COAL LAB - Fall 2020
Faisal Khan: *faisal.khan@nu.edu.pk*

Display Memory

DIV:

DIV does integer division and gives an integer quotient and an integer remainder.
There are two types of division: 16-bit and 32-bit.
In 32-bit division, 16-bit quotient is stored in AX and 16-bit remainder is stored in DX.
In 16-bit division, 8-bit quotient is stored in AL and 8-bit remainder is stored in AH.
For example "DIV BL" has an 8-bit operand, so the implied dividend is 16-bit and is stored in the AX register and "DIV BX" has a 16-bit operand, so the implied dividend is 32-bit and is therefore stored in the concatenation of the DX and AX registers. The higher word is stored in DX and the lower word in AX.

Divide Overflow Error:

When a very large number is divided by a small number, the possibility is that the quotient will be a large number which may not fit in the space provided. So, an interrupt is generated and the program terminates.
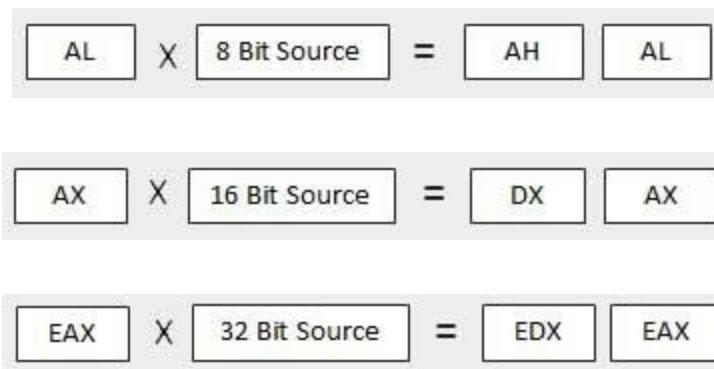
Example:
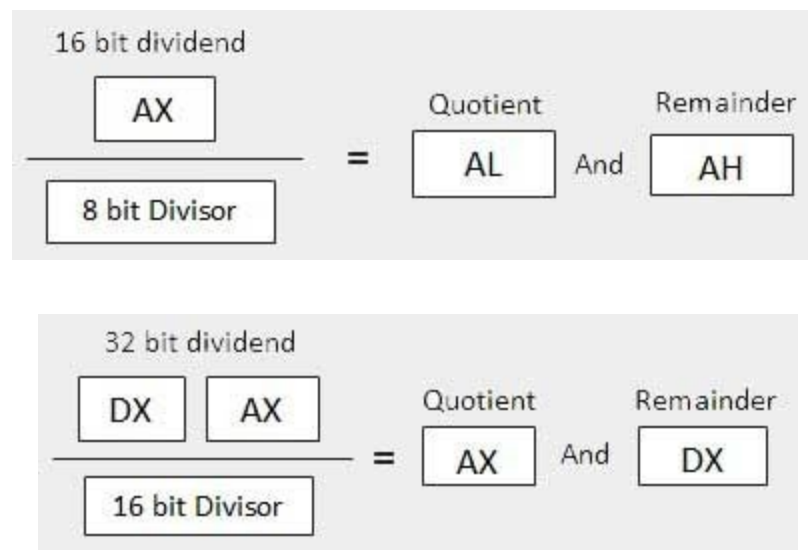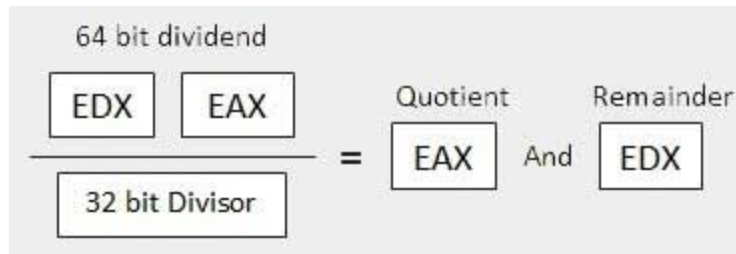
Example 6.3

MUL:

MUL instruction performs multiplication of source operand and the accumulator.
If the source is a byte then it is multiplied by AL and the result is stored in AH and AL.
If the source is a word then it is multiplied by AX and the result is stored in DX and AX.

Example:

Example 6.4

———————