EX.NO: 1 8 BIT ADDITION

PROGRAM:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ADDRESS | LABEL | MNEMONIC CODE | MACHINE CODE | COMMENT |
| 4100 |  | MVI A,00H | 3E,00 | CLEAR THE ACCUMULATOR |
| 4102 |  | LXI H,4150H | 21,50,41 | MEMORY LOCATION IN HL PAIR |
| 4105 |  | MOV A,M | 7E | MOVE THE CONTENT OF MEM TO ACC |
| 4106 |  | INX H | 23 | INCREMENT MEM LOCATION |
| 4107 |  | ADD M | 86 | ADD THE VALUE WITH ACC |
| 4108 |  | INX H | 23 | INCREMENT MEM LOCATION |
| 4109 |  | MOV M,A | 77 | MOVE THE VALUE OF ACC TO MEM |
| 410A |  | HLT | 76 | STOP |

EX.NO: 2 8 BIT SUBTRACTION

PROGRAM:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ADDRESS | LABEL | MNEMONIC CODE | MACHINE CODE | COMMENT |
| 4100 |  | MVI A,00H | 3E,00 | CLEAR THE ACCUMULATOR |
| 4102 |  | LXI H,4150H | 21,50,41 | MEMORY LOCATION IN HL PAIR |
| 4105 |  | MOV A,M | 7E | MOVE THE CONTENT OF MEM TO ACC |
| 4106 |  | INX H | 23 | INCREMENT MEM LOCATION |
| 4107 |  | SUB M | 96 | SUB THE VALUE WITH ACC |
| 4108 |  | INX H | 23 | INCREMENT MEM LOCATION |
| 4109 |  | MOV M,A | 77 | MOVE THE VALUE OF ACC TO MEM |
| 410A |  | HLT | 76 | STOP |

EX.NO: 3 8 BIT MULTIPLICATION

PROGRAM:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ADDRESS | LABEL | MNEMONIC CODE | MACHINE CODE | COMMENT |
| 4100 |  | MVI A,00H | 3E,00 | CLEAR THE ACCUMULATOR |
| 4102 |  | MVI B,04H | 06,04 | MOVE IMMEDIATLY THE VALUE 04 TO REG B |
| 4104 |  | MVI C,03H | 0E,03 | MOVE IMMEDIATLY THE VALUE 03 TO REG C |
| 4106 | LOOP | ADD B | 80 | ADD THE VALUE B WITH ACC |
| 4107 |  | DCR C | 0D | DECREMENT THE VALUE OF C. |
| 4108 |  | JNZ LOOP | C2,06,41 | JUMP TO LOOP IF VALUE OF C IS NOT ZERO. |
| 410B |  | STA 4170H | 32,70,41 | RESULT IS STORED IN MEM LOCATION 4170H |
| 410E |  | HLT | 76 | STOP |

EX.NO: 4 8 BIT DIVISION

PROGRAM:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ADDRESS | LABEL | MNEMONIC CODE | MACHINE CODE | COMMENT |
| 4100 |  | MVI A,00H | 3E,00 | CLEAR THE ACCUMULATOR |
| 4102 |  | MVI C,08H | 0E,08 | MOVE IMMEDIATLY THE VALUE 08 TO REG C |
| 4104 |  | MVI D,02H | 16,02 | MOVE IMMEDIATLY THE VALUE 02 TO REG D |
| 4106 |  | MOV A,C | 79 | MOVE THE CONTENT OF C TO A |
| 4107 |  | MVI B,00H | 06,00 | MOVE IMMEDIATELY THE VALUE 00 IN REG B |
| 4109 | LOOP | SUB D | 92 | SUBTRACT D WITH ACCUMULATOR |
| 410A |  | INR B | 04 | INCREMENT THE VALUE OF B |
| 410B |  | CMP D | BA | COMPARE REG D WITH ACC |
| 410C |  | JNC LOOP | D2,09,41 | IF NO CARRY THEN JUMP ONTO LOOP |
| 410F |  | MOV A,B | 78 | MOVE THE CONTENT IF REG B TO A |
| 4110 |  | STA 4170H | 32,70,41 | STORE THE RESULT IN 4170 |
| 4113 |  | HLT | 76 |  |

