



MICROPROCESSOR BASED RAM TESTER

HERE WE ARE PRESENTING ITS DESIGN

OUR TEAM

CHINMAY MANDVEKAR BT21ECE005

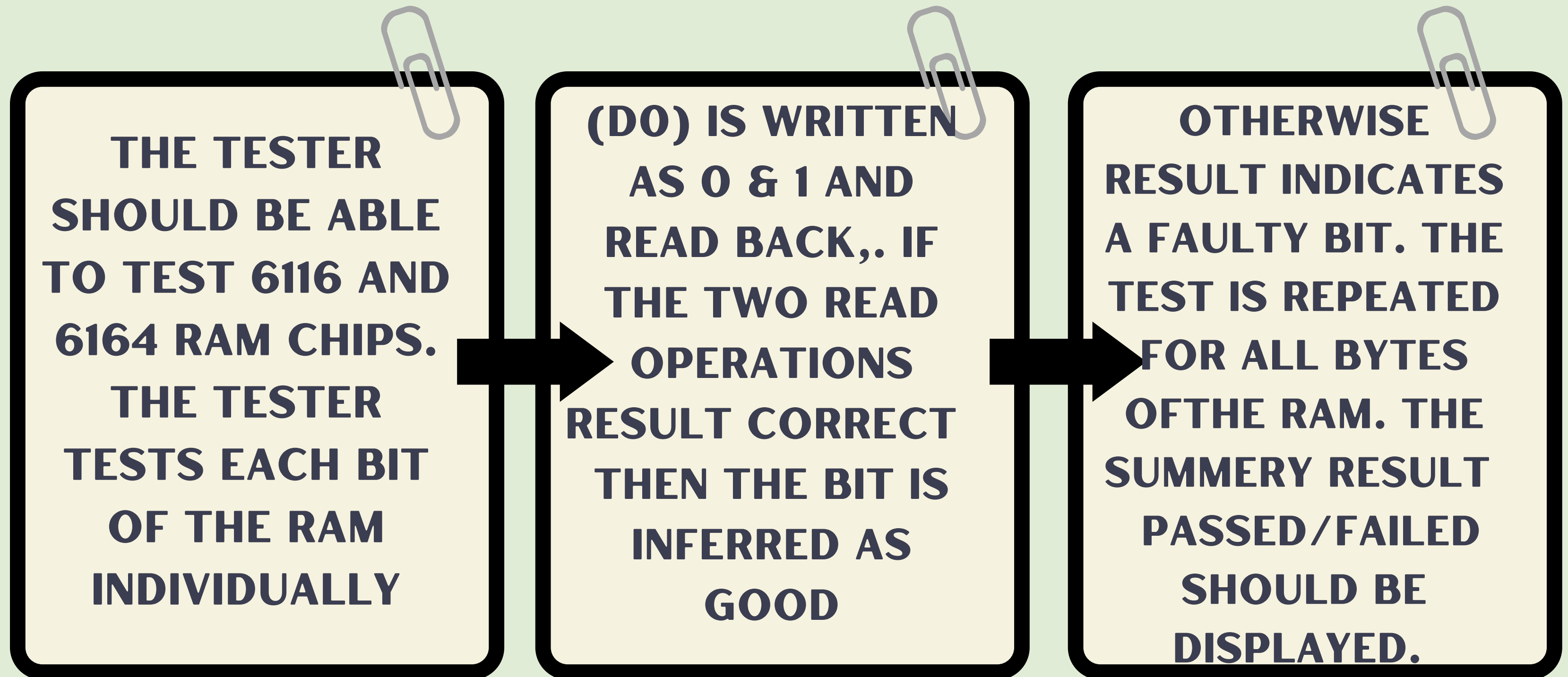
ADITI KULKARNI BT21ECE033

VEDANT RAULKAR BT21ECE036

PRANAV SONAR BT21ECE038

ROHAN KALE BT21ECE042

PROBLEM STATEMENT



SYSTEM DESCRIPTION :

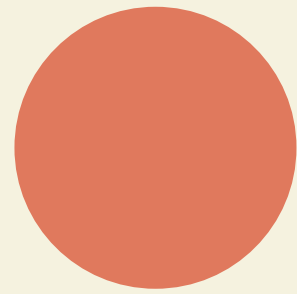
The RAM tester is so designed, such that the user has a choice which RAM he wants tested at a given instant.

