## Program Code

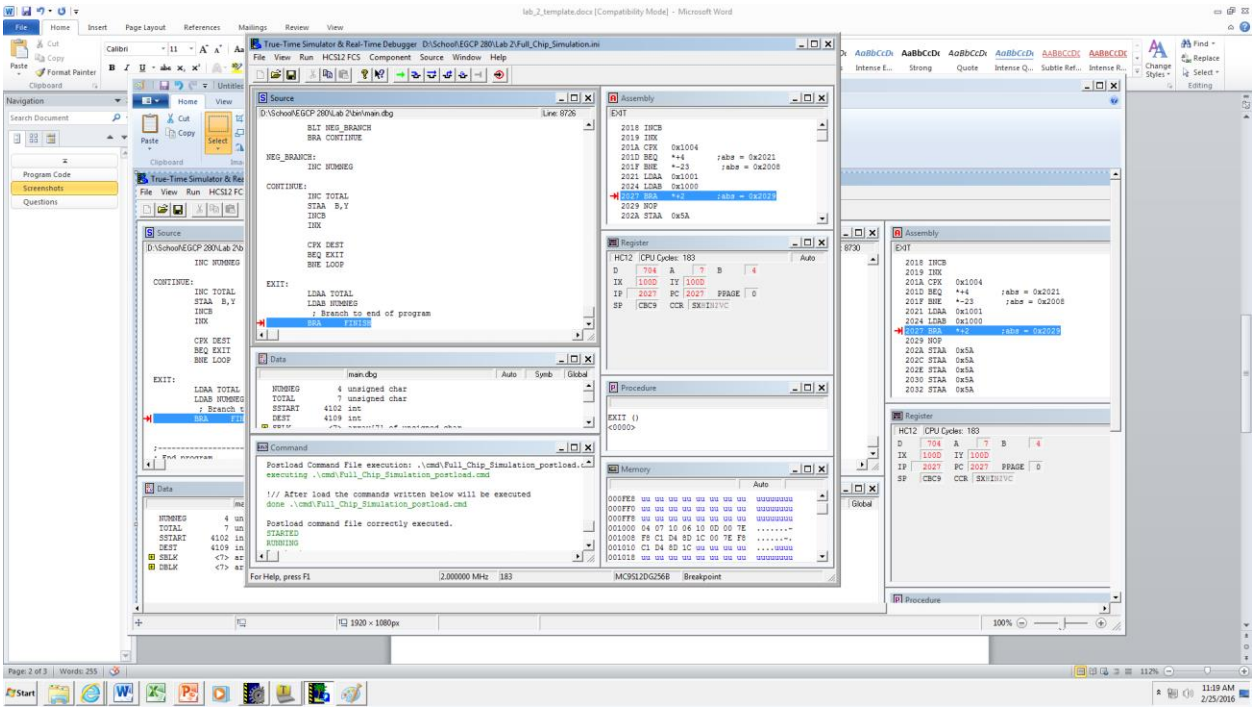
Provide your program code here for each part of the work task (copy-paste your code)

```
;---------------------------------------------------
; Code Section
; KEEP THIS!!
;---------------------------------------------------
        ORG     PROG

; Insert your code following the label "Entry"
Entry:                  ; KEEP THIS LABEL!!

        ; Enter your code starting here
        LDX  #SBLK
        LDY  #DBLK
        LDAB #$00

LOOP:
        LDAA X
        CMPA #0
        BLT NEG_BRANCH
        BRA CONTINUE

NEG_BRANCH:
        INC NUMNEG

CONTINUE:
        INC TOTAL
        STAA  B,Y
        INCB
        INX

        CPX DEST
        BEQ EXIT
        BNE LOOP

EXIT:
        LDAA TOTAL
        LDAB NUMNEG
         ; Branch to end of program
        BRA     FINISH
```

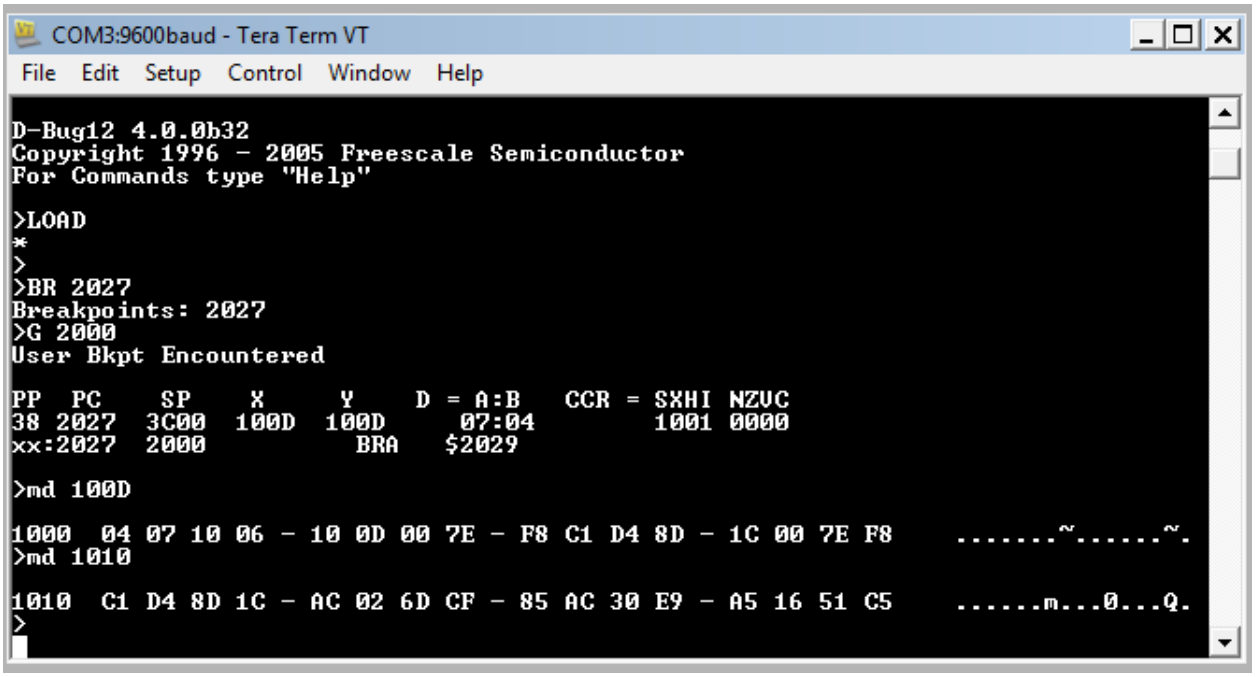
## Screenshots

Provide your screenshots here for each part of the work task. Include screenshots of the registers and the memory location of the variables for both CodeWarrior and the terminal after execution. Please use a larger image by cropping and resizing the image or use “Alt-PrintScreen” for a Windows computer.

CodeWarrior:



Terminal:



## Questions

1. Describe how you copied from the source to the destination block. Also, describe how you knew when you were finished copying. Specifically, I'm looking for addressing modes and conditional branch instructions used and why.

   We started by loading the address of sblock to register X, and the address of dblock to register Y. We used a branch not equal loop to keep us inside the loop until the copying was finished. We determined when the copying was done by incrementing register X until it was equal to register Y, which was the start location of the dblock.

2. Describe how you counted the number of negative numbers transferred. Specifically, I'm looking for the conditional branch instructions used and why.

   We used a branch less than and compared the value to be copied with 0. If it is less than 0, then the numneg variable would be incremented.