EX.NO: 5 16 BIT ADDITION

PROGRAM

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ADDRESS | LABEL | MNEMONIC CODE | MACHINE CODE | COMMENT |
| 4100 |  | MVI A,00H | 3E,00 | CLEAR THE ACCUMULATOR |
| 4102 |  | LHLD 4160H | 2A,60,41 | L <- 4160  H<-4161 |
| 4105 |  | XCHG | EB | CONTENT OF DE PAIR IS EXCHANGED WITH HL PAIR |
| 4106 |  | LHLD 4150H | 2A,50,41 | L <- 4150  H<-4151 |
| 4109 |  | DAD D | 19 | ADD THE CONTENT OF DE PAIR WITH HL PAIR |
| 410A |  | SHLD 4170H | 22,70,41 | L <- 4170  H<-4171 |
| 410D |  | HLT | 76 | STOP |

EX.NO: 6 BCD SUBTRACTION

PROGRAM

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ADDRESS | LABEL | MNEMONIC CODE | MACHINE CODE | COMMENT |
| 4100 |  | MVI A,00H | 3E,00 | CLEAR THE ACCUMULATOR |
| 4102 |  | MVI B,82 | 06,82 | MOVE IMMEDIATELY THE VALUE OF 82 IN REG B |
| 4104 |  | MVI C,49 | 0E,49 | MOVE IMMEDIATELY VALUE OF 49 IN REG C |
| 4106 |  | MVI A,99 | 3E,99 | MOVE IMMEDIATELY VALUE OF REG A |
| 4108 |  | SUB C | 91 | SUBTRACT THE CONTENT OF C THE ACCUMULATOR |
| 4109 |  | INR A | 3C | INCREMENT THE VALUE OF ACC |
| 410A |  | ADD B | 80 | ADD THE CONTENT OF REG B WITH ACC |
| 410B |  | DAA | 27 | CONVERT DATA HEXADECIMAL INTO DECIMAL |
| 410C |  | STA 4150H | 32,50,41 | STORE THE ACC |
| 410F |  | HLT | 76 | STOP |

EX.NO: 7 DATA TRANSFER FROM ONE PART OF MEMORY TO

ANOTHER(BLOCK MOVE)

PROGRAM

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ADDRESS | LABEL | MNEMONIC CODE | MACHINE CODE | COMMENT |
| 4100 |  | MVI A,00H | 3E,00 | CLEAR THE ACCUMULATOR |
| 4102 |  | MVI B,04H | 06,04 | MOVE IMMEDIATELY THE VALUE 04 IN REG B |
| 4104 |  | LXI D,4160H | 11,60,41 | LOAD THE MEMORY LOCATION 160 IN H-L PAIR |
| 4107 |  | LXI H,4150H | 21,50,41 | LOAD THE MEMORY LOCATION 4150 IN H-L PAIR |
| 410A | LOOP | MOV A,M | 7E | MOVE THE VALUE OF MEMORY TO REG A |
| 410B |  | STAX D | 12 | STORE THE CONTENT OF D INTO MEM LOCATION WHERE ADDRESS IN D-E PAIR |
| 410C |  | INX D | 13 | INCREMENT THE MEM LOCATION IN D-E PAIR |
| 410D |  | INX H | 23 | INCREMENT THE MEM LOCATION |
| 410E |  | DCR B | 05 | DECREMENT THE VALUE OF REG B |
| 410F |  | JNZ LOOP | C2,0A,41 | JUMP TO LOOP  IF NO ZERO |
| 4112 |  | HLT | 76 | STOP |