The user is provided with two RAMS, one for each RAM and the checking is done according to the user input. Every bit of the RAM is first written with 0 and then with 1. After every write, the values are read and compared to the values written. If they are equal in both cases, it implies that the RAM is fully functional. In case, any discrepancy arises the RAM is classified as faulty. Whatever the conclusion, is displayed on a LED display.

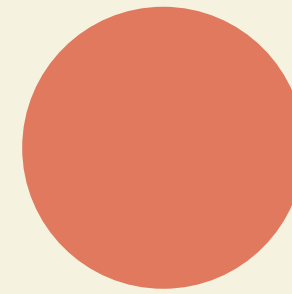
RAM's are connected to it using a 8255 interfaced at 40H,

Another 8255 interfaced at 44H is used to interact with the another RAM

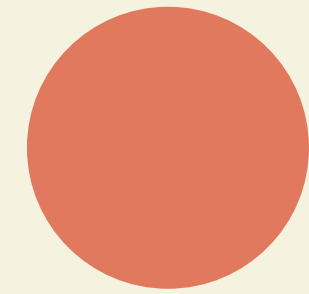
ASSUMPTIONS



At any given instant only one of the two switches is at ON position..



At the memory location 3001 data corresponding to the seven segment display code of 'PASSED' is stored.



At the memory location 3011 H the following data corresponding to the seven segment display code of 'FAILED' is stored.

HARDWARE DEVICES

8085 : Microprocessor

6116 SRAM (to be attached when tested)

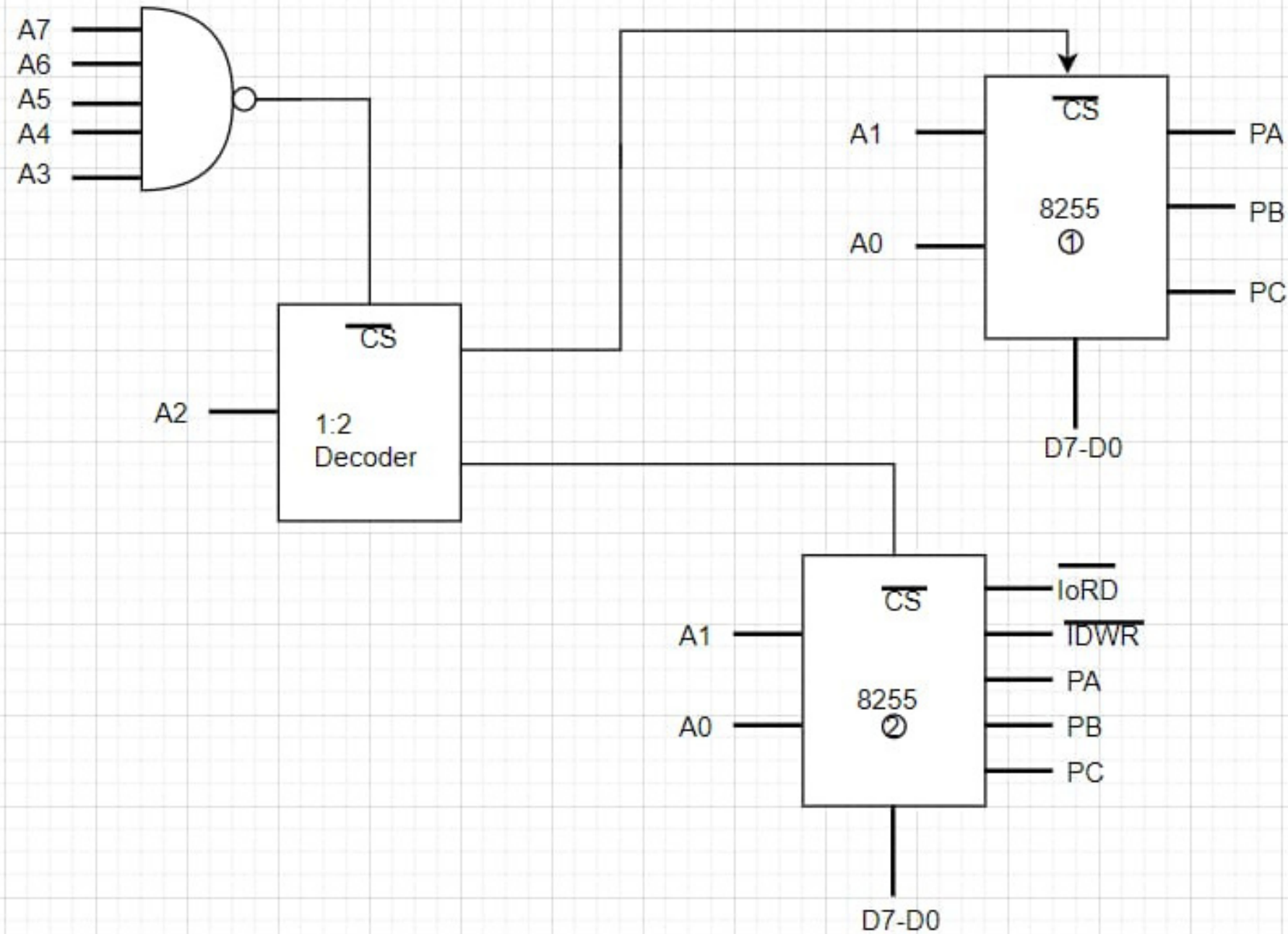
6164 SRAM (to be attached when tested)

