**The VC-3600 Computer**

The VC-3600 is a decimal computer with 10,000 words of memory. Each word consists of 6 decimal digits. There is an additional word of memory called the accumulator. The machine language instructions for the VC-3600 is of the following form:

                             |2 digits             | 4 digits             |   
                             |operation code | address portion|

A machine language program is a sequence of machine language instructions stored in memory. The computer executes a machine language program by obeying the commands specified by a sequence of instructions stored in successive memory locations. The first instruction of a program is assumed to be at location 100. The following are the machine language instructions for the VC-3600.

NAME           OP. CODE     MEANING

ADD                     01           ACC <-- c(ACC) + c(ADDR)   (The contents of the accumulator and of the memory location specified by the address portion of the instruction are added together. The result is placed in the accumulator.):   
SUBTRACT         02            ACC <-- c(ACC) - c(ADDR)   
MULTIPLY           03            ACC <-- c(ACC) \* c(ADDR)   
DIVIDE                 04            ACC <-- c(ACC) / c(ADDR)   
LOAD                   05            ACC <-- c(ADDR)   
STORE                06            ADDR <-- c(ACC)   
READ                   07            A line is read and its first 6 digits are placed in the specified address.   
WRITE                 08            c(ADDR) is displayed   
BRANCH              09           go to ADDR for next instruction   
BRANCH MINUS 10            go to ADDR if c(ACC) < 0   
BRANCH ZERO   11           go to ADDR if c(ACC) = 0   
BRANCH POSITIVE 12       go to ADDR if c(ACC) > 0   
HALT                    13           terminate execution

We will right the following examples programs:

1. Print the value of C(5)+C(300)
2. Print C(200)\*C(6)+C(300)\*C(7)
3. Read in a number and display its factorial.
4. Read in 100 nos. and print their average.