EX.NO: 8 REVERSE THE REVERSE ELEMENT

PROGRAM

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Address | Label | Mnemonic Code | Machine Code | Comment |
| 4100 |  | MVI A, 00 H | 3E, 00 | CLEAR THE ACCUMULATOR |
| 4102 |  | MVI B, 04 H | 06, 04 | MOVE IMMEDIATELY THE VALUE OF 04 IN REGISTER B |
| 4104 |  | LXI H,4150 H | 21, 50, 41 | GET THE FIRST NUMBER IN 4150(H- L) |
| 4107 |  | LXI D,4163 H | 11, 63, 41 | LOAD THE MEMORY LOCATION IN D-E PAIR |
| 410A | LOOP | MOV A, M | 7E | MOVE THE CONTENT OF MEMORY TO ACCUMULATOR |
| 410B |  | STAX D | 12 | STORE THE CONTENT OF MEMORY LOCATION WHOSE ADDRESS IN  D-E PAIR |
| 410C |  | INX H | 23 | INCREMENT THE MEMORY LOCATION |
| 410D |  | DCX D | 1B | DECREMENT THE MEMORY LOCATION D- E PAIR |
| 410E |  | DCR B | 05 | DECREMENT THE VALUE OF B |
| 410F |  | JNZ LOOP | C2, 0A, 41 | JUMP TO LOOP IF THE VALUE IS NOT ZERO |
| 4112 |  | HLT | 76 | STOP |

EX.NO: 9 LARGEST NUMBER

PROGRAM

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ADDRESS | LABEL | MNEMONIC CODE | MACHINE CODE | COMMENT |
| 4100 |  | MVI A, 00 H | 3E, 00 | CLEAR THE ACCUMULATOR |
| 4102 |  | MVI B, 04 H | 06, 04 | MOVE IMMEDIATELY THE VALUE OF 04 IN REGISTER B |
| 4104 |  | LXI H,4150 H | 21, 50, 41 | GET THE FIRST NUMBER IN 4150(H- L) |
| 4107 |  | MOV A, M | 7E | MOVE THE CONTENT OF MEMORY TO ACCUMULATOR |
| 4108 |  | DCR B | 05 | DECREMENT THE MEMORY LOCATION OF VALUE B |
| 4109 | LOOP | INX H | 23 | INCREMENT THE MEMORY LOCATION OF VALUE H |
| 410A |  | CMP M | BE | COMPARE THE VALUE OF THE MEMORY TOACCUMULATOR |
| 410B |  | JNC LOOP1 | D2, 0F, 41 | JUMP TO LOOP 1 IF THERE IS NO CARRY |
| 410E |  | MOV A,M | 7E | MOVE THE CONTENT OF MEMORY TO ACCUMULATOR |
| 410F | LOOP1 | DCR B | 05 | DECREMENT THE VALUE OF B |
| 4110 |  | JNZ LOOP | C2, 09, 41 | JUMP TO LOOP IF THE VALUE IS NOT ZERO |
| 4113 |  | STA 4170 H | 32,70,41 | STORE THE RESULT IN 4170 |
| 4116 |  | HLT | 76 | STOP |

EX.NO: 10 SMALLEST NUMBER

PROGRAM:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ADDRESS | LABEL | MNEMONIC CODE | MACHINE CODE | COMMENT |
| 4100 |  | MVI A, 00 H | 3E, 00 | CLEAR THE ACCUMULATOR |
| 4102 |  | MVI B, 04 H | 06, 04 | MOVE IMMEDIATELY THE VALUE OF 04 IN REGISTER B |
| 4104 |  | LXI H,4150 H | 21, 50, 41 | GET THE FIRST NUMBER IN 4150(H- L) |
| 4107 |  | MOV A, M | 7E | MOVE THE CONTENT OF MEMORY TO ACCUMULATOR |
| 4108 |  | DCR B | 05 | DECREMENT THE VALUE OF B |
| 4109 | LOOP | INX H | 23 | INCREMENT THE MEMORY LOCATION |
| 410A |  | CMP M | BE | COMPARE THE VALUE OF MEMORY TO ACCUMULATOR |
| 410B |  | JC LOOP1 | D2, 0F, 41 | JUMP TO LOOP1 IF THERE IS NO CARRY |
| 410E |  | MOV A,M | 7E | MOVE THE CONTENT OF MEMORY TO ACCUMULATOR |
| 410F | LOOP1 | DCR B | 05 | DECREMENT THE VALUE OF B |
| 4110 |  | JNZ Loop | C2, 09, 41 | JUMP TO LOOP IF THE VALUE IS NOT ZERO |
| 4113 |  | STA 4170 H | 32,70,41 | STORE THE RESULT IN 4170 |
| 4116 |  | HLT | 76 | STOP |

