

Assembly Project: Columns

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1 Instruction and Summary

1. Which milestones were implemented?

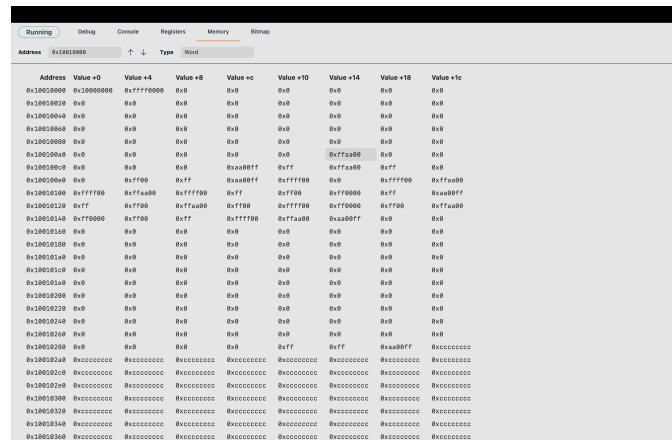
Milestone 1, 2, 3

2. How to view the game:

- (a) Unit width in pixels: 8
- (b) Unit height in pixels: 8
- (c) Display width in pixels: 256
- (d) Display height in pixels: 256
- (e) Base Address for Display: 0x10008000

3. What is stored in memory:

- (a) ColumnArray: An array that has 78 (6×13) spaces that stores the color of each pixels in the grid
- (b) RemoveArray: An array that map to ColumnArray. It's used for marking collision of columns and stores 1 or 0. 1 indicate this pixel has matches and will be removed.
- (c) Colors: An array that stores the 6 colors
- (d) CurrentColumns: An array with 3 spaces that stores the colors of current falling column.



Address	Value +0	Value +4	Value +8	Value +c	Value +10	Value +14	Value +18	Value +1c
0x10010000	0x10000000	0xffff0000	0x0	0x0	0x0	0x0	0x0	0x0
0x10010020	0x0	0x0	0x0	0x0	0x0	0x0	0x0	0x0
0x10010040	0x0	0x0	0x0	0x0	0x0	0x0	0x0	0x0
0x10010060	0x0	0x0	0x0	0x0	0x0	0x0	0x0	0x0
0x10010080	0x0	0x0	0x0	0x0	0x0	0x0	0x0	0x0
0x100100a0	0x0	0x0	0x0	0x0	0x0	0xffff0000	0x0	0x0
0x100100c0	0x0	0x0	0x0	0xaa00ff	0xff	0xffa000	0xff	0x0
0x100100e0	0x0	0xff00	0xff	0xaa00ff	0xffff00	0x0	0xffff00	0xffa000
0x10010100	0xffff00	0xffa000	0xffff00	0xff	0xff00	0xffff0000	0xff	0xaa00ff
0x10010120	0xff	0xff00	0xffa000	0xff00	0xffff00	0xffff0000	0xff00	0xffa000
0x10010140	0xffff0000	0xff00	0xff	0xffff00	0xffa000	0xaa00ff	0x0	0x0
0x10010160	0x0	0x0	0x0	0x0	0x0	0x0	0x0	0x0
0x10010180	0x0	0x0	0x0	0x0	0x0	0x0	0x0	0x0
0x100101a0	0x0	0x0	0x0	0x0	0x0	0x0	0x0	0x0
0x100101c0	0x0	0x0	0x0	0x0	0x0	0x0	0x0	0x0
0x100101e0	0x0	0x0	0x0	0x0	0x0	0x0	0x0	0x0
0x10010200	0x0	0x0	0x0	0x0	0x0	0x0	0x0	0x0
0x10010220	0x0	0x0	0x0	0x0	0x0	0x0	0x0	0x0
0x10010240	0x0	0x0	0x0	0x0	0x0	0x0	0x0	0x0
0x10010260	0x0	0x0	0x0	0x0	0x0	0x0	0x0	0x0
0x10010280	0x0	0x0	0x0	0x0	0xff	0xff	0xaa00ff	0x00000000
0x100102a0	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000
0x100102c0	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000
0x100102e0	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000
0x10010300	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000
0x10010320	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000
0x10010340	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000
0x10010360	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000	0x00000000

Figure 1: Memory in the middle of a game

Figure 2: caption

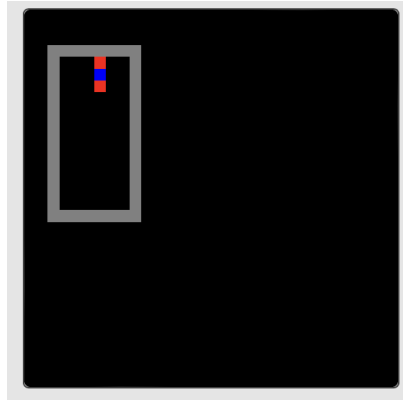


Figure 3: Static Screen

4. Game Summary:

- You can use the A, S, D keys to move the column left, down and right respectively. To shuffle the order of the gems, you can press W. The goal is to eliminate gems by arranging them so that there are 3 in a row of the same colour, either horizontally, vertically or diagonally.
- The features we implemented are: gravity

2 Attribution Table

Student 1 (Cynthia 1011129832)	Student 2 (Jasmine and 1008825407)
Milestone 1, 2, 3	Milestone 1, 2, 3
Task	Task
Task	Task
Task	Task
Task	Task
Task	Task