**Computer Organization and Assembly Language**

**PART 2**

**Problem #1:**

Write an assembly language program that replaces the element by -10 if value from array is greater than 0 else if the value is less than -10 replace the value from 100 else remain the value unchanged.

Hint:

*If(array[i]>100)*

*….taskA*

*Else if (array[i]<-10)*

*…taskB*

*Else*

*… taskC*

***Note: perform the task using single array of 10 elements (byte size each).***

Let Array 1 (byte size):

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Index | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Value | 0X67 | 0X76 | 0XF8 | 0XB9 | 0XF4 | 0XF7 | 0XF5 | 0XEF | 0X7F | 0X73 |

**Problem #2:**

Write an assembly language program that subtracts the values of second array from the elements of first array and store the result in third array.

***Note: Use indirect addressing mode to access array values.***

Let Array 1 (word size):

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Index | 0 | | 1 | 2 | | | 3 | | 4 |
| Value | 0xABCD | 0x9010 | | | 0xDEA7 | 0x6CD3 | | 0xF01B | |

Array 2 (word size):

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Index | 0 | | 1 | 2 | | | 3 | | 4 |
| Value | 0XEEC5 | 0X4510 | | | 0X4D3F | 0X4954 | | 0XFF47 | |