

ECE 120: Introduction to Computing

ASCII Screen Art

Let's Develop a Program

Let's develop a program together.

Given an array of 3-tuples

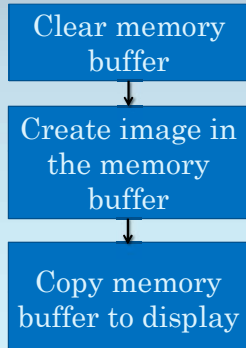
- X position
- Y position
- ASCII character

which ends with a negative X position,
we want to draw a screen with those ASCII
characters.

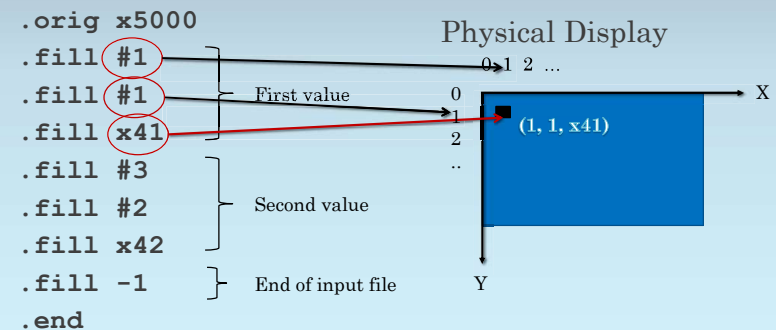
We Will Use Three Steps to Accomplish Our Task

We'll write this code in three steps:

1. Write one string filled with spaces per row into a 'screen' in memory.
2. Parse the array, adding the ASCII characters to the 'screen.'
3. Dump the 'screen' to the real monitor.

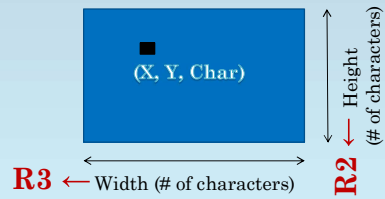


Input



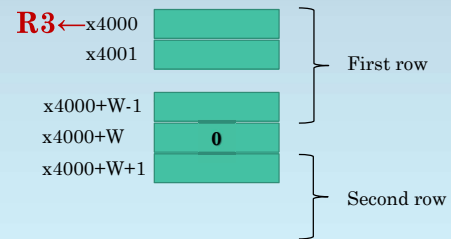
“Screen Memory”

Physical Display



R0 ← **x0**
R1 ← **x20**

Memory Buffer



ASCII values for each pixel are
stored as a NUL-terminated string