NAND ,NOT GATE

3*8 DECODER

8255 : Programmable Peripheral Interface(2)

ADDRESS DECODING TABLE



Sr. No.	Port Address	Binary Address
	8255 - 1	
A	40 H	0100 0000
B	41 H	0100 0001
C	42 H	0100 0010
CWR	43 H	0100 0011
	8255 - 2	
A	44 H	0100 0100
B	45 H	0100 0101
C	46 H	0100 0110
CWR	47 H	0100 0111

INTERFACING RAM'S

01

Add a main point

Briefly elaborate on what
you want to discuss.

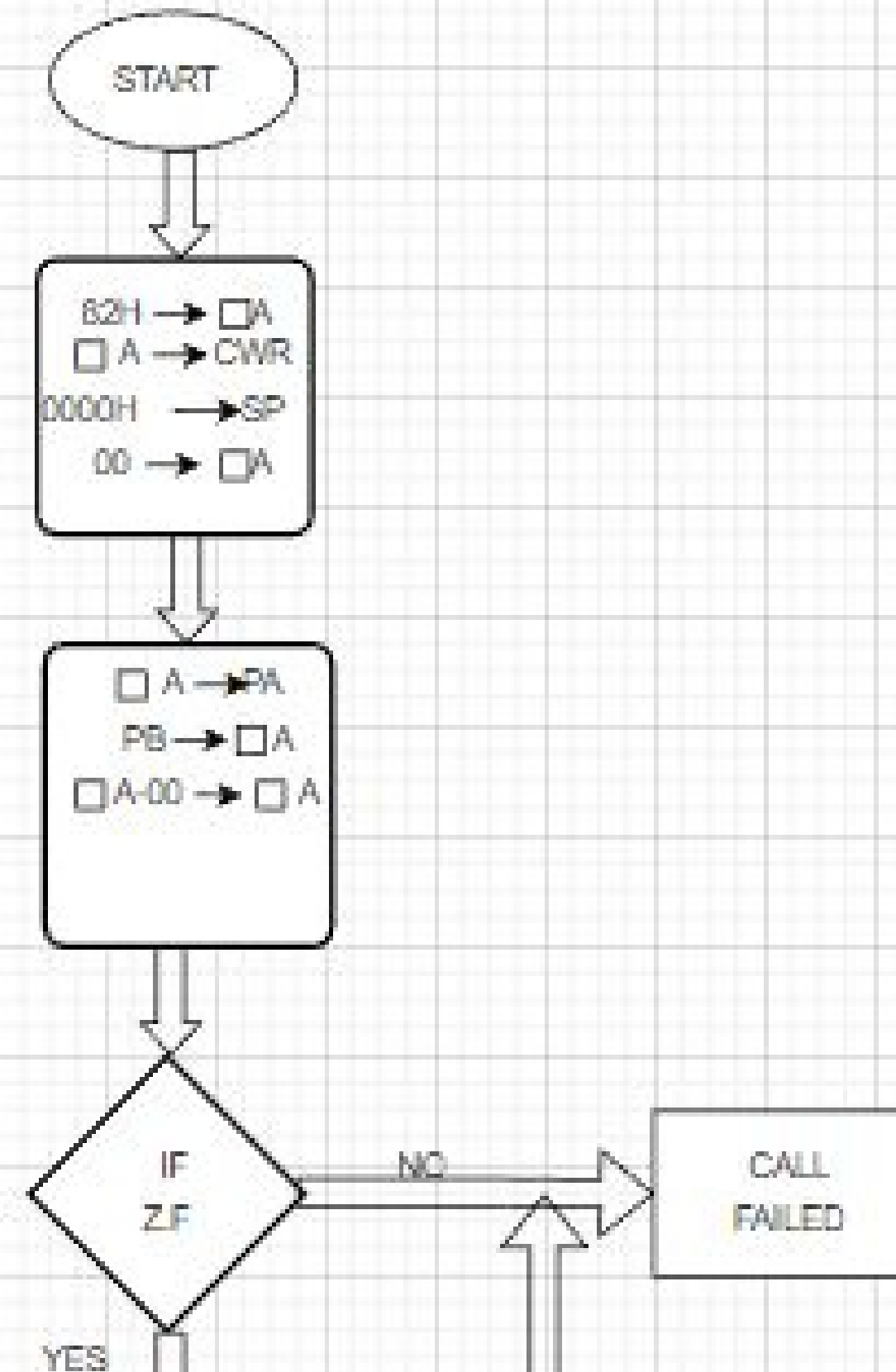
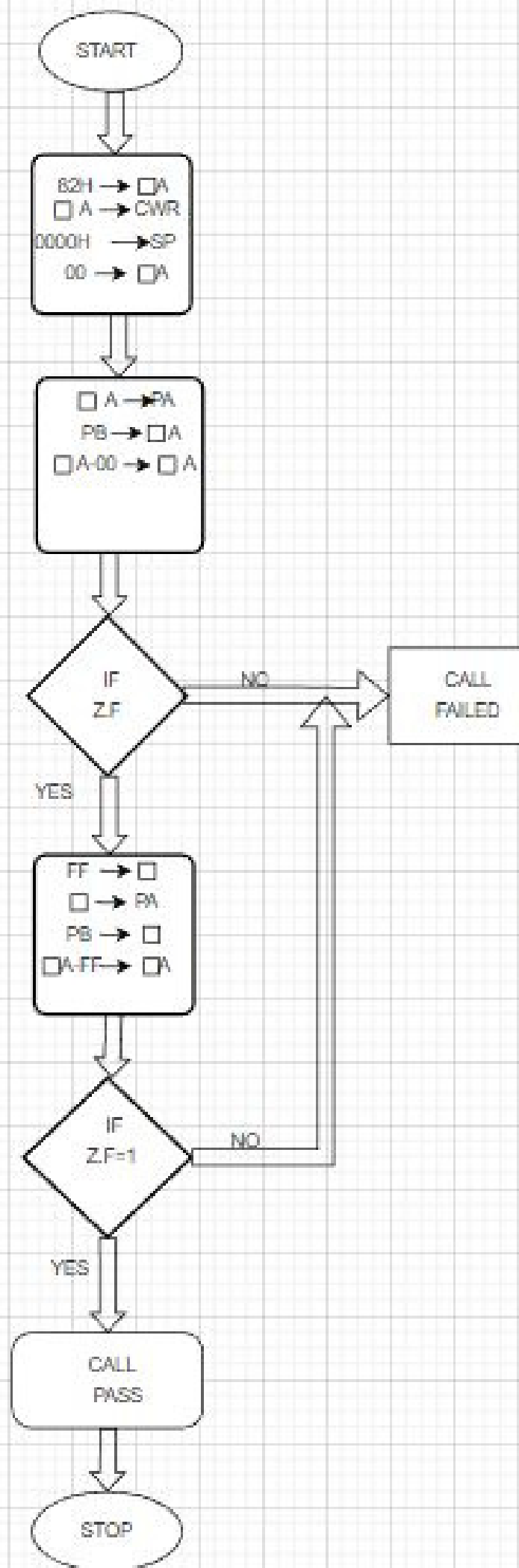


