Unofficial
Web Development Competition 2023

TEST PROJECT

Written by:
Roberts Flaumanis,
Franz Stimpfl,
Margit Tennosaar

SKILL **17** web technologies

Contents

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Introduction

After the pandemic, many companies have made remote work their primary way of working. At the same time, employees have complained that working alone at home isolates them from other employees, so the company XOXO is building a virtual office. Your task is to make an MVP for a virtual office web application where one can see other employees' avatars in real-time at the virtual office.

The theme for the competition: [The Office TV show.](#)

You will get a pre-defined layout as a background for the office. Your task is to add selectable areas to which the user can be assigned. Multiple users might be assigned to the same room/area, and the information needs to be updated in real-time via Web Sockets or AJAX.

Description of the project

You must create a web application allowing users to be in a virtual office. The application must be user-friendly, modern, and optimised for desktop usage. Use creativity while choosing colours, typography, and layout elements for enhancing the UI and UX.

Users can:

- Start and end session.
- See session length.
- Choose and change avatar from predefined avatars.
- See a real-time list of all rooms/zones and participants in each room/zone.
- See the virtual office layout with the logged-in users' avatars.
- Enter and leave rooms/zones.
- Chat with people in the same room.

Using the application

Users can start the session by entering their first name and selecting an avatar from predefined avatars. When a user starts the session, a zone where the avatar is placed will be selected randomly.

When the user is disconnected for more than 5 minutes (the timeout must be configurable via the config file), the user is automatically disconnected from the room.

On the left side of the application, the user can see the following information (Image 1):

- Chosen avatar and the entered name.
- Session length
- The "End Session" button
- The list of rooms/zones
  - Each room has an indicator of how many people are allowed into the room and how many currently are in that particular room.
  - The information about which users are currently in that room.
- A chat window for a room where the user currently is.

The user can see the virtual office layout on the right side of the application. The rooms/zones must be selectable/highlighted with a hover effect when the mouse moves over them. The user can change the avatar's position inside the room/zone with drag and drop.

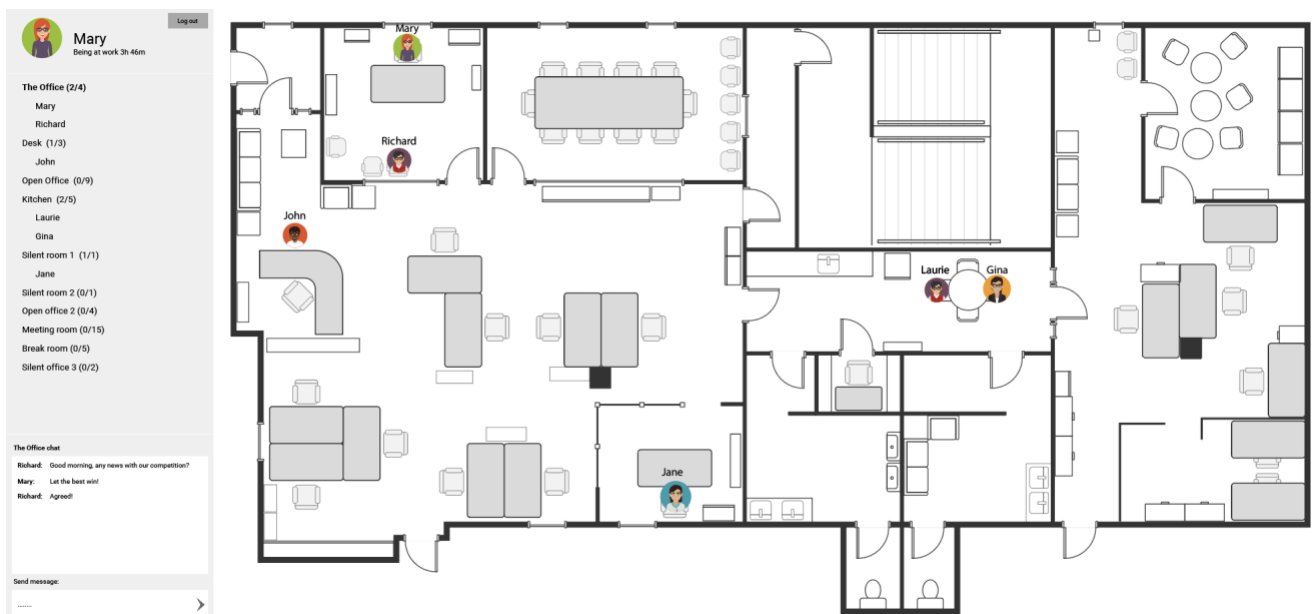*Image 1 - Web app mock-up*

Rooms/Zones

Each room/zone (Image 2) has limited spaces (listed below); an alert message is presented to the user when the limit is reached, and the user can not join with the room/zone in which the limit is reached.

