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*-----------------------------------------------------------------
* Programmer: Nathan Azoulay
* Class Account: cssc0406
* Assignment or Title: Program 3
* Filename: prog3.s
* Date completed:  November 29,2018
*-----------------------------------------------------------------
* Problem statement: Print all even numbers 2 through n
* Input: Number less than 500
* Output: All even numbers 2 through input
* Error conditions tested: check number is less than 500
* Included files:
* Method and/or pseudocode:
* References:
*-----------------------------------------------------------------
*
      ORG    $0
      DC.L   $3000        * Stack pointer value after a reset
      DC.L   start        * Program counter value after a reset
      ORG    $3000          * Start at location 3000 Hex
*
*-----------------------------------------------------------------
*
#minclude /home/cs/faculty/cs237/bsvc/macros/iomacs.s
#minclude /home/cs/faculty/cs237/bsvc/macros/evtmacs.s
*
*-----------------------------------------------------------------
*
* Register use
*        D1- 2s comp of input for comparison
*        D2- Length of input
*        D4- Begins at 2, counters even numbers through our input
*-----------------------------------------------------------------
*
start:  initIO           * Initialize (required for I/O)
```

*   D2- Length of input

*---
*
start: initIO   * Initialize (required for I/O)
        setEVT   * Error handling routines
*   initF   * For floating point macros only

        lineout head
        lineout prompt
        linein buff

        lea   buff,A1
        clr.l   D3

len: *Get length of input
        cmpi.b #' ',(A1)
        beq   check
        addi.l #1,D3
        adda.l #1,A1
        bra   len

check: *Convert input and check condition (<500)
        move.l D0,D2
        cvta2   buff,D2
        move.l D0,D1
        cmpi.l #2,D1
        blt   end
        cmpi.l #500,D1
        bge   end
        clr.l   D4
        bra   out

out: *Prints even numbers 2 to N

        addi.l #2,D4
        cmp.l   D4,D1
        blt   end
        dump   D4
        bra   out

end:

        break   * Terminate execution

```
        dump    D4
        bra     out


end:

        break               * Terminate execution
*
*------------------------------------------------------------------
*       Storage declarations
head:   dc.b    'Program #3, Nathan Azoulay, cssc0406',0
prompt:         dc.b    'Enter a number less than 500:',0
buff:   ds.b    80
        end
```