DIGITAL STOPWATCH

Design and construct a digital stopwatch using a 555 timer IC that accurately measures time intervals in seconds.

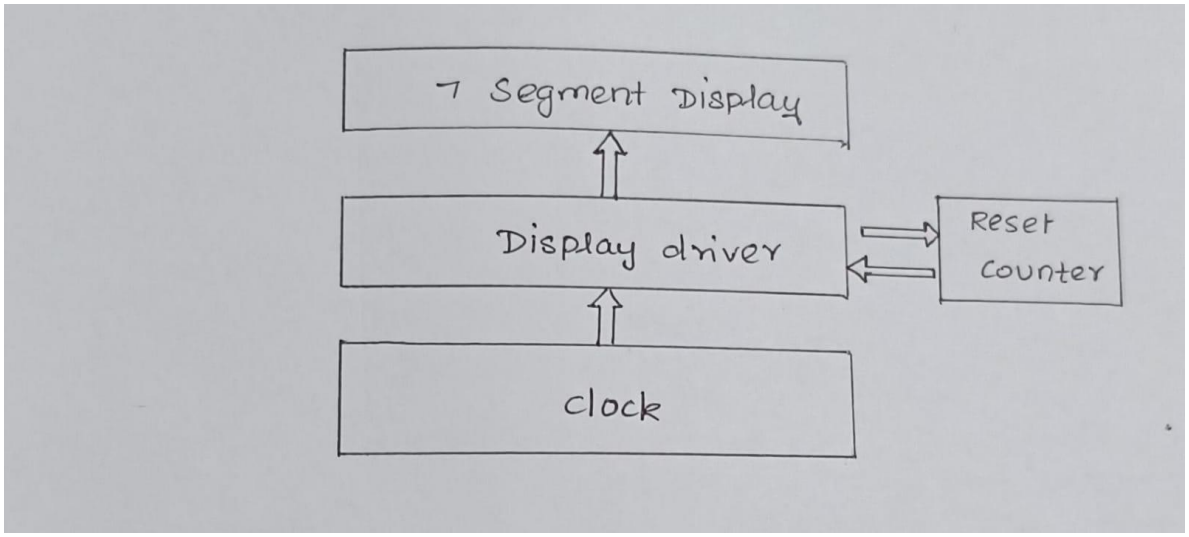
INTRODUCTION:

Digital stopwatches are common in laboratories. They can measure a time interval 0-59 seconds, indicating the time lapsed as the start/stop button is pressed. The time interval is recorded between the start and stop of an event.

APPARATUS REQUIRED:

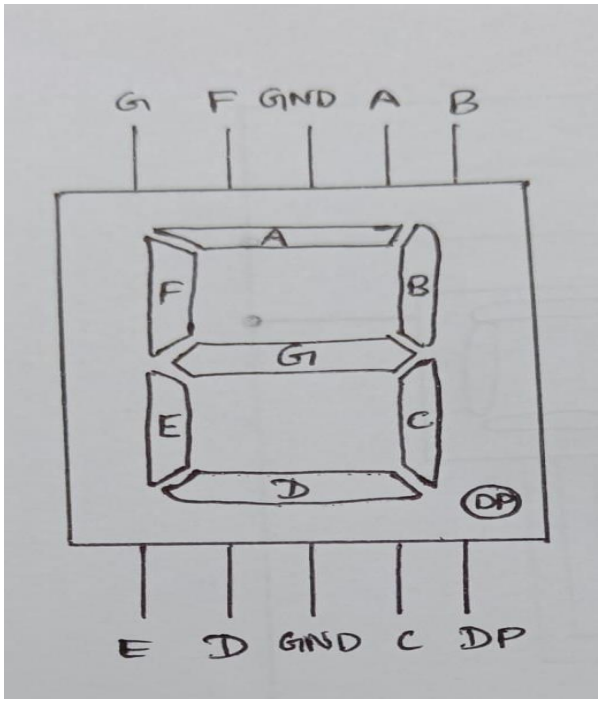
S.No	Components	Value	Price
1.	IC	CD4026(2)	54
2.	IC	NE555 timer	10
3.	7 segment display (2)	-	20
4.	Resistor	56k,33k,100k,150 ohm	30
5.	Capacitor	10uF	20
6.	Electric switch	-	20
7.	Push button	-	10
8.	Bread board	-	60
9.	Battery	9 Volt	80
10.	LED	-	2
11.	Voltage Regulator	7805	100

BLOCK DIAGRAM:



PIN DIAGRAMS:

7 Segment Display:



Pin Diagram CD4026:

