



Indoor Mapping of Devices using QR Code and Geolocation

Project Management and Software Development
for Medical Applications

General Info

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Project Abstract

Hospitals collaborate with multiple medical device manufacturers. From the operating room to radiology, different vendors provide tools and equipment for the medical staff to conduct their work with. MDOP aims to provide a universal solution that connects all devices into a well-organized system by using QR code technologies. One of the most valuable features of MDOP is its QR code scanning which allows users direct access to the medical devices they scan.

Background and Motivation

The most important non-human resources of a hospital are its medical devices and tools used to perform day-to-day tasks such as surgeries, scans, and others.

Considering the multitude of medical devices and device manufacturers, hospitals are still facing a problem when it comes to locating their devices, issue that's especially difficult for new employees.

Hospital staff members should have quick and easy access to the location of a specific device by just looking for the device on the hospital map, a map that can be created with the use of QR codes, geolocation and other technologies.

Student's Tasks Description

The student should develop an Indoor Mapping of Hospital Devices inside the MDOP app that can allow MDOP users to locate a device or a device room by searching for the name of a specific device.

In the first stage, the student is supposed to get familiar with the MDOP app and then come up with a geolocation / wi-fi positioning system that would allow to build a mockup map of one Klinikum Rechts der Isar hospital room, preferably the IFL.

Technical Prerequisites

Programming skills are very important since the student is supposed to create an interactive map system that would tell the user where they can find a specific device.

UX/UI skills are also valuable since the interactive map should be well designed and easy to follow.

Time management skills and the ability to be self-driven are also very important since the student should decide how to organize and manage their work and time.

References

<https://indoo.rs/museum-library-navigation/>
https://en.wikipedia.org/wiki/Indoor_positioning_system