**Computer Organization and Assembly Language**

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| **Lab 09** | |
| **Topic** | 1. MUL, IMUL, DIV and IDIV instructions |

**PART 2 Home**

**Problem #1**

**Write an assembly language program to check whether any two word sized numbers are multiples of each other or not? Take values of your choice.**

**If they are found multiple then clear the accumulator else set the accumulator from maximum possible signed number.**

*Hint: For example, 20 is divisible by 4, so 20 is a multiple of 4*

**Problem # 2**

**Write an assembly language program to find the prime numbers in an array.**

**If a number is prime replace it with 1 else if it is not replace with 0.**

Let values are (byte size)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Index | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Value | 0x05 | 0xEF | 0xDE | 0x64 | 0x38 | 0x0D | 0x84 | 0x15 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Index | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Value | 1 | ? | ? | ? | ? | ? | ? | 0 |