02

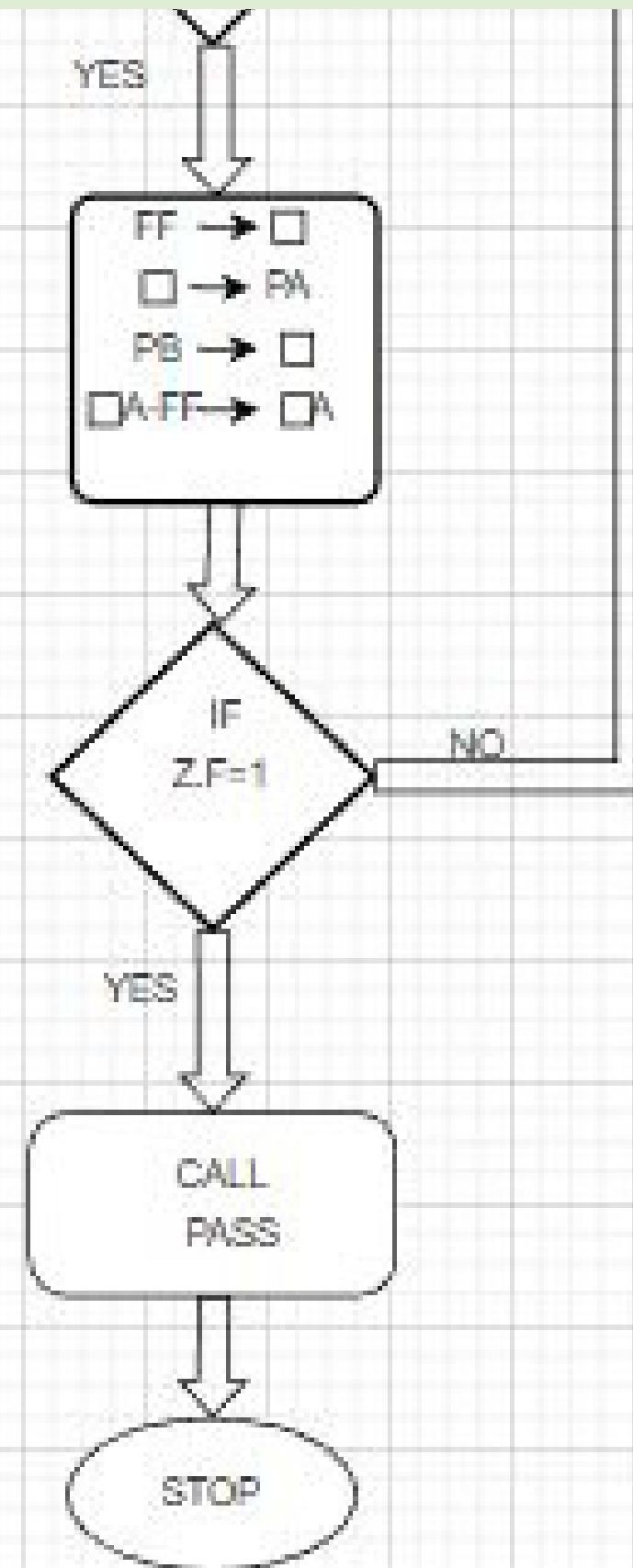
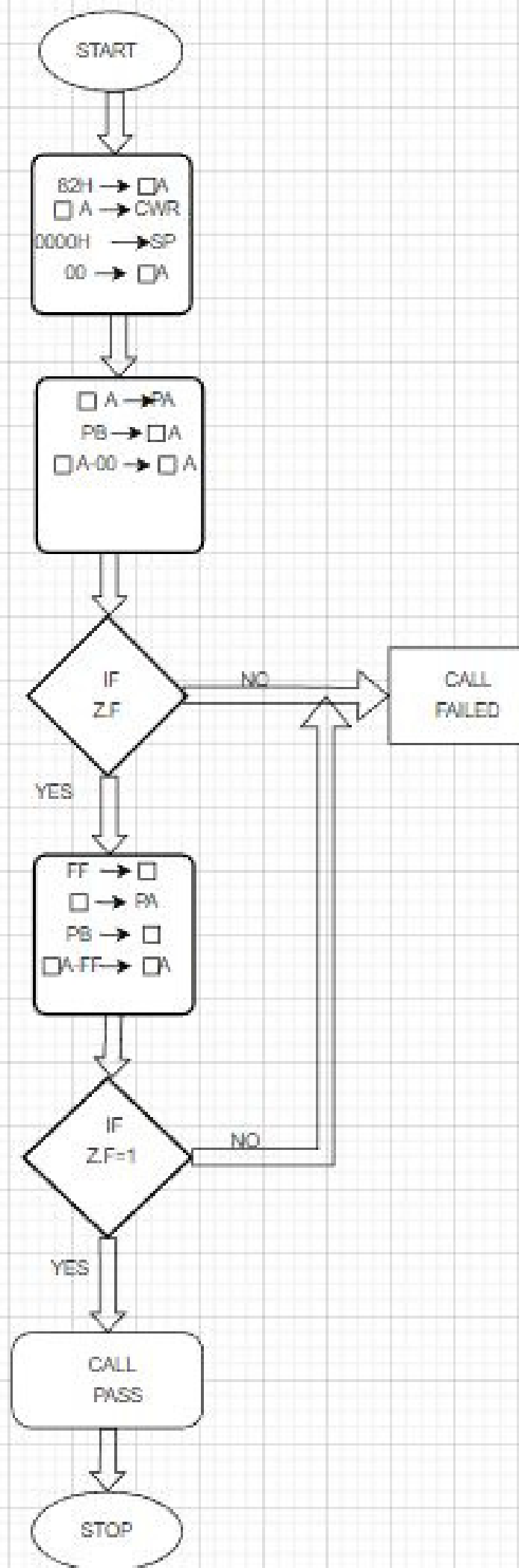
Add a main point