EX.NO: 11 SEARCH THE GIVEN DATA IN AN ARRAY

PROGRAM:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ADDRESS | LABEL | MNEMONIC CODE | MACHINE CODE | COMMENT |
| 4100 |  | MVI A, 00 H | 3E, 00 | CLEAR THE ACCUMULATOR |
| 4102 |  | MVI B, 04 H | 06, 04 | MOVE IMMEDIATELY THE VALUE OF 04 IN REGISTER B |
| 4104 |  | MVI C, 06 H | 0E, 06 | MOVE IMMEDIATELY THE VALUE OF 06 IN REGISTER C |
| 4106 |  | LXI H,4150 H | 21, 50, 41 | GET THE FIRST NUMBER IN 4150(H- L) |
| 4109 | LOOP | MOV A,M | 7E | MOVE THE CONTENT OF MEMORY TO ACCUMULATOR |
| 410A |  | CMP C | B9 | COMPARE THE VALUE OF C WITH A |
| 410B |  | JZ loop | CA,13,41 | JUMP TO LOOP IF VALUE IS ZERO |
| 410E |  | INX H | 23 | INCREMENT THE MEMORY LOCATION |
| 410F |  | DCR B | 05 | DECREMENT THE VALUE OF B |
| 4110 |  | JNZ Loop1 | C2, 09, 41 | JUMP TO LOOP1 IF THE VALUE IS NOT ZERO |
| 4113 | LOOP1 | MOV A,M | 7E | MOVE THE CONTENT OF MEMORY TO ACCUMULATOR |
| 4114 |  | STA 4170 H | 32,70,41 | STORE THE RESULT INTO 4170 |
| 4117 |  | HLT | 76 | STOP |

EX.NO: 12 SORTING IN ASCENDING ORDER

PROGRAM:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ADDRESS | LABEL | MNEMONIC CODE | MACHINE CODE | COMMENT |
| 4100 |  | MVI A, 00 H | 3E, 00 | CLEAR THE ACCUMULATOR |
| 4102 |  | MVI B, 03 H | 06, 03 | MOVE IMMEDIATELY THE VALUE OF 03 IN REGISTER B |
| 4104 |  | MVI C, 03 H | 0E, 03 | MOVE IMMEDIATELY THE VALUE OF 03 IN REGISTER C |
| 4106 |  | MVI D, 00 H | 16, 00 | MOVE IMMEDIATELY THE VALUE OF 00 IN REGISTER D |
| 4108 |  | MVI E, 00 H | 1E, 00 | MOVE IMMEDIATELY THE VALUE OF 00 IN REGISTER E |
| 410A |  | MOV E, C | 59 | MOVE THE CONTENT OF MEMORY C INTO E |
| 410B | LOOP 2 | LXI H,4150 H | 21, 50, 41 | GET THE FIRST NUMBER IN 4150(H- L) |
| 410E | LOOP 1 | MOV A,M | 7E | MOVE THE CONTENT OF MEMORY TO ACCUMULATOR |
| 410F |  | INX H | 23 | INCREMENT THE MEMORY LOCATION |
| 4110 |  | CMP M | BE | COMPARE THE VALUE OF MEMORY LOCATION |
| 4111 |  | JC loop | DA,1A,41 | JUMP TO LOOP IF THERE IS CARRY |
| 4114 |  | MOV D,A | 57 | MOVE THE VALUE OF A TO D |
| 4115 |  | MOV A,M | 7E | MOVE THE CONTENT OF MEMORY TO ACCUMULATOR |
| 4116 |  | MOV M,D | 72 | MOVE THE VALUE OF D TO MEMORY |
| 4117 |  | DCX H | 2B | DECREMENT THE MEMORY LOCATION |
| 4118 |  | MOV M,A | 77 | MOVE THE VALUE OF A TO MEMORY |
| 4119 |  | INX H | 23 | INCREMENT THE MEMORY LOCATION |
| 411A | LOOP | DCR C | 0D | DECREMENT THE VALUE OF C |
| 411B |  | JNZ LOOP1 | C2, 0E, 41 | JUMP TO LOOP1 IF THE VALUE IS NOT ZERO |
| 411E |  | MOV C, E | 4B | MOVE THE VALUE OF E TO C |
| 411F |  | DCR B | 05 | DECREMENT THE VALUE OF B |
| 4120 |  | JNZ LOOP2 | C2, 0B, 41 | JUMP TO LOOP IF THE VALUE IS NOT ZERO |
| 4123 |  | HLT | 76 | STOP |

