VM Project input specification

**The input file will consist of a sequence of commands, one command per line.**

**There may also be some lines with no commands, only white space. These lines should be skipped over and ignored.**

**There are three commands:** TA**,** RP**, and** NL**.** TA **and** RP **take one parameter,** NL **takes no parameters. The definition of each command is as follows**

**• TA (Translate virtual Address):**

• TA <va>**, where <va> is a virtual address specified by an integer.**

**Translate the virtual address <va> to a physical address, and write the resulting physical address, a single integer, to the output file.**

**If the virtual address <va> cannot be translated to a valid physical address, write -1 to the output file. (For example, if the offset of the word within the segment is not less than the segment length.)**

**• RP (Read Physical address):**

• RP <pa>**, where <pa> is a physical address specified by an integer.**

**Write the contents of the word at physical address <pa>, a single integer, to the output file.**

**If the frame to which the physical address belongs is a free frame, then the contents of the word should be zero.**

**This is a read-only command and should not affect the state of either virtual memory or physical memory. For example, if the frame to which the physical address belongs is a free frame, then the frame remains free after the contents of <pa> have been reported to the output file.**

**If the specified integer <pa> is not a valid physical address, write -1 to the output file. (For example, if the integer <pa> is not less than the number of words of physical memory.)**

**• NL (New Line):**

• NL**.**

**Start a new line in the output file.**

**The output file will consist of a sequence of integers. The integers should be written one after another on the same line until a NL command is encountered, which will cause a new line to be started. For examples, see the posted sample input and output files.**