Project Group “The Dreamteam”

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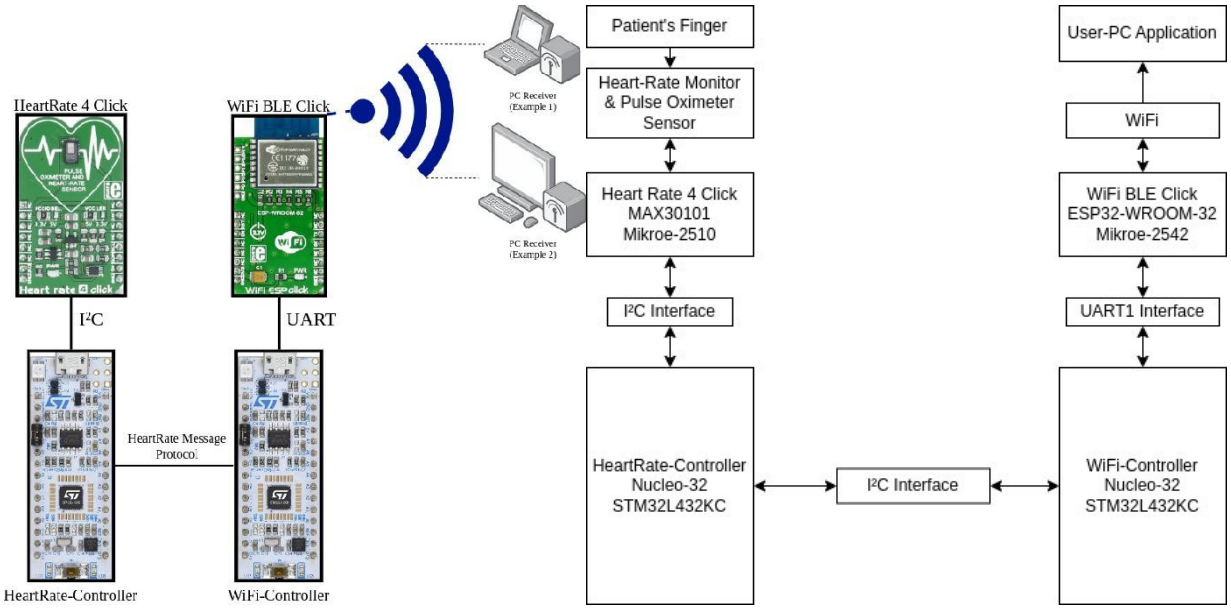
Project Description

A telemedicinal application for the remote reading of patients’ current heart rate is the project’s aim. A heart rate sensor will be employed to provide readings for patients’ heart rates that are processes by a microcontroller (Nucleo 432 board). The processed signals are transferred via a UART-Interface to another microcontroller (Nucleo 432 board) equipped with a WiFi-hotspot. For the transmission between the two microcontroller boards a basic telecommunication protocol will be devised. The WiFi hotspot will allow for the communication with an app on another device that displays data on patients’ current heart rate readings to health care professionals.

Required Hardware

Nucleo 432 Board (incl. FHTW Click-Shield)	2x
Heart Rate 4 Click Sensor	1x
ESP32 WiFi Module	1x
2 jumper cables	1x
Display Hardware (i.e. PC)	1x

Block Diagram



Work Packages & Estimated Efforts

Development Task	Est. Hours	Assigned To
Heart rate sensor reading	25h	DM
Basic communication protocol	5h	DM
UART Communication Module – Sender / Receiver	20h	DM
WiFi board integration	30h	NR
App for displaying heart rate readings	20h	NR