Assignment#3
Experiment 3

Q1. Write an assembly program that declares three different macros to do the following operations with string(s), that defined in the data segment (assume that the string size is 10 characters).

1. **Find MACRO**: this macro will take a character input parameter then search how many times found in a string, put this number in a variable name it "found".

2. **Concatenate MACRO**: this macro will take two strings and concatenate them in a new string (have 20 characters).

3. **Compare MACRO**: this macro will take two strings and compares between them character by character generating a new sequence of 0(s) or 1(s) depending on the result of the compare operation, if a two characters from the strings matches then put 1 in the resulted array, otherwise put 0.

   Example:
   Assume we have two different strings str1 and str2:
   Str1 db " bcdfcdgdrt"
   Str2 db " bydfcygdrx"
   And we have to compare between them the resulted array will be:
   Result db "1011101110"

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Q2. Assume we have a ***public word data variable*** defined in the data segment, write three different subroutines as following:

1. The first Subroutine to find the **number** of zero (0) bits in the public word data variable and return it.

2. The second Subroutine to find the **number** of one (1) bits in the public word data variable and return it.

3. The third Subroutine to **test** the public word data variable if it is odd or even and return the result.

- **You must write each subroutine in a different .asm file then link these files in one library file name <u>checkvar.lib</u>.**

- **You must write another assembly program which will test all the functions in your library.**

Note:

**Print the codes and write the procedure of your work and show your test and results.

** compress all .asm files and library then submit it on Email:

        Eng.Ezya@gmail.com.