Image 2 - Rooms/Zones.

Zones limits:

- The Office (4 participants).
- Meeting room (15 participants).
- Desk (3 participants).
- Open Office 1 (9 participants).
- Silent room 1 (1 participant).
- Kitchen (5 participants).
- Silent room 2 (1 participant).
- Breakroom (5 participants).
- Open office 2 (4 participants).
- Silent room 3 (2 participants).

Chatting

When a user enters the room/zone, a chat room is created where all the room participants can communicate. When the last user leaves the room, the chat room is rested in an empty state.

Technical Requirements

- Data needs to be seeded (use Laravel database seeder or provide a **"seed.sql"** file in the project root directory.
- The deployment should be done via the CI/CD prevailed pipeline.
- The selected room updates should happen without reloading the page.
- The backend must be programmed in PHP (native or with Laravel framework) or NodeJS based.

Note that the code should be optimised and well-organised. Add comments to improve readability.

Submission Instructions to the Competitor

Your final and built project should be stored in the default document root „//var/www/html" on the provided server and accessible via the provided URL. More information can be found in the readme.txt on the server.

Upload your final project with all necessary files latest on **11.03.2023 at 15:00 (CET)**.

The project must include a README.md file with installation and usage instructions. Please ensure you include all the necessary information for running your solution. Readme quality will be assessed.

Since version control is a fundamental part of a web developer's life, we also want you to use GIT as a version control system and show us that you can use GIT. The proper use of GIT also includes a meaningful usage of GIT commits. Therefore, please also provide the link/information to your GIT repository.

Materials provided

ITEM	DESCRIPTION
Avatars package	.zip package
Office layouts	.png, .jpg, .svg

Marking Scheme

SECTION	MODULE	MARKS
A	Session and profile	15.00
B	Virtual Office Layout	30.00
C	Listing of the rooms/zones	15.00
D	Chat	25.00
E	Code quality and UI/UX	10.00
F	Documentation & Work Style	5.00
		100.00

Introduction

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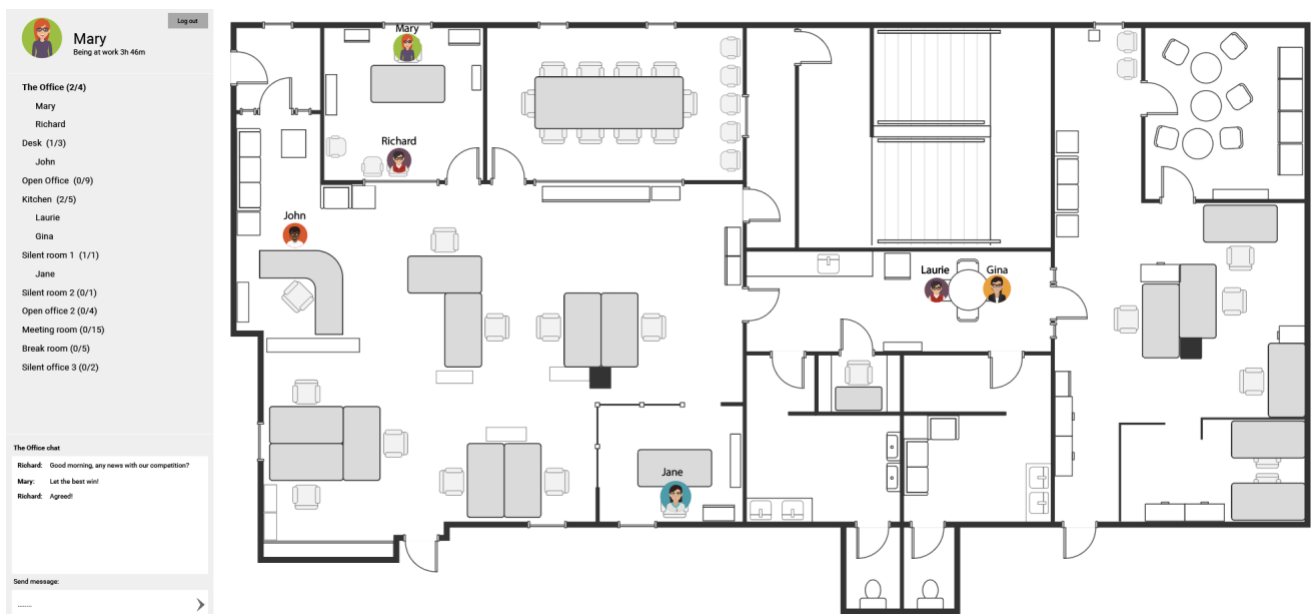

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