

Three assembly language program:

- 1) Write an assembly language program segment to implement the subtraction of two 32-bit signed numbers. The first number, x , is stored in memory starting at DS:0100. The second number, y , is stored in (DX, CX). The result= $x-y$ should be stored in memory starting at DS:0200.
- 2) Write a program segment to compute the dot product of two vectors A and B. The components of vector A (A_x , A_y and A_z) are stored in memory at address VECTOR A, those of vector B at address VECTOR B. All components are 8-bit signed numbers. The result of the dot product (scalar) should be stored in memory starting at address RESULT. Use the most suitable addressing modes.
- 3) Write a program segment to implement the arithmetic function $F=4x+z^2$. The numbers x and z are 8-bit numbers stored in registers CL and CH, respectively. The calculated value of F should be stored in memory starting at DS:0100.