

# Assembly Project: Dr Mario

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## 1 Instruction and Summary

1. Which milestones were implemented?

Milestones 1 and 2, with 3 partly done. Just not clearing rows and columns yet.

2. How to view the game:

- (a) Open DrMario.asm in MARS.

- (b) Open the bitmap.

- i. set the pixel height to 8

- ii. set the pixel width to 8

- iii. set the display width to 512

- iv. set the display height to 512

- v. change the base address to 0x10008000

- vi. click connect to MIPS.

- (c) Open the keyboard input and click connect to MIPS.

- (d) Assemble DrMario.asm and run.

[illegible]

Figure 1: What memory is initialized to

- ### 3. Game Summary:

- It is just dr mario so far. (WASD to move)
- Each second your pill falls one row
- When the pill collides with something below it a new pill spawns
- Press C to save the pill for later or retrieve a saved pill
- There are all the previewed capsules in the side jar on the right
- Press p to pause the game

- When you get 4 or more in a row those capsules clear
- Then any unsupported capsule drops
- When the entrance is blocked Game Over happens
- Press r to restart the game if you've reached game over
- Each time rows clear, the gravity speeds up
- There are sound effects

#### 4. Features

- Easy: Gravity
- Easy: Speed up gravity as you clear rows
- Easy: Sound Effects
- Easy: Game Over
- Easy: Pause
- Easy: Save Capsule
- Easy: Preview 1 capsule
- Easy: Preview 4-5 capsules

## 2 Attribution Table

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Everything

#### 1. Milestone 1

Fairly easy, just used a drawline function to draw the bottle and drawpill function with random syscall to make pills. Then just more random calls for the viruses.

#### 2. Milestone 2

Pretty easy too, just used a couple functions to respond to movement

#### 3. Milestone 3

HARD, Collision detection was pretty easy and so was clearing rows, but I had to consider how to implement dropping unsupported capsules so that the logic is the same as the original game. I had to add an array where I keep the location of the other half of pills. And had to consider cases where the other half gets destroyed. Then I still had to make sure they dropped properly.

#### 4. Milestones 4-5

All the features that I implemented were fairly easy - medium difficult, so I don't think I should get any extra points here