**Name:** Vineel Sai

**Reg No:** 498

**IIIT Kalyani, Assignment 1 8085 Micro controller**

**PROB.1** FIND OUT THE 1’S COMPLEMENT OF THE NUMBER STORED IN MEMORY LOCATION 8C00H AND PLACE THE RESULT IN MEMORY LOCATION 8C01H.

|  |  |  |
| --- | --- | --- |
| **Memory address in HEX** | **Opcode in HEX** | **Mnemoic** |
| 8000 | C3 03 080 | jmp start |
| 8003 | 00 | start: nop |
| 8004 | 3A 00 08C | LDA 8c00H |
| 8007 | 2F | CMA |
| 8008 | 32 01 08C | STA 8c01H |
| 800B | 76 | hlt |

**Values**

|  |  |  |
| --- | --- | --- |
|  | **Memory Address** | **Value** |
| **Input** | 35840 | 0 |
| **Output** | 35841 | 255 |

|  |  |  |
| --- | --- | --- |
|  | **Memory Address** | **Value** |
| **Input** | 35840 | 10 |
| **Output** | 35841 | 245 |

**PROB.2** FIND OUT THE 2’S COMPLEMENT OF THE NUMBER STORED IN MEMORY LOCATION 8C00H AND PLACE THE RESULT IN MEMORY LOCATION 8C01H.

|  |  |  |
| --- | --- | --- |
| **Memory address in HEX** | **Opcode in HEX** | **Mnemoic** |
| 8000 | C3 03 080 | jmp start |
| 8003 | 00 | start: nop |
| 8004 | 3A 00 08C | LDA 8c00H |
| 8007 | 2F | CMA |
| 8008 | 32 01 08C | STA 8c01H |
| 800B | 3C | INR A |
| 800C | 32 01 08C | STA 8c01H |
| 800F | 76 | hlt |

**Values**

|  |  |  |
| --- | --- | --- |
|  | **Memory Address** | **Value** |
| **Input** | 35840 | 1 |
| **Output** | 35841 | 255 |

|  |  |  |
| --- | --- | --- |
|  | **Memory Address** | **Value** |
| **Input** | 35840 | 10 |
| **Output** | 35841 | 246 |

**PROB.3** TWO 8 BIT NUMBERS ARE STORED IN MEMORY LOCATIONS 8C00H AND 8C01H. PERFORM ADDITION AND STORE THE RESULT IN 8C02H.

|  |  |  |
| --- | --- | --- |
| **Memory address in HEX** | **Opcode in HEX** | **Mnemoic** |
| 8000 | C3 03 080 | jmp start |
| 8003 | 00 | start: nop |
| 8004 | 3A 00 08C | LDA 8c00H |
| 8007 | 2F | MOV H, A |
| 8008 | 32 01 08C | LDA 8c01H |
| 800B | 3C | ADD H |
| 800C | 32 01 08C | STA 8c02H |
| 800B | 76 | hlt |

**Values**

|  |  |  |
| --- | --- | --- |
|  | **Memory Address** | **Value** |
| **Input** | 35840 | 100 |
| **Input** | 35841 | 50 |
| **Output** | 35842 | 150 |

|  |  |  |
| --- | --- | --- |
|  | **Memory Address** | **Value** |
| **Input** | 35840 | 200 |
| **Input** | 35841 | 100 |
| **Output** | 35842 | 44 |

**PROB.4** TWO 8 BIT NUMBERS ARE STORED IN MEMORY LOCATIONS 8C00H AND 8C01H. PERFORM SUBTRACTION AND STORE THE RESULT IN 8C02H.

|  |  |  |
| --- | --- | --- |
| **Memory address in HEX** | **Opcode in HEX** | **Mnemoic** |
| 8000 | C3 03 080 | jmp start |
| 8003 | 00 | start: nop |
| 8004 | 3A 00 08C | LDA 8c00H |
| 8007 | 67 | MOV H, A |
| 8008 | 3A 01 08C | LDA 8c01H |
| 800B | 94 | SUB H |
| 800C | 32 02 08C | STA 8c02H |
| 800B | 76 | hlt |

**Values**

|  |  |  |
| --- | --- | --- |
|  | **Memory Address** | **Value** |
| **Input** | 35840 | 100 |
| **Input** | 35841 | 150 |
| **Output** | 35842 | 50 |

|  |  |  |
| --- | --- | --- |
|  | **Memory Address** | **Value** |
| **Input** | 35840 | 200 |
| **Input** | 35841 | 100 |
| **Output** | 35842 | 156 |