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# **Use Cases**

**for**

# **Votafun**

**Version 1.3 approved**

**Prepared by Team Votafun**

**31/10/2023**

## Revision History

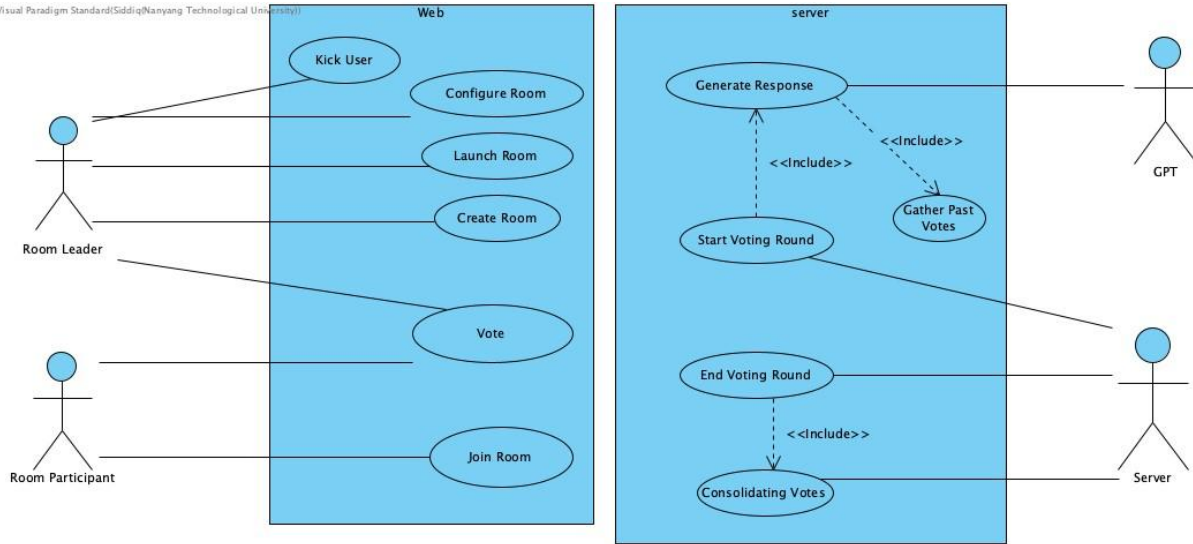
Name	Date	Reason For Changes	Version
Lloyd Wang	2/9/2023	Initial use cases	1.0
Lloyd Wang	6/9/2023	Refined use cases	1.2
Ng Yue Jie Alphaeus	31/10/2023	Refined use cases, update old information	1.3

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## Use Case Model

Visual Paradigm Standard(Siddiq/Nanyang Technological University)



## Use Case Description

Use Case ID:	1		
Use Case Name:	Create Room		
Created By:	Lloyd	Last Updated By:	Ng Yue Jie Alphaeus
Date Created:	2/9/2023	Date Last Updated:	31/10/2023

Actors:	Room Leader
Description:	The room leader will create a room similar to Kahoot, with a code that can be shared to invite users to the room.
Trigger:	The room leader selects location and budget options in dropdown lists. He then clicks “Create room” to launch a room, allowing people to join.
Preconditions:	<ol style="list-style-type: none"> <li>1. The room leader is not in an active existing room.</li> <li>2. The room leader has selected values in both location and budget dropdown lists.</li> <li>3. The room leader clicks “Create room”.</li> <li>4. The room code is not in use.</li> </ol>
Postconditions:	<ol style="list-style-type: none"> <li>1. A room code is generated based on a hash of the timestamp when the room was created.</li> <li>2. The page should display a lobby with the open room and its room code, the people currently in the room, and an option to close the room.</li> <li>3. A record of the room is created. The status is “WAITING”.</li> </ol>
Normal Flow:	<ol style="list-style-type: none"> <li>1.0 The room leader clicks “Create room”.</li> <li>1.0 The room leader enters his name.</li> <li>1.0 The room leader clicks “Join”.</li> <li>1.0 The application displays the room lobby.</li> <li>1.0 The application creates a room code.</li> <li>1.0 The room leader selects options for location, activity, and max users.</li> </ol>
Alternative Flows:	Nil
Exceptions:	<ol style="list-style-type: none"> <li>1.0.E.1 The leader does not select a value from either dropdown list</li> <li>1.0.E.1 An error will be displayed on the screen to inform the room leader to select a value first before creating a room</li> <li>1.0.E.2 Due to network error or other reasons, a room is not started within 30 minutes of it being created.</li> <li>1.0.E.2 The room will be closed and all users in it will be removed from the room.</li> <li>1.0.E.2 An error message will be shown to the room leader.</li> <li>1.0.E.3 A room code is not available (for some reason all codes are used)</li> <li>1.0.E.3 An error message will be shown to the room leader.</li> </ol>
Includes:	Create room, Close room, Remove user from room, Generate room code
Priority:	High
Frequency of Use:	Once each time he uses the app
Business Rules:	Nil

Special Requirements:	1. The hash function to create the room code should be enough to minimize clashes in room codes.
Assumptions:	Nil
Notes and Issues:	1. The options for the room leader to select from at the room creation stage.

