**WRITE AN ASSEMBLY LEVEL PROGRAM TO CONVERT GIVEN HEXA DECIMAL NUMBER INTO ITS EQUIVALENT ASCII NUMBER USING 8085.**

**ALGORITHM:**

1. Start the microprocessor.
2. Load the given data in accumulator A and move to register B.
3. Mask the upper nibble of the HEXA decimal number in accumulator A.
4. Call subroutine to get ASCII of lower nibble.
5. Store it in memory.
6. Move the content of register to accumulator A and mask the lower nibble.
7. Rotate the upper nibble to lower nibble position.
8. Call subroutine to get ASCII of upper nibble.
9. Store it in memory.
10. Terminate the program.

**PROGRAM**:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ADDRESS** | **LABEL** | **OPCODE/OPERAND** | **COMMENTS** |  |  |  |
|  |  | LDA 4200 |  |  |  |  |
|  |  | MOV B,A |  |  |  |  |
|  |  | ANI 0F |  |  |  |  |
|  |  | CALL SUB1 |  |  |  |  |
|  |  | STA 4201 |  |  |  |  |
|  |  | MOV A,B |  |  |  |  |
|  |  | ANI F0 |  |  |  |  |
|  |  | RLC |  |  |  |  |
|  |  | RLC |  |  |  |  |
|  |  | RLC |  |  |  |  |
|  |  | RLC |  |  |  |  |
|  |  | CALL SUB1 |  |  |  |  |
|  |  | STA 4202 |  |  |  |  |
|  |  | HLT |  |  |  |  |
|  |  |  |  |  |  |  |
|  | SUB1: | CPI 0A |  |  |  |  |
|  |  | JC SKIP |  |  |  |  |
|  |  | ADI 07 |  |  |  |  |
|  | SKIP: | ADI 30 |  |  |  |  |
|  |  | RET |  |  |  |  |
|  |  |  |  |  |  |  |

**OBSERVATION:**

**INPUT**

|  |  |
| --- | --- |
| 4200 | EF (HEXA data) |
|  |  |

**OUTPUT:**

|  |  |
| --- | --- |
| 4201 | 34(ASCII Code for 4) |
| 4202 | 4202 45(ASCII Code for E) |
|  |  |