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* 1. Word is a data definition to store n number of 32-bit quantities in successive memory words. The words A, B, C act as variables.
     1. Load the word labelled as A into register t0, where A is 10
     2. Loat the word labelled as B into register t1, where B is 8
     3. Add registers t0 and t1 and that value is stored in t2, resulting in 18
     4. Store the value in t2 in word labelled as C, so C equals 18.
  2. By default, in MIPS, the values data segment starts at 0x1001000. The lui instruction set the upper word to this offset and the lw instruction loads the word from this location and label offset. So lui loads the upper half and the lw then loads the other half. The extra lines of code are the instructions finishing the tasks in steps.
  3. To reduce the instructions generated, set the base address of the data segments to zero.
  4. To reduce the instruction size in the MARS program, go to Settings 🡪Memory Configuration and in this menu, select the option Compact, Data at Address 0. This option eliminates the need for the lui instructions.

1. Syscall is a system call to perform certain OS like services
   1. $v0 = 4 🡪 print string
   2. $v0 = 1 🡪 print integer
   3. $v0 = 10 🡪 end of program