Use Case ID:	2		
Use Case Name:	Launch Room		
Created By:	Lloyd	Last Updated By:	Ng Yue Jie Alphaeus
Date Created:	2/9/2023	Date Last Updated:	31/10/2023

Actors:	Room Leader
Description:	The room leader will start the room, starting the voting process and conversation with ChatGPT.
Trigger:	The room leader clicks on the “Start room” button.
Preconditions:	1. The room leader has created the room. 2. The room leader has waited for a sufficient number of members to join the room.
Postconditions:	1. The room members will be shown another view, where ChatGPT will ask a series of questions, and they each have to vote for their favorite option. 2. The status of the room will be changed to “STARTED” in the database.
Normal Flow:	2.0 The room leader waits for people to join the room. 2.0 The room leader clicks on the “Start room” button. 2.0 The status of the room changes to “STARTED”. 2.0 A chat session with ChatGPT is created.
Alternative Flows:	Nil
Exceptions:	2.0.E.1 An error has occurred while creating the room. 2.0.E.1 An error message will be displayed to the room leader.
Includes:	Nil
Priority:	High
Frequency of Use:	Once each time he uses the app
Business Rules:	Nil
Special Requirements:	1. Limit the number of concurrent connections to each room to minimize network issues.
Assumptions:	Nil
Notes and Issues:	Nil

Use Case ID:	3		
Use Case Name:	Close Room		
Created By:	Lloyd	Last Updated By:	Lloyd
Date Created:	2/9/2023	Date Last Updated:	2/9/2023

Actors:	Room Leader
Description:	The room leader can choose to close the room at any point in time. This will remove all the members in the group, including himself.
Trigger:	After the room is created, the room leader can click on the “Close room” button to close the room.
Preconditions:	1. The room leader is in an active room that he has created.
Postconditions:	2. The room members, including the room leader, will be removed from the room. 3. The room’s data will be removed from the database. 4. A message will be shown to the screen.
Normal Flow:	3.0 The room leader has created a room. 3.0 The room leader has not left the room. 3.0 The room leader clicks on “Close room”. 3.0 The app uses a foreign key relationship in the database to find the room users’ IDs. 3.0 The app removes the room from the Rooms table and each user from the room and sends notifications to them.
Alternative Flows:	3.1 All members have left the room, but the room has not been explicitly closed. 3.1 A polling task will find this inactive room (defined by being inactive for an hour), and close it explicitly.
Exceptions:	3.0.E.1 An error has occurred while closing the room. 3.0.E.1 An error message will be displayed to the room leader.
Includes:	Nil
Priority:	High
Frequency of Use:	Once each time he uses the app
Business Rules:	Nil
Special Requirements:	1. The polling task should be run every hour to minimize resource usage from inactive rooms.
Assumptions:	Nil
Notes and Issues:	Nil

May be removed

Use Case ID:	4		
Use Case Name:	Remove user from room		
Created By:	Lloyd	Last Updated By:	Roy Lau Run-Xuan
Date Created:	2/9/2023	Date Last Updated:	31/10/2023

Actors:	Room Leader
Description:	The room leader can remove users from the room that he has created.
Trigger:	The room leader clicks a “Remove” button next to a user to remove him from the room.
Preconditions:	1. The room leader and unwanted user are in the same room.
Postconditions:	1. The unwanted user’s id is removed from the room’s data in the database. 2. A message is displayed to the kicked user’s screens.
Normal Flow:	4.0 The room leader wants to remove a user. 4.0 The room leader clicks on “Remove” button beside user’s name 4.0 The unwanted user is removed from the room. 4.0 The participant list in the room is updated.
Alternative Flows:	Nil
Exceptions:	4.0.E.1 The remove function fails. 4.0.E.1 An error message is shown to the room leader’s screen.
Includes:	Nil
Priority:	Medium
Frequency of Use:	Twice each time he uses the app
Business Rules:	Nil
Special Requirements:	Nil
Assumptions:	Nil
Notes and Issues:	Nil



Use Case ID:	5		
Use Case Name:	Join room		
Created By:	Lloyd	Last Updated By:	Ng Yue Jie Alphaeus
Date Created:	2/9/2023	Date Last Updated:	31/10/2023

