Digital clock

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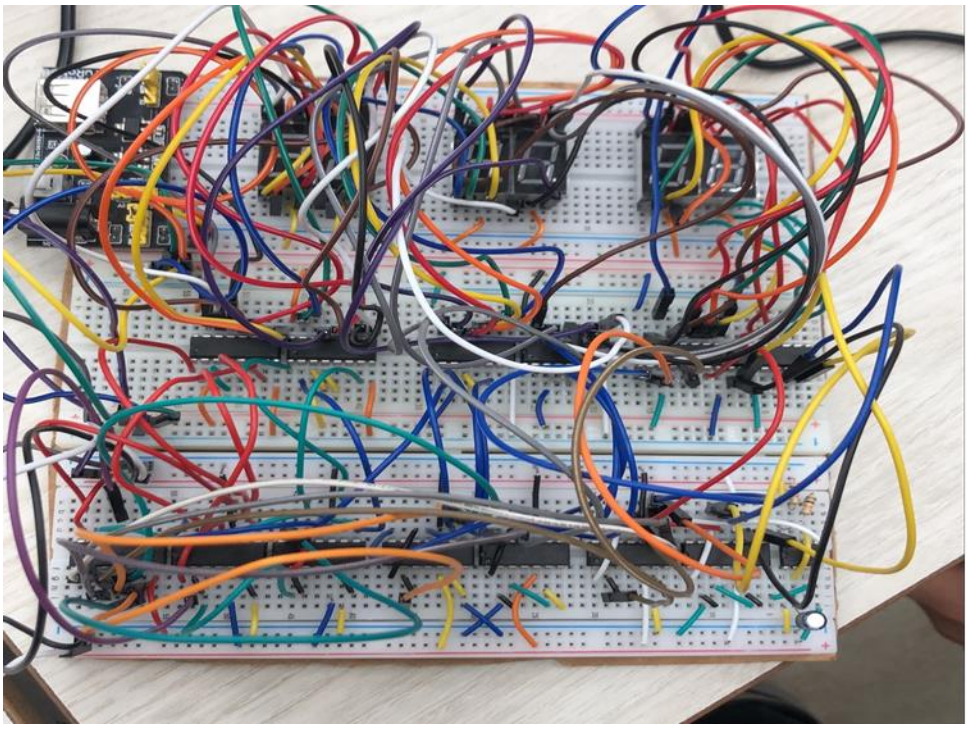
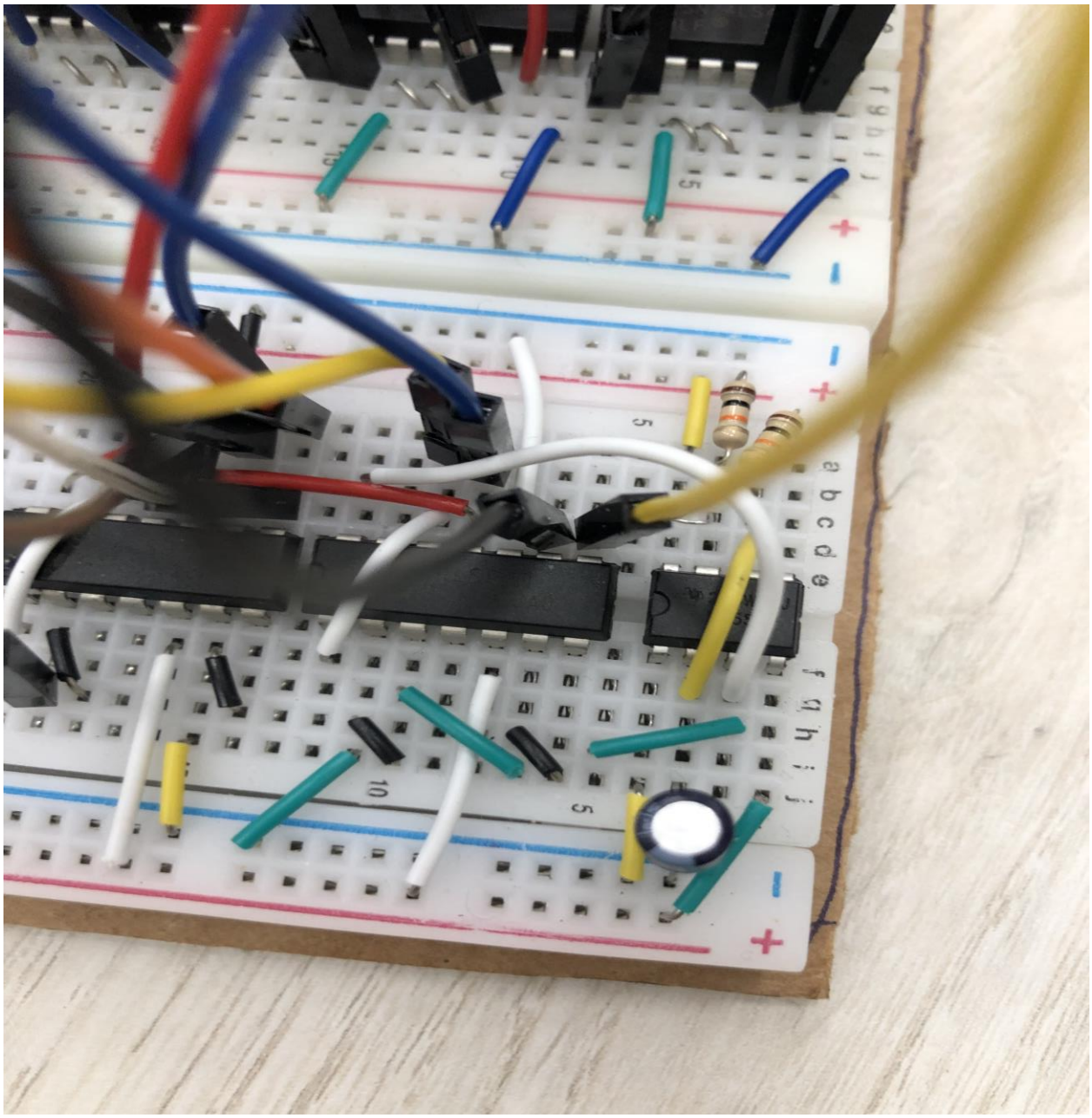
The component we used in the digital clock project:

