

Project Demo 3

Overview

Demo your real-time MMO.

This demo will include the web and desktop versions of your app. All users must be able to interact with each other regardless of what version of the app they are using.

Demo

For this part of the project you will demonstrate all the networking features of your app. All networking must occur in real-time and allow for many simultaneous users. At any point during the demo your TA may ask the team to explain how the networking is implemented. If you did not implement your own networking (Ex. using Unity's Network Manager or any other "magic" solution to connect your users without writing your own networking code) the team will receive a 0 for this part of the project.

To demonstrate the requirements for the project follow these procedures while presenting your app to the TA. The entire demo can be ran from a single machine using localhost, but you should make it clear to the TA that the app would work over a network as well.

1. Start all parts of your server (Database, web server, etc.)
2. Open the web version of your app in 2 separate browser windows

Web-Web demo: Demonstrate that actions taken in each browser window are show in the other window in real time

3. Run 2 instances of the desktop version of your app

Desktop-Desktop demo: Demonstrate that actions taken in each instance of your desktop app are show in the other in real time

Web-Desktop demo: Demonstrate that actions taken in the web and desktop version of your app are shown in the other in real time

4. Shutdown the server of your app

Networking demo: Show that user actions are no longer shown in other instances of the app. It's ok if your desktop version crashes when the server is shutdown, but at least your web version should still run but will not have any networking features

Submissions

[Team Submission Form](#)

[Self and Peer Evaluation Form](#)

In addition to your in-lab demo you must submit the following for your project. All submissions must be made before your lab section begins:

- A link to your repository
 - If you have multiple repositories submit all links
 - If your repository is private provide access for both of your lab TAs
- A YouTube link showing usage of your running app
 - Less than 1 minute
 - No commentary required
 - Your videos will be used by course staff to settle grading decisions outside of your demo. Your video will not be shared with the class
- Peer and Self Evaluations
 - Since this is a team submission you will report the level of work completed by each member of the team
 - Project points will be distributed based on these evaluations

Grading Rubrics

If any of the listed criteria are missing the grade for demo 3 is automatically 0:

- The idea for your app must support an “unlimited” number of users
 - The actual number of users can be limited as long as the limit is arbitrary and could be raised by only changing one variable in your code. Hard-coding the app for a limited number of users will result in a 0 (Ex. A chess app limited to 2 players is not acceptable unless you include an unlimited number of games that can be played simultaneously)
- The idea for your app must be real-time
 - Much of the grading will test your implementation of the real-time aspect, but if the idea of your app doesn’t take advantage of real-time interactions you are building then it’s a 0 for demo 3. Recall from Lab Activity 1 that our criteria for this is that your users should notice a difference in the user experience if there were a 1 second network delay in your app
- The networking code must be written by the team
 - While libraries are allowed in this course, if a library or service is used that “magically” handles the networking for the app the team will receive a 0. This includes services like Unity’s Network Manager or anything that automatically communicates the state of game objects to all users. You must write the code that connects your clients to your server and the code on your server that

broadcasts the state of the app to every client. You can use any library that makes this task easier to implement, but not a library that completes the entire task for you. TAs may verify this criteria by asking the team to explain how the networking works, what protocols are used, and how they are used

	0 points	8 points	17 points	25 points
Web - Web Interactions	No interaction -OR- user input not functional	Interactions are noticeably delayed or the user experience is notably hindered by poor networking	Interactions are slightly delayed / laggy / choppy or jitters / stutters	Real-time interactions are smooth and have no noticeable delay
Desktop - Desktop Interactions	No interaction -OR- user input not functional	Interactions are noticeably delayed or the user experience is notably hindered by poor networking	Interactions are slightly delayed / laggy / choppy or jitters / stutters	Real-time interactions are smooth and have no noticeable delay

	0 points	17 points	33 points	50 points
Web - Desktop Interactions	No interaction -OR- user input not functional	Interactions are noticeably delayed or the user experience is notably hindered by poor networking	Interactions are slightly delayed / laggy / choppy or jitters / stutters	Real-time interactions are smooth and have no noticeable delay
MMO (You can earn these points if at least one of the 3 interactions above are functional)	Users cannot see actions taken by other users in real time	Users can see actions of all other users, but cannot interact with them at all	Users can see actions of all other users, but there are noticeable issues with the interactions between users	All users can interact with each other in real time as intended by the app idea

	0 points	8 points	17 points	25 points
Web Version Testing	Testing does not exist -OR- there are no networked interactions with other users	Some testing exists, but there is an issue noticeable to the user that makes at least one feature of the app unusable	Some testing exists, but there is a minor issue noticeable to the user that negatively impacts the user experience (and all features are usable for their intended purpose)	Some testing exists and there are no issues that are noticeable to the user
Desktop Version Testing	Testing does not exist -OR- there are no networked interactions with other users	Some testing exists, but there is an issue noticeable to the user that makes at least one feature of the app unusable	Some testing exists, but there is a minor issue noticeable to the user that negatively impacts the user experience (and all features are usable for their intended purpose)	Some testing exists and there are no issues that are noticeable to the user