Experiment Number -05

PEE-452/PCS-405 Microprocessors Lab
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OBJECT

To perform computation of square root of given number.

APPRATUS REQUIRED

8085 Microprocessor trainer kit, Keyboard

THEORY

The Intel 8085 is an 8-bit microprocessor produced by Intel and introduced in 1976. It is a software-binary compatible with the more-famous Intel 8080 with only two minor instructions added to support its added interrupt and serial input/output features. However, it requires less support circuitry, allowing simpler and less expensive microcomputer systems to be built.

In Enter Program into Trainer Kit

1. Press 'RESET' key

2. Sub (key processor represent address field)

3. Enter the address (16 bit) and digit in hex

4. Press 'NEXT' key

5. Enter the data

6. Again press "NEXT"

7. Again after taking the program, are use HLT instruction its Hex code

8. Press "NEXT"

How to executive program

1. Press "RESET"

2. Press "GO"

3. Enter the address location in which line program was executed

4. Press "Execute" key

PROGRAM

Memory Address	Machine Codes	Labels	Mnemonics	Operands	Comments
2000	0E		MVI	C,00	
2001	00				
2002	21		LXI	H,2500	
2003	00				
2004	25				
2005	7E		MOV	A, M	
2006	1E		MVI	E,01	
2007	01				
2008	93	LOOP	SUB	E	
2009	1C		INR	E	
200A	1C		INR	E	
200B	0C		INR	C	
200C	FE		CPI	00	
200D	00				
200E	C2		JNZ	LOOP	
200F	08				
2010	20				
2011	79		MOV	A,C	
2012	32		STA	2600H	
2013	00				
2014	26				
2015	76		HLT		

OBSERVAVTION

Before Execution	After Execution
Data: Address Data 2500-	Result: Address Data 2600-

RESULT

Successfully perform the computation of square root of given number (result is in the table).

PRECAUTIONS

1. Connections should be proper and tight.
2. Switch "ON" the power after completing the circuit.
3. Do not touch the line terminals.