EX.NO: 13 SORTING IN DESCENDING ORDER

PROGRAM

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ADDRESS | LABEL | MNEMONIC CODE | MACHINE CODE | COMMENT |
| 4100 |  | MVI A, 00 H | 3E, 00 | CLEAR THE ACCUMULATOR |
| 4102 |  | MVI B, 03 H | 06, 03 | MOVE IMMEDIATELY THE VALUE OF 03 IN REGISTER B |
| 4104 |  | MVI C, 03 H | 0E, 03 | MOVE IMMEDIATELY THE VALUE OF 03 IN REGISTER C |
| 4106 |  | MVI D, 00 H | 16, 00 | MOVE IMMEDIATELY THE VALUE OF 00 IN REGISTER D |
| 4108 |  | MVI E, 00 H | 1E, 00 | MOVE IMMEDIATELY THE VALUE OF 00 IN REGISTER E |
| 410A |  | MOV E, C | 59 | MOVE THE CONTENT OF MEMORY C INTO E |
| 410B | LOOP 2 | LXI H,4150 H | 21, 50, 41 | GET THE FIRST NUMBER IN 4150(H- L) |
| 410E | LOOP 1 | MOV A,M | 7E | MOVE THE CONTENT OF MEMORY TO ACCUMULATOR |
| 410F |  | INX H | 23 | INCREMENT THE MEMORY LOCATION |
| 4110 |  | CMP M | BE | COMPARE THE VALUE OF MEMORY LOCATION |
| 4111 |  | JNC LOOP | D2,1A,41 | JUMP TO LOOP IF THERE IS NO CARRY |
| 4114 |  | MOV D,A | 57 | MOVE THE VALUE OF A TO D |
| 4115 |  | MOV A,M | 7E | MOVE THE CONTENT OF MEMORY TO ACCUMULATOR |
| 4116 |  | MOV M,D | 72 | MOVE THE VALUE OF D TO MEMORY |
| 4117 |  | DCX H | 2B | DECREMENT THE MEMORY LOCATION |
| 4118 |  | MOV M,A | 77 | MOVE THE VALUE OF A TO MEMORY |
| 4119 |  | INX H | 23 | INCREMENT THE MEMORY LOCATION |
| 411A | LOOP | DCR C | 0D | DECREMENT THE VALUE OF C |
| 411B |  | JNZ LOOP1 | C2, 0E, 41 | JUMP TO LOOP1 IF THE VALUE IS NOT ZERO |
| 411E |  | MOV C, E | 4B | MOVE THE VALUE OF E TO C |
| 411F |  | DCR B | 05 | DECREMENT THE VALUE OF B |
| 4120 |  | JNZ LOOP2 | C2, 0B, 41 | JUMP TO LOOP IF THE VALUE IS NOT ZERO |
| 4123 |  | HLT | 76 | STOP |