Briefly elaborate on what
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FLOW CHART



FLOW CHART



CODE

MVI A,82 H
OUT 43 H
LXI SP,0000 H
MVI A,00 H
OUT 40 H
IN 41 H
CPI 00 H
CNZ 2100 H
CALL 03AF (DELAY)
JNZ L1.
MVI A,FF H
OUT 40 H
IN 41 H
CPI FF H
CNZ 2100 H
CZ 2200 H
CALL 03AF (DELAY)

L1: MVI A,82 H
OUT 47 H
MVI A,00 H
OUT 44 H
IN 45 H
CPI 00 H
CNZ 2100 H
CALL 03AF (DELAY)
JNZ L2.
MVI A,FF H
OUT 44 H
IN 45 H
CPI FF H
CNZ 2100 H
CZ 2200 H
L2: RST 5

PASSED:
CALL 0F40 H
MVI B,06 H
LXI H 3011 H
CALL 1747 H
CALL 0F51 (DELAY)
RET

FAILED:
CALL 0F40 H
MVI B,06 H
LXI H 3001 H
CALL 1747 H
CALL 0F51 (DELAY)
RET

YOUR REFERENCE

→ CLASS NOTES

UNDER KIND GUIDANCE OF:

DR.PARITOSH PESHWE

Tb

Thank you!