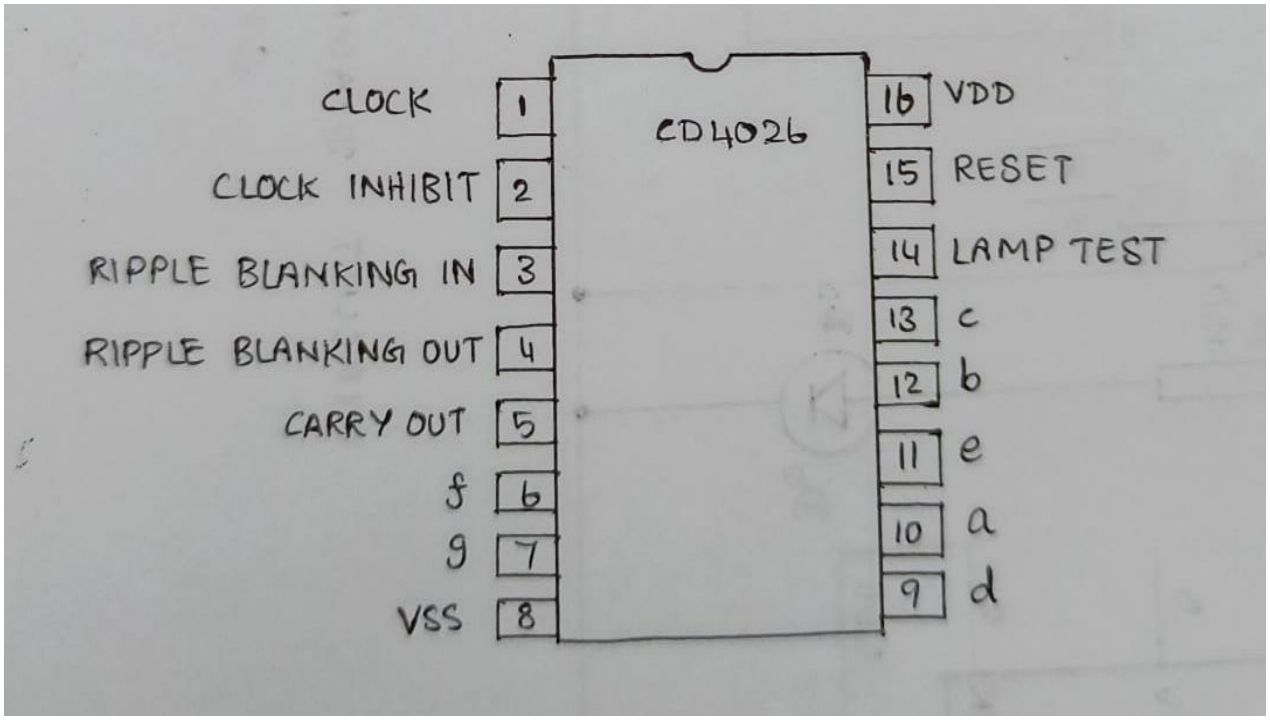
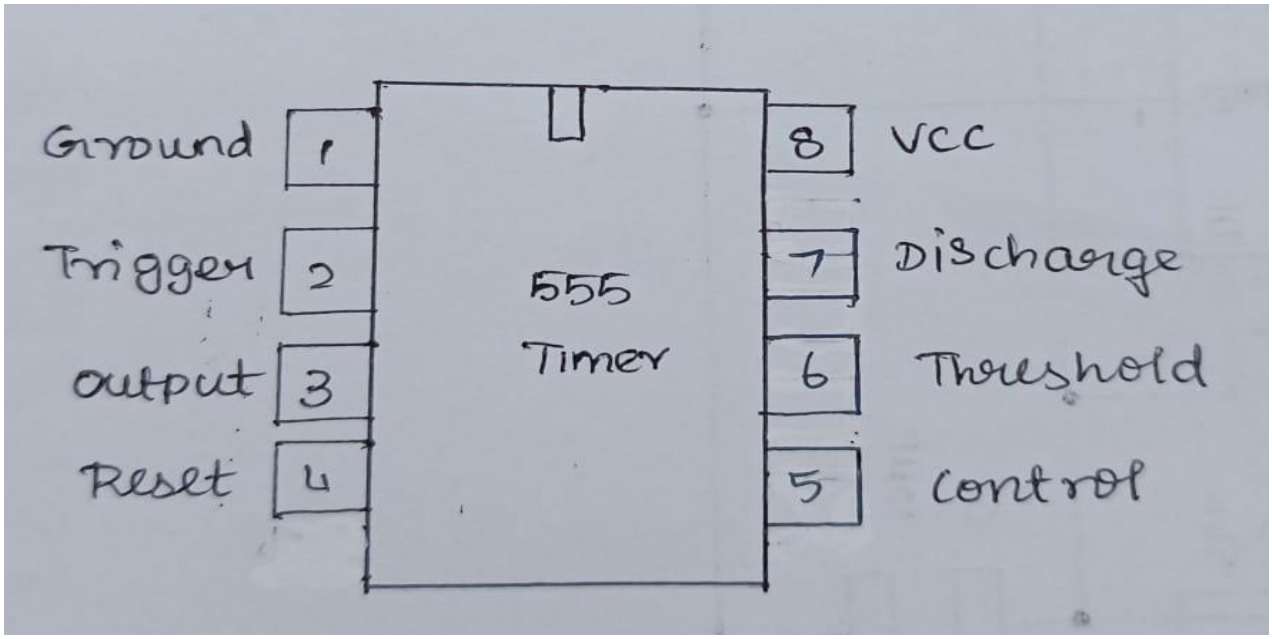
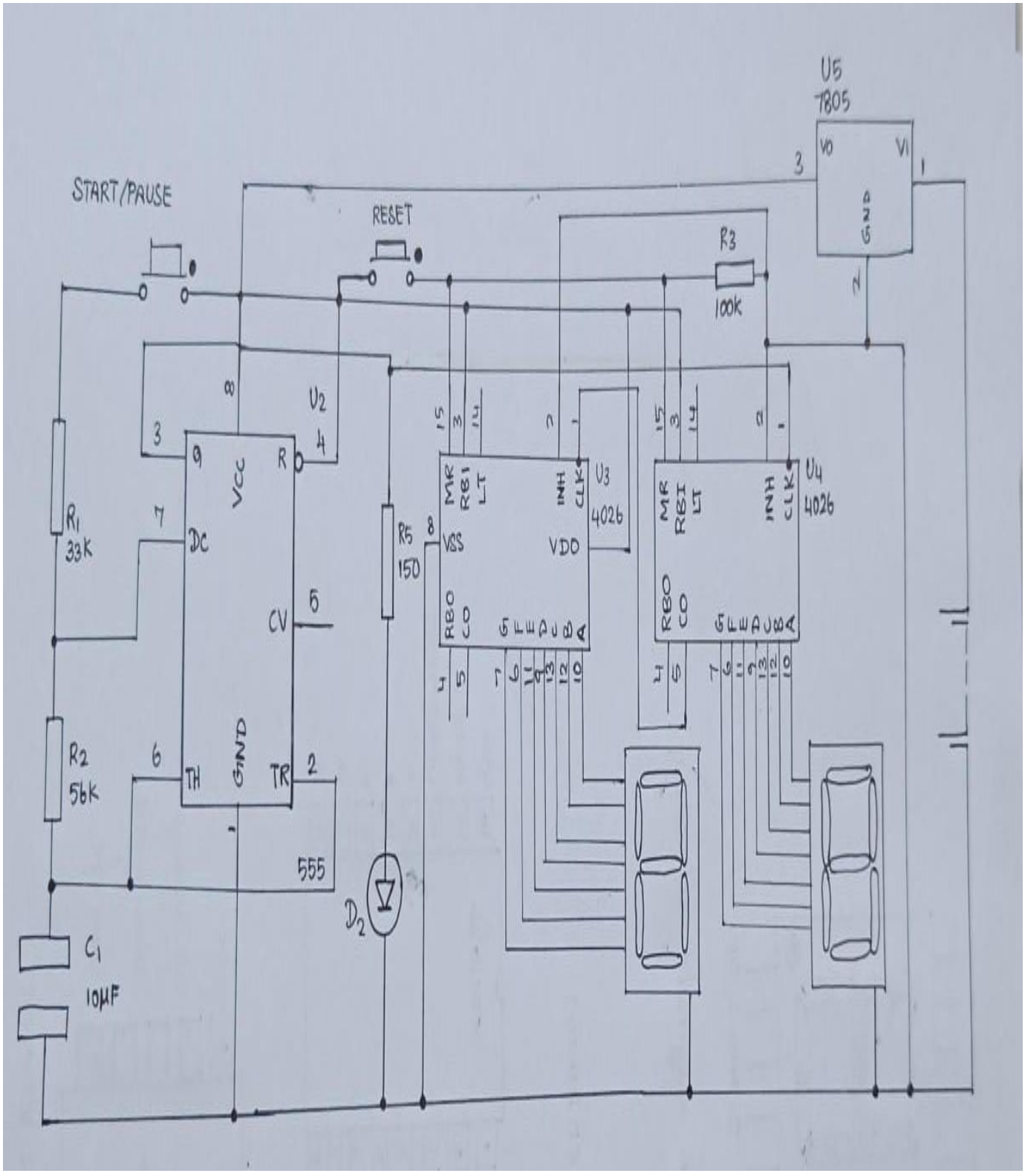


Diagram for 555 timer:



CIRCUIT DIAGRAM:



SUMMARY:

The digital stopwatch project aims to create a portable and user-friendly timekeeping device using a 555 timer IC. The stopwatch features start/stop and reset buttons, a digital display for seconds and minutes, accurate time measurement to the nearest second, and a compact design. The project involves circuit design, component selection, and construction. Upon completion, the stopwatch will provide a simple and reliable timing solution for various applications.

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