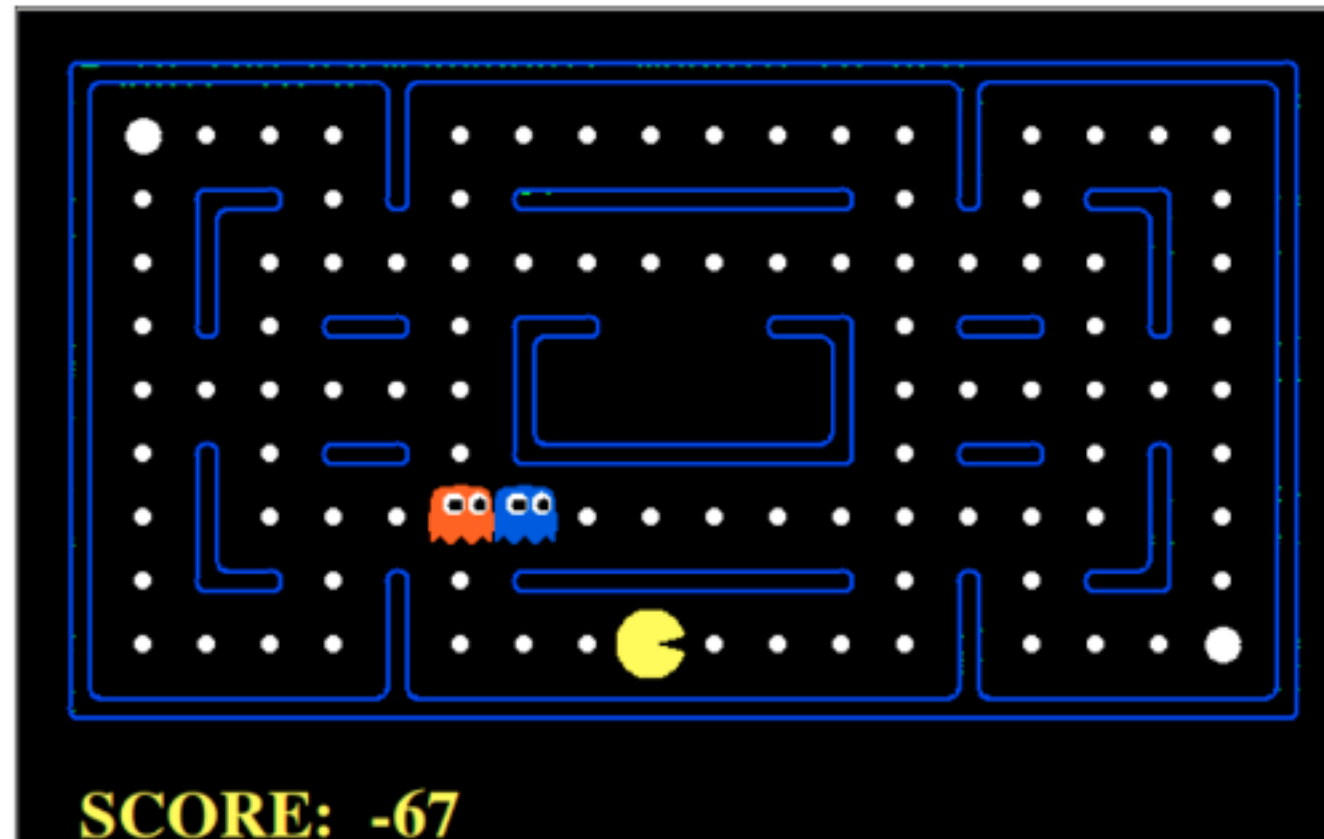


Instructions for the study

Please read the following instructions carefully

Through this survey, you will be asked to play a game and then provide concepts relevant to some of the game moves. By concepts, we mean factors of the game that are relevant to playing the game. This could include things like the conditions that need to be met to play a certain move successfully (we will call moves in the game as actions). These could also include the conditions under which the move gives you positive points (hence increasing your overall score) or negative points (hence decreasing your overall score). To see an example consider the pacman game:



Consider the move/action of the pacman going to the left (we will call this action 'move_left'). Now if there is a wall next to pacman on the left, then pacman can't move. So clearly a wall being there or not is an important concept for that action. Also a pellet (shown as a white dot) being on the left, is also important since pacman going to a pellet gets it +10 points. Another important concept would be if there is a ghost on the left, since moving to the left with ghosts will cause pacman to get -50 points (i.e. decrease the score by 50). As with any game, you want to finish it with a high score. Now we can express these concepts relevant to action 'move_left' as:

Concept name: No_wall_on_left

Concept description: There is no blue wall on the left of the pacman

Concept name: pellet_on_left

Concept description: There is a pellet, a white dot, right next to pacman on the left side

Concept name: ghost_on_left

Concept description: There is a ghost (either the red or the blue one) right next to pacman on the left side

Information:

Concept names can be a unique name given to the factor, while Concept description should include enough information about the concept that it can be identified from the picture. Think of it as a description you might provide to a friend so that they can pick all pictures where that concept may be true. For example, with the current description for pellet_on_left, a person might be able to pick all pictures where the Pacman is right next to a pellet on the left.

In this particular survey you will be asked to provide concepts related to a Japanese game called sokoban. In the game the player needs to push boxes to specific locations (marked in red). You will need to play the game online to familiarize yourself with the game mechanics (please do it even if you are familiar with the game, since we have changed some of the rules). Then you will be asked to provide concepts for some of the actions.

You are encouraged to highly explore the game to get familiar with its mechanics

IMPORTANT: We are collecting this information as part of a research project.

Please try to give as many relevant concepts as you can think of. We will be checking your entries before reimbursing you for the study

[See tutorial](#)

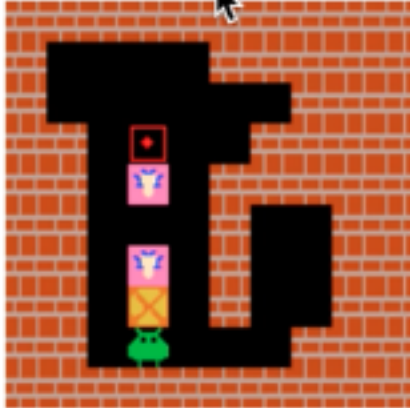
Tutorial for the interface.

Navigate tutorial images by clicking Prev / Next button at the bottom or by arrow keys ⬅️ / ➡️
Instructions are provided in red color

Play sokoban

Not Secure | ae-robots.com:5050/sokoban/run

Provide all the relevant concept for the action: Push up



Game Information

Game goal: Push the box into red target

Action just executed: —

Points obtained: —

Total score: —

Restart Game

Add a new concept

Select from previously added concepts

Keys to execute actions:

Move up - ↑

Move down - ↓

Move left - ←

Move right - →

Push up - w

Push down - s

Push left - a

Push right - d

Next action

The current action for which concepts are required. You will be giving concepts for 4 actions in total.

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Next

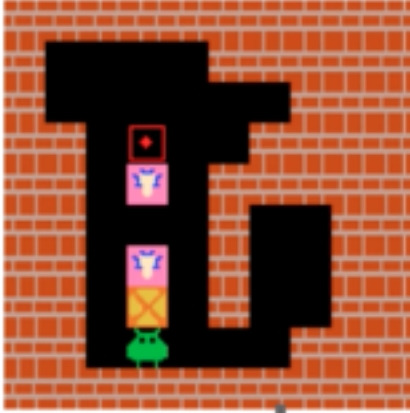
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Instructions are provided in red color

Play sokoban

Not Secure | ae-robots.com:5050/sokoban/run

Provide all the relevant concept for the action: Push up



Game Information

Game goal: Push the box into red target

Action just executed: —

Points obtained: —

Total score: —

Restart Game

Concepts added for action: Push up

The game has 8 actions. Their corresponding keys are displayed here.

Add a new concept

Select from previously added concepts

The sokoban game is displayed here. The game image will update as you play the game