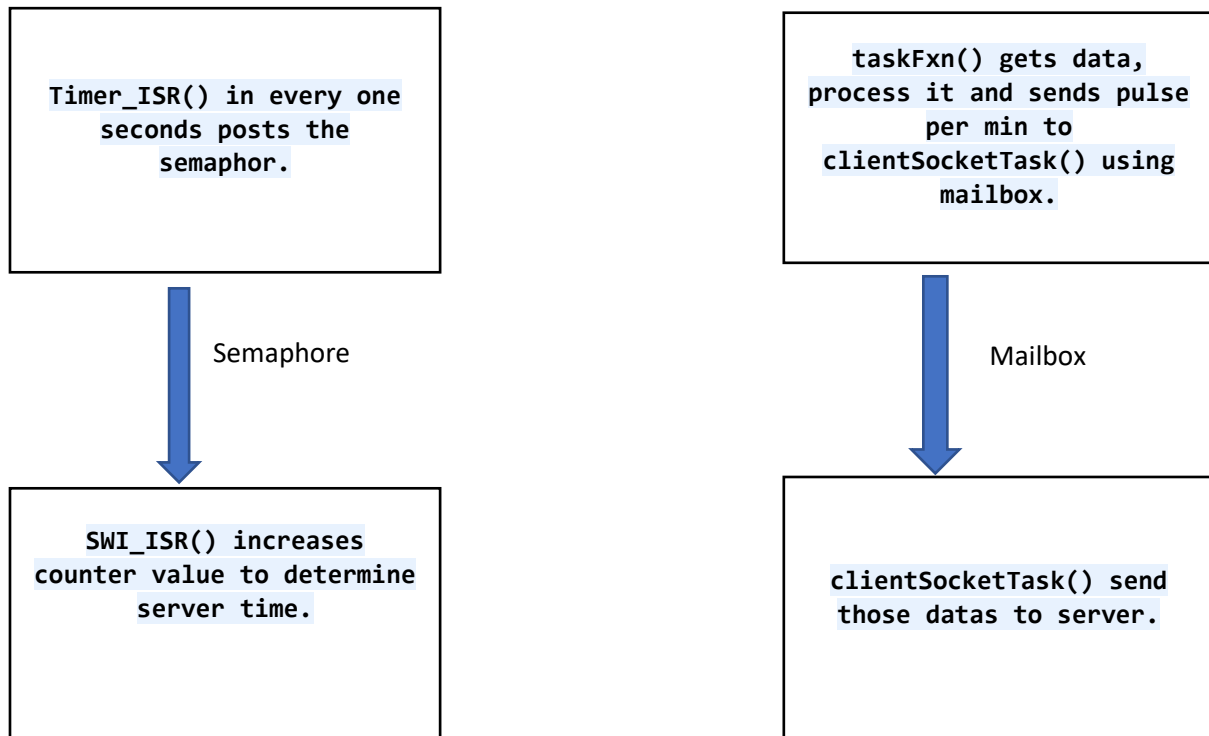


Sekran Mert Kılıç

52522588108

The main purpose of this project is to write a code that gets a pulse value, then sends that to a server. A mailbox, a semaphore, a timer and 4 task are used in this Project. Using a MAX30100 IR sensor, the time between each pulse is determined, dividing 60000 with this time value gives as average pulse in minute. In the figure below, it can be seen, for which functions these are used.



In SWI_ISR() task using timer, a counter vale is incremented.(this counter value is a replacement for ntp time server's value).

clientSocketTask() task is used to process data from taskFxn to send to server. Using sendData2Server() function which creates a socket to connect with hercules data is sent to the server.

taskFxn() task cominicates with max30100 using I2C protocol. It sets its mode, sampling rate, pulse width and led current. Then using its fifo register, it gets IR data. With a DC ofsett filter and a butterworth filter it process this data to pulse per min.