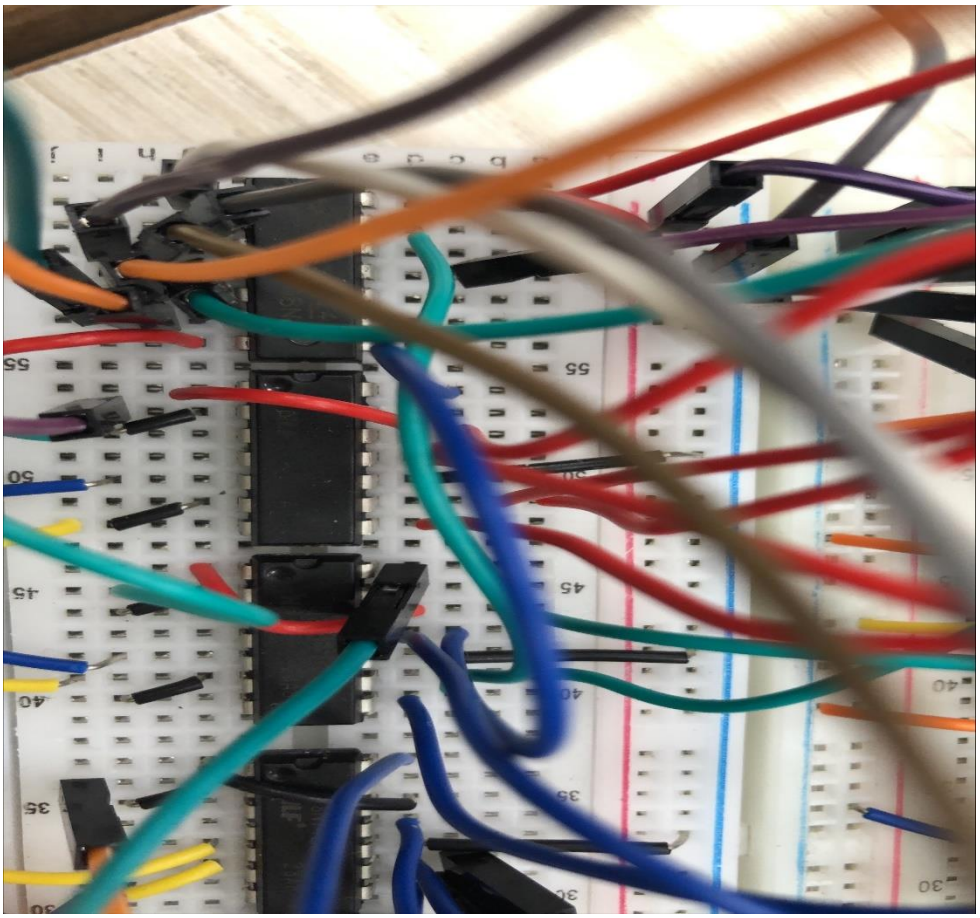
1-(1) ne555p
2-(6) 74ls90n
3-(6)74ls47n
4-(6) 7 segment display common anode
5-(1) 74ls08n
6-(2) 10k ohm resistor
7-(1) 47 u capacitor



