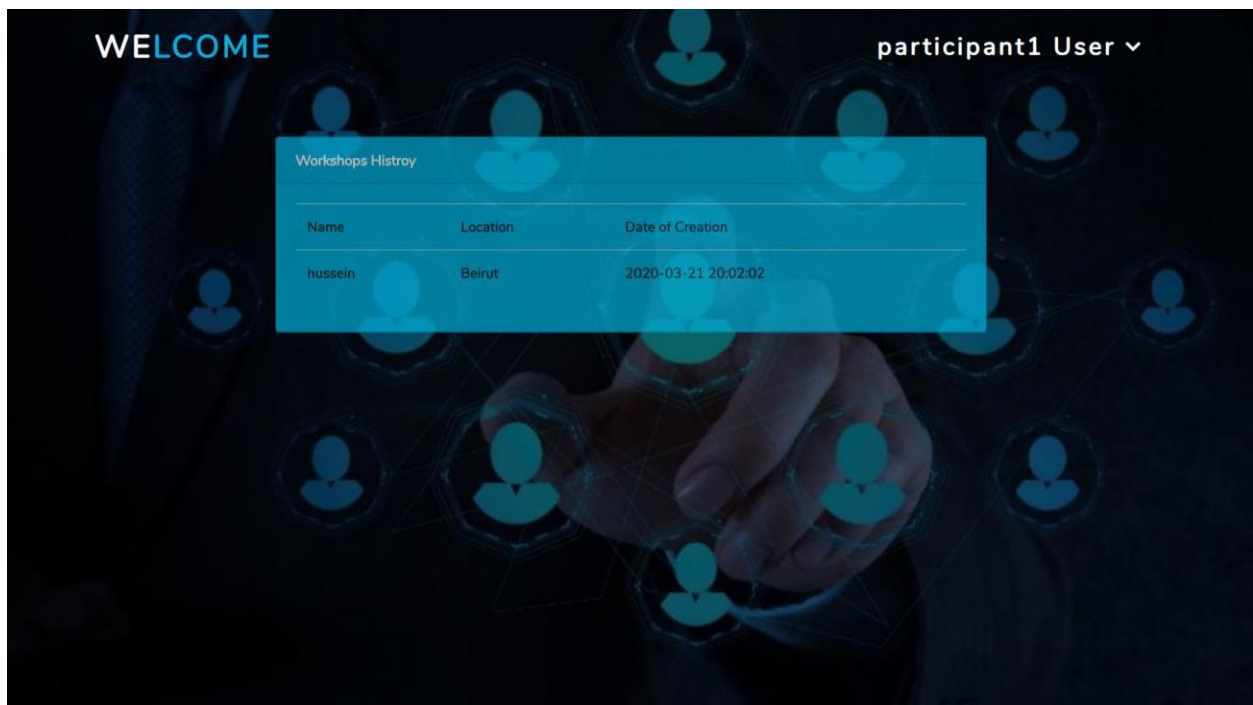
- Workshops History (Monitor View):



The screenshot shows a web interface with a dark background featuring a network of user icons. At the top left is the word "WELCOME" in white. At the top right is the text "Monitor User" followed by a downward arrow. In the center, there is a white table titled "Workshops History".

Name	Location	Number of Participants	Date of Creation
houssein	Beirut	2	2020-03-21 20:02:02

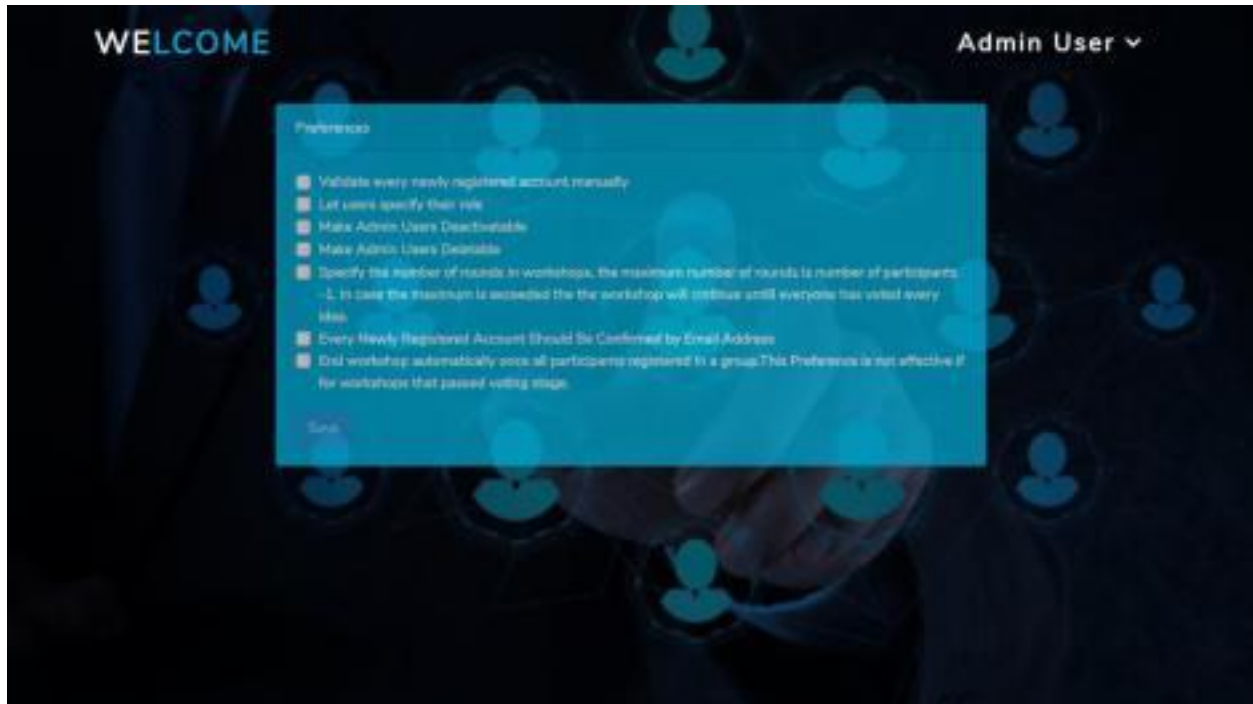
- Workshops History (Participant View):



The screenshot shows a web interface with a dark background featuring a network of user icons. At the top left is the word "WELCOME" in white. At the top right is the text "participant1 User" followed by a downward arrow. In the center, there is a white table titled "Workshops History".

Name	Location	Date of Creation
houssein	Beirut	2020-03-21 20:02:02

- Preferences (Admin):



Chapter 4: Implementation and Testing

I used MySQL Workbench for database implementation and testing.

I “debugged” triggers printing values in MySQL Workbench to make sure everything works and executes in the right time, such as:

- Deactivation trigger which automatically deactivates workshop at a certain stage (admin can enable/disable this trigger from preferences).
- Creating groups to work on chosen ideas.
- Automating increment/decrement operations on number of participant field in workshop and group tables on insert/delete operations.

I created appropriate indexes and foreign keys (on delete cascade) to ensure referential integrity.

I created 3 database users admin, monitor and participant and granted each user permissions associated with his need only.

The application was developed using laravel framework ver. 6.9.0 which is a MVC web Applications framework based on PHP, HTML, JQuery and CSS.

Conclusion

This course helped me develop a secure, consistent and powerful application whatever was the technology or interface used I learned to control and secure the app from a database point of view.