EX.NO: 14 CODE CONVERSION OF HEXADECIMAL TO DECIMAL

PROGRAM

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ADDRESS | LABEL | MNEMONIC CODE | MACHINE CODE | COMMENT |
| 4100 |  | LXI H, 4150 H | 21, 50, 41 | GET THE FIRST NUMBER IN 4150(H- L) |
| 4103 |  | LXI B ,0000 H | 01, 00 00 | THE MEMORY LOCATION IS 0000 STORED IN BE REGISTER PAIR |
| 4106 |  | MOV A,M | 7E | MOVE THE CONTENT OF MEMORY TO ACCUMULATOR |
| 4107 |  | SUI 64 | D6, 64 | SUBTRACT IMMEDIATELY 64 FROM ACCUMULATOR |
| 4109 |  | JC LOOP1 | DA, 10, 41 | JUMP TO LOOP IF THERE IS CARRY |
| 410C |  | JMP LOOP | C3, 07,41 | JUMP TO LOOP |
| 410F |  | INR B | 04 | INCREMENT THE VALUE OF B |
| 4110 | LOOP1 | ADI 64 | C6, 64 | ADD IMMEDIATELY THE VALUE 64 TO ACCUMULATOR |
| 4112 | LOOP2 | SUI 0A | D6, 0A | SUBTRACT IMMEDIATELY THE VALUE 0A FROM ACCUMULATOR |
| 4114 |  | JC LOOP3 | DA,1B,41 | JUMP TO LOOP3 IF THERE IS CARRY |
| 4117 |  | INR C | 0C | INCREMENT THE VALUE OF C |
| 4118 |  | JMP LOOP2 | C3, 12, 41 | JUMP TO LOOP2 |
| 411B | LOOP3 | ADI 0A | C6, 0A | ADD IMMEDIATELY THE VALUE 0A TO ACCUMULATOR |
| 411D |  | INX H | 23 | INCREMENT THE MEMORY LOCATION |
| 411E |  | MOV M,B | 70 | MOVE THE VALUE OF B TO MEMORY |
| 411F |  | MOV B,A | 47 | MOVE THE VALUE OF ACCUMULATOR TO MEMORY B |
| 4120 |  | MOV A,C | 79 | MOVE THE VALUE OF C TO ACCUMULATOR |
| 4121 |  | RLC | 07 | ROTATE ACCUMULATOR LEFT |
| 4122 |  | RLC | 07 | ROTATE ACCUMULATOR LEFT |
| 4123 |  | RLC | 07 | ROTATE ACCUMULATOR LEFT |
| 4124 |  | RLC | 07 | ROTATE ACCUMULATOR LEFT |
| 4125 |  | ADD B | 80 | ADD THE CONTENT OF B WITH A |
| 4126 |  | INX H | 23 | INCREMENT THE MEMORY LOCATION |
| 4127 |  | MOV M,A | 77 | MOVE THE CONTENT OF ACCUMULATOR TO MEMORY |
| 4128 |  | HLT | 76 | STOP |

EX.NO: 15 CODE CONVERSION OF DECIMAL TO HEXADECIMAL

PROGRAM:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ADDRESS | LABEL | MNEMONIC CODE | MACHINE CODE | COMMENT |
| 4100 |  | LXI H, 4150 H | 21, 50, 41 | GET THE FIRST NUMBER IN 4150(H- L) |
| 4103 |  | MVI A ,00H | 3E, 00 | MOVE IMMEDIATELY VALUE 00 IN ACCUMULATOR |
| 4105 |  | MOV B,M | 46 | MOVE THE CONTENT OF MEMORY INTO REGISTER B |
| 4106 | LOOP1 | ADI 64 | C6, 64 | ADD IMMEDIATELY THE VALUE 64 TO ACCUMULATOR |
| 4108 |  | DCR B | 05 | DECREMENT THE VALUE OF B |
| 4109 |  | JNZ LOOP1 | C2, 06,41 | JUMP TO LOOP IN THE VALUE IS NOT ZERO |
| 410C |  | INX H | 23 | INCREMENT THE MEM LOCATION |
| 410D |  | MOV C,M | 4E | MOVE THE CONTENT OF MEMORY INTO REGISTER C |
| 410E | LOOP2 | ADI 0A | C6, 0A | ADD IMMEDIATELY THE VALUE 0A INTO ACCUMULATOR |
| 4110 |  | DCR C | 0D | DECREMENT THE VALUE OF C |
| 4111 |  | JNZ LOOP2 | C2, 0E, 41 | JUMP TO LOOP2 IF THE VALUE IS NOT ZERO |
| 4114 |  | INX H | 23 | INCREMENT THE MEMORY LOCATION |
| 4115 |  | ADD M | 86 | ADD THE CONTENT OF MEMORY WITH ACCUMULATOR |
| 4116 |  | INX H | 23 | INCREMENT THE MEMORY LOCATION |
| 4117 |  | MOV M,A | 77 | MOVE THE VALUE OF ACCUMULATOR TO MEMORY |
| 4118 |  | HLT | 76 | STOP |