**WRITE AN ASSEMBLY LEVEL PROGRAM TO CONVERT TWO BCD NUMBERS IN MEMORY TO EQUIVALENT HEX NUMBER USING 8085.**

**ALGORITHM:**

1. Start the microprocessor.
2. Initialize memory pointer to 4150 H.
3. Get the Most Significant Digit (MSD).
4. Multiply the MSD by ten using repeated addition.
5. Add the Least Significant Digit (LSD) to the result obtained in previous step.
6. Store the HEX data in Memory.

**PROGRAM**:

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| --- | --- | --- | --- | --- | --- | --- |
| **ADDRESS** | **LABEL** | **OPCODE/OPERAND** | **COMMENTS** |  |  |  |
|  |  | LXI H,4150 |  |  |  |  |
|  |  | MOV A,M | Initialize memory pointer |  |  |  |
|  |  | ADD A | MSD X 2 |  |  |  |
|  |  | MOV B,A | Store MSD X 2 |  |  |  |
|  |  | ADD A | MSD X 4 |  |  |  |
|  |  | ADD A | MSD X 8 |  |  |  |
|  |  | ADD B | MSD X 10 |  |  |  |
|  |  | INX H | Point to LSD |  |  |  |
|  |  | ADD M | Add to form HEX |  |  |  |
|  |  | INX H |  |  |  |  |
|  |  | MOV M,A | Store the result |  |  |  |
|  |  | HLT |  |  |  |  |
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**OBSERVATION:**

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| --- | --- |
| 4150 | 02 |
| 4151 | 09 |
|  |  |

**OUTPUT:**

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| --- | --- |
| 4152 | 1D |
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