Actors:	Room Leader and other users
Description:	The room leader, if he has left the room, can join back to the room. Non-room leader users can also join the room.
Trigger:	The users specify the room code and click the “Join room” button
Preconditions:	1. The room code provided specifies a room that has been created and is active, and has not started.
Postconditions:	1. If the user joining back to the room is the room leader, there will be more functions available to him, such as “Close room” and “Remove user”. 2. The lobby page will be displayed to the users that joined.
Normal Flow:	5.0 The user specifies a room code in an input field and click the “Join room” button or enters the room link into his browser. 5.0 The user enters his username and clicks the “Join” button. 5.0 The user is redirected to the lobby page. 5.0 If the user is the room leader, he will be shown the extra functions and buttons. 5.0 Update the “last activity” value for the room in the database.
Alternative Flows:	Nil
Exceptions:	5.0.E.1 The room has not been created. 5.0.E.1 An error message is shown to the screen. 5.0.E.2 The join room function faces an error. 5.0.E.2 An error message is shown to the screen. 5.0.E.3 The room has already started. 5.0.E.4 An error message is shown to the screen.
Includes:	Nil
Priority:	High
Frequency of Use:	Up to 10 times per room.
Business Rules:	Nil
Special Requirements:	Nil
Assumptions:	Nil
Notes and Issues:	Nil

Use Case ID:	6		
Use Case Name:	Vote for Option		
Created By:	Abdul Siddiq	Last Updated By:	Roy Lau Run-Xuan
Date Created:	3/9/2023	Date Last Updated:	31/10/2023

Actors:	Room leader and other users
Description:	During each round, question and options will be shown to users in the room. At the end of five rounds, users will vote for their favourite activity and it will be the desired activity of choice
Trigger:	When the room has started and ChatGPT has provided options to choose from
Preconditions:	<ol style="list-style-type: none"> <li>1. The room leader has picked a location and activity.</li> <li>2. A room has been created</li> <li>3. ChatGPT has provided a list of options based on location &amp; activity</li> </ol>
Postconditions:	1. The highest voted activity is shown to users.
Normal Flow:	<p>6.0 For 5 rounds, questions and options provided by ChatGPT are shown on screen.</p> <p>6.0 Users will be given 15 seconds to vote for their most preferred option.</p> <p>6.0 During the last round, ChatGPT will recommend 4 activities and show the location of each activity.</p> <p>6.0 Users will be given 15 seconds to vote for their most preferred activity.</p> <p>6.0 The most voted activity will be displayed on the screen.</p>
Alternative Flows:	<p>6.0.AF.1 One or more activities is tied for most voted</p> <p>6.0.AF.1 A random activity between the tied activity will be chosen as the most voted activity.</p>
Exceptions:	<p>6.0.E.1 The message limit of ChatGPT has been exceeded.</p> <p>6.0.E.1 An error message is shown to the screen.</p> <p>6.0.E.2 An invalid ChatGPT API key is used.</p> <p>6.0.E.2 An error message is shown to the screen.</p> <p>6.0.E.3 Information returned from ChatGPT is not formatted correctly.</p> <p>6.0.E.3 An error message is shown to the screen.</p>
Includes:	NIL
Priority:	High
Frequency of Use:	Always, whenever a new round has started
Business Rules:	NIL
Special Requirements:	NIL
Assumptions:	This use case assumes that ChatGPT is functioning and is not currently down.
Notes and Issues:	NIL

Use Case ID:	7		
Use Case Name:	Generate Questions and Options		
Created By:	Tran Trung Dung	Last Updated By:	Tran Trung Dung
Date Created:	4/9/2023	Date Last Updated:	4/9/2023

Actors:	ChatGPT(AI)
Description:	AI generates questions based on the topic or previous answers.
Trigger:	Need for a new question based on topic or previous responses.
Preconditions:	Room is active, and the previous question (if any) has been answered.
Postconditions:	A new question and options are presented to participants.
Normal Flow:	8.0 AI fetches context from the room (topic, previous questions, voting results). 8.0 Based on the context, the AI model determines the type of question needed. 8.0 AI generates a relevant question. 8.0 AI also crafts or selects appropriate answer choices. 8.0 System displays the question and answer options to all room participants.
Alternative Flows:	NIL
Exceptions:	8.0.E.1 System error while fetching context. 8.0.E.1 An error message is displayed on the screen.
Includes:	NIL
Priority:	High
Frequency of Use:	Always, whenever a new round has started
Business Rules:	NIL
Special Requirements:	NIL
Assumptions:	This use case assumes that ChatGPT is functioning and is not currently down.
Notes and Issues:	NIL