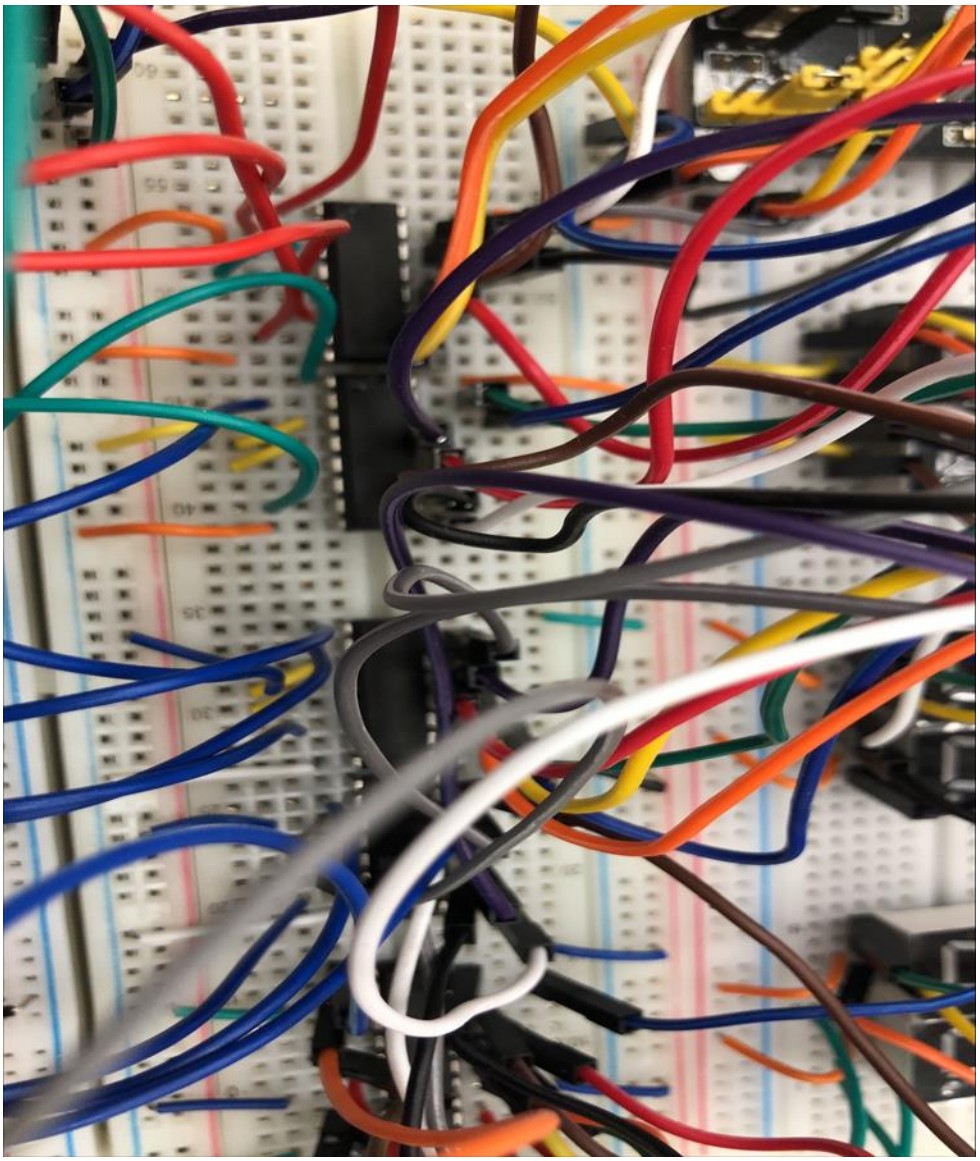
first we use the 555 IC to produce the clock frequency that we will use in the digital clock we used 10K,10K resistors and a 47uF capacitor to produce the 1hz



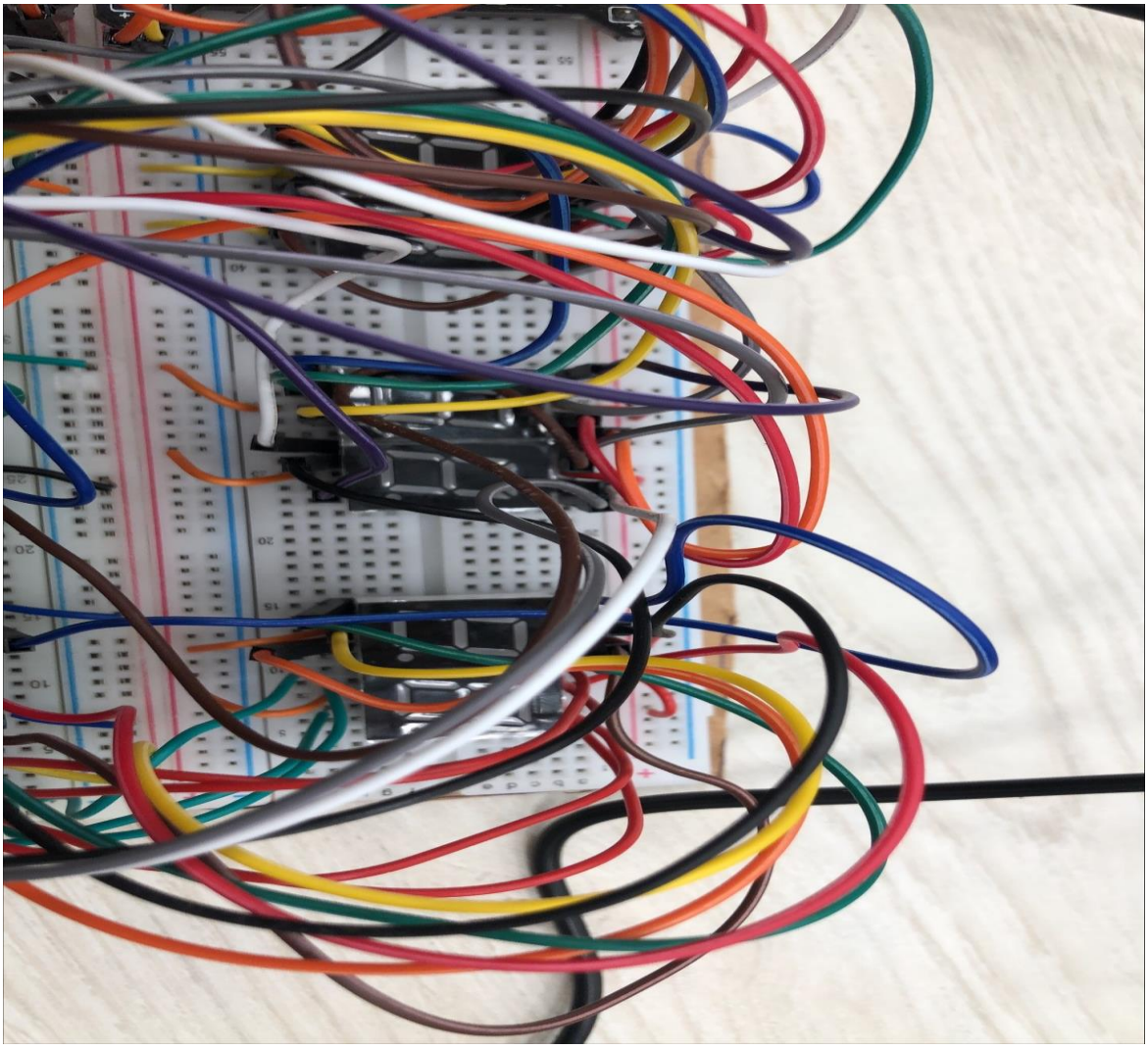
then we connect the clock to the first counter in pin (14) 74ls90



all the inputs for the first counter are connected to the ground since we want to start from 0 and count up
after that all the outputs from the first counter we be inputs for the first decoder (74LS47)



to transform the binary inputs to decimal inputs to be able to show it at the 7 segment display .



all the outputs from the decoder we be the input for the 7 segment display .0
for the second counter the clock will be (q3) from the first counter
the outputs will all be inputs for the decoder and (q2,a3) will also input into and gate that output will divide into two lines one will enter inputs 1,2 in counter 2 and the second line will input into third counter clock by this we achieved a clock that its frequency well be 1/m
all the inputs for the third counter will be connected to the ground and (q0) will input the second clock for counter 3 and q(3) will input into the fourth counter first clock and (q3) form the fourth counter will input into the second clock for counter 4 by this we achieved a 10/m frequency clock (q2,1) will input into an AND gate that output splits into two lines one line into the same counter (1,2) inputs and the other line will input into the fifth counter by this we achieved a 1/h frequency and q(3) will input unto the second clock and (q3) will input into the six counter first clock by this we achieved a 1/10h frequency and q(3) will enter the second clock and (q2) from the fifth counter and (q1) from the sixth counter we input into AND gate to make it every 24 hour it reset