BLG212E - HOMEWORK1

Assignment Date : 26.10.2023
Due Date : 23.11.2023 at 23:59

- Student must do the homework without any collaboration.
- Automatic plagiarism detection software will be used for scanning the submitted files.
- If significant similarities are found between submitted files, it will be considered as plagiarism, and those homework grades will be zero.
- File should be submitted to Ninova only, email submission is not accepted.
- Program should work without compiler errors and generate correct results as expected.

- Write a complete 8086 Assembly program to do the followings.
- Use the general program template that is in the Lecture3 slide.
- The Emu8086 emulator/assembler should be used for testing the homework.

Step1) Define an array variable and initialize with the following decimal data. Each element of array is 1 byte.

45	0	28	76	45	0	0	14	32	27	14	39	0	68	15	23	0	14	42	27

Step2) By looping, find all data values that are duplicated (repeated).
If a data value is duplicated, keep the first one and replace the others with zeros, as shown below.

Old:	45	0	28	76	45	0	0	14	32	27	14	39	0	68	15	23	0	14	42	27
New:	45	0	28	76	0	0	0	14	32	27	0	39	0	68	15	23	0	0	42	0

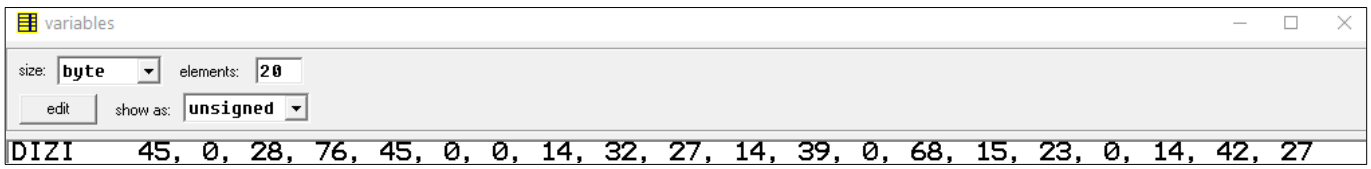
Step3) By looping, check the elements in array, and move all of the zero elements to the end of array.

Old:	45	0	28	76	0	0	0	14	32	27	0	39	0	68	15	23	0	0	42	0
New:	45	28	76	14	32	27	39	68	15	23	42	0	0	0	0	0	0	0	0	0

- The original array should be modified by the program, so that it will contain the results of last step.
- The array should not be sorted and the original ordering of the non-zero elements should not change.
- You may define other additional variables (such as temporary second array, etc.) in the program.
- User will not enter any data values from keyboard.
- Program will not display any messages or results on console screen.

TESTING THE PROGRAM IN EMU8086 EMULATOR

Original array:



Expected final resulting array: