Self-Check for Lecture #5

Solutions are posted

1. Define a MASM constant for your name as a z-byte terminated string.

   \[\text{MY\_NAME \ EQU \ "Name O. Student", 0}\]

2. What is the size of the string in the following MASM data segment declaration?

   \[\text{.data}\]
   \[\text{stones \ BYTE \ "You Can’t Always Get What You Want.", 10, 13, 0}\]

   38 Bytes (Don’t forget to count spaces, punctuation, and extra 8-bit numbers.)

3. Solve each problem using the following data segment:

   \[\text{.data}\]
   \[k \ \text{DWORD }?\]
   \[n \ \text{DWORD }?\]
   \[\text{yes \ BYTE \ "Yes", 0}\]
   \[\text{no \ BYTE \ "No", 0}\]
   \[\text{maybe \ BYTE \ "Maybe", 0}\]

   Assume that variables have been initialized. Write MASM code to implement the following high-level pseudo-code repetition structures.

   3.1. while \((k < n)\) {
       \[
       \begin{align*}
       &\text{print (yes);} \\
       &k += 2;
       \end{align*}
       \]
   }

   3.2. do{
       \[
       \begin{align*}
       &\text{print (maybe);} \\
       &k++; \\
       &\text{while } (k < n);
       \end{align*}
       \]

   3.3. for \((k = 10; k > 0; k--)\)  
       \[
       \begin{align*}
       &\text{print (k);} \\
       \end{align*}
       \]

   3.4. for \((k = 10; k <= n; k++)\)  
       \[
       \begin{align*}
       &\text{print (no);} \\
       \end{align*}
       \]

   Note: You cannot cmp memory to memory. At least one of the operands must be a register or a constant.