Heart Beat Monitor

Aim: - To measure the heart beat using simple electronics components and to improve its accuracy, user interface and displaying the results on LCD/seven segments.

Problems Faced:-The most challenging problem was to set the accuracy…the accuracy was very less due to the poor hardware.. Hardware requires a robustly built and sturdily done soldering …PCB is preferred over GCB but that isn’t possible in first year so we will go for GCB. Also the good quality optical sensor is preferred.

I had used USART and had shown the output on laptop’s monitor using a COM port software called X\_CTU. . However we can use LCD /seven segment to display the heartbeat.

Components required : - ATmega32,IR LED, photo diode,LM324 op-amp, 1k-ohm resistance,100k-ohm resistance,led,16\*2 LCD,GCB,wires,7805 voltage regulator,battery,push bottons,switch,potentiometer .

Difficulty level - Intermediate

Skills required:-

Intermediate C/C++ programming

Familiar with AVR

Good soldering skills

High Patience