

## Sokoban

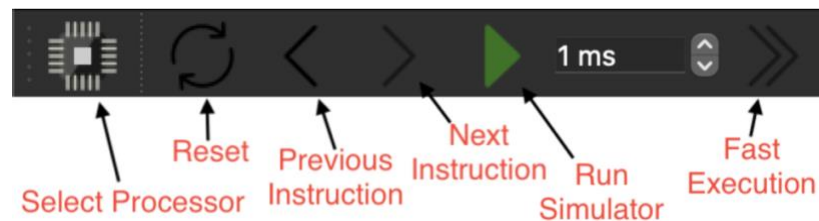
### Introduction:

Welcome to Sokoban, the engaging puzzle game where your goal is to push boxes onto designated targets. Customize your challenge by choosing the number of boxes yourself. Enjoy a unique puzzle layout every time you play!

### Setup Instructions:

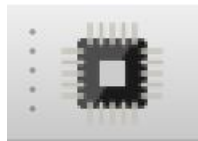
Since Sokoban game requires some steps to set up the system configurations, please kindly follow the following steps to ensure correct setup.

Note: this figure provides the names of the buttons covered in later steps.

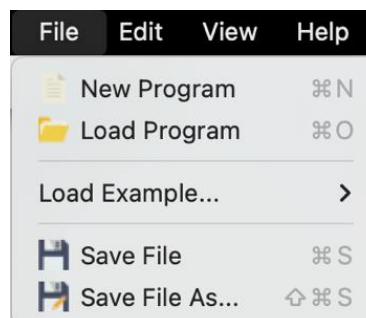


### Steps:

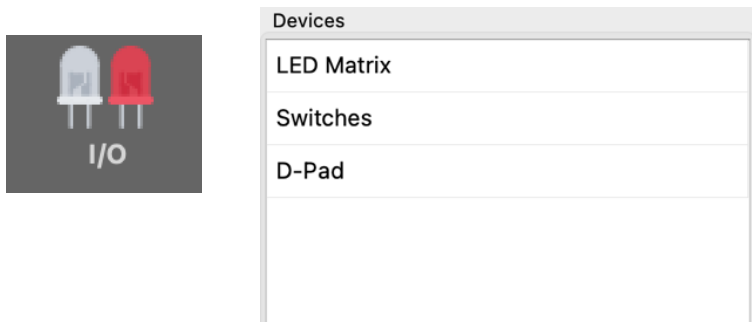
1. Select Processor: navigate to “Select Processor” and choose the “32-bit Single-cycle processor” option.



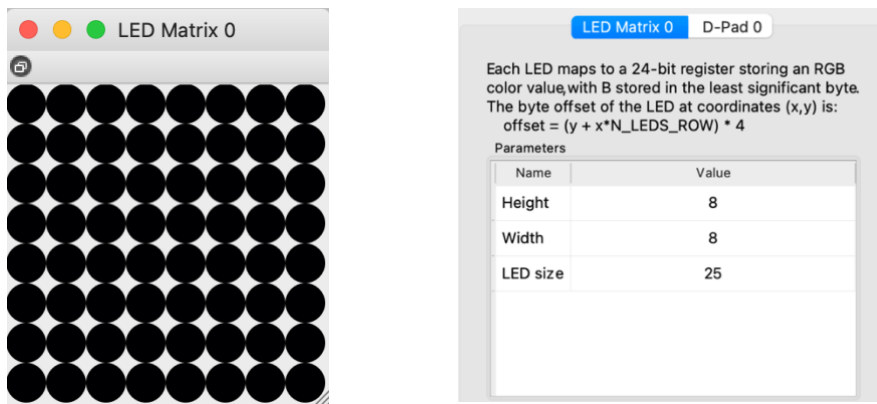
2. Load the game: Download the sokoban.s file to preferred directory, then select “Load Program” in the file section. Next, open sokoban.s file as the source file.



### 3. Configure I/O:



- a. click on the I/O tab, then double-click on the "LED Matrix", set both the height and width to 8, and any LED size value that makes it good for you to play the game.



- b. Next, double-click on the "D-Pad" device to activate a d-pad for you to control the direction the character moves.



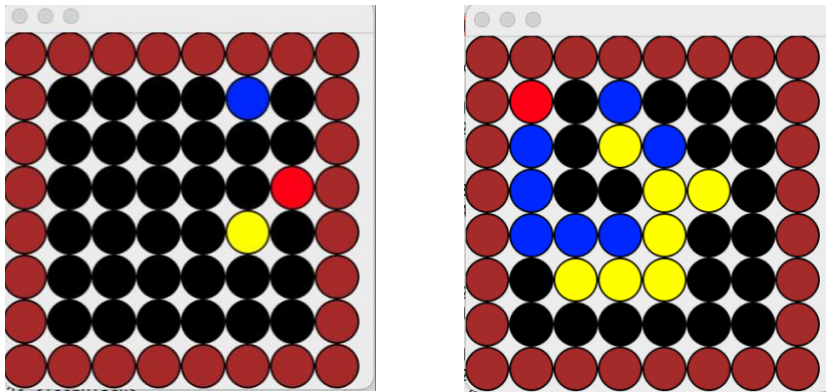
4. Begin the game: Return to the editor section where you started from and click fast execution (the ">>" symbol) to enjoy the game!



**Gameplay Instructions:** [Please include more visual aids for this section to help readers to follow your document. \[AE\]](#)

1. The game features four main components: a character (red circle), boxes (yellow circles), targets (blue or green circles), and walls on the 8x8 LED's edges (brown circles), enhanced by the multi-box and multi-target feature.

Layout examples:

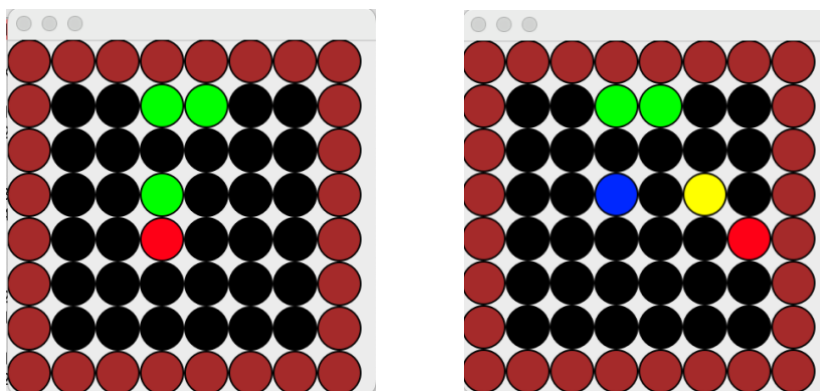


2. At the game's start, the player will be prompted to enter the number of boxes (1-15) they wish to play with. This number also sets the quantity of targets. For instance, entering '3' results in 1 character, 3 boxes, and 3 targets. Inputting numbers outside this range or special characters will prompt a re-entry.
3. The character can move to any direction that is not blocked by the walls. If the direction that the character moves towards is blocked by a box, then the character can only move if the number of boxes blocks the character is 1, and the box will not be pushed into the wall.

If the character's movement is not allowed, then a warning message "You cannot move in this direction because it's blocked" would be shown.

4. To win the game, the character needs to push all the box(es) to cover target(s), covered targets would be shown as green circles, and it is allowed to move the box off a target.

Target color examples:



Please provide restarting the game as a separate section to help readers to find it easily [AE] and provide visual aids if possible and refer to them in your text.

5. To restart the game at any time, please click on the d-pad to send the Konami code (consecutive up, up, down, down, left, right, left, right). Then the game will be restarted with a randomly generated brand-new layout, and the player will reselect the number of boxes wanted.

## **Enjoy Sokoban!**

The game is random, have fun with all the brand-new experiences!