Lab 4 - Exercises - Assembly - Emu8086

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Ex_28

Write a program in Assembly language that **saves** the 16-single hexadecimal elements of array **DATA = 00h, 01h, 02h, 03h, 04h, 05h, 06h, 07h, 08h, 09h, 0Ah, 0Bh, 0Ch, 0Dh, 0Eh, 0Fh** using **LOOP**. Calculate the **sum** and the **average** of the **DATA** elements and **save** them in variables named **SUM** and **AVG** respectively.

Ex_29

Write a program in Assembly language that **copies** array of string named **SOURCE**, which has the following **41-characters** '**Assembly language is a low level language**', into another array named **TARGET**.

Ex_30

Write a program in Assembly language that **fills** two arrays with the first one hundred unsigned decimal numbers. The first array named **EDATA**, has the first **50-unsigned** even decimal numbers **(0, 2, 4, ..., 96, 98)**. The second array named **ODATA**, has the first **50-unsigned** odd decimal numbers **(1, 3, 5, ..., 97, 99)**.
Calculate the **sum** and the **average** for each array element and **save** them in variables named **SUME**, **SUMO**, **AVGEQ**, **AVGER**, **AVGOQ**, and **AVGOR**. Finally, **exchange** the **EDATA** and **ODATA** array elements.

Ex_31

Write a program in Assembly language that **fills** two consecutive blocks of data using **Loops**. The size of each block is one Kbyte. The first block starts at address **0800h:0200h**. Each memory location of **block1** is filled with **7Eh** while each memory location of **block2** is filled with **E7h**. Finally, **Exchange** the data of the two blocks.

Ex_32

Write a program in an assembly language that **compares** between two unsigned variables. **VAR1 = 7Fh** and **VAR2 = 80h**. Then **save** the highest and lowest variables in **HIGH** and **LOW** variables respectively.

Ex_33

Write a program in an assembly language that **compares** between two signed variables. **VAR1 = 7Fh** and **VAR2 = 80h**. Then **save** the highest and lowest variables in **HIGH** and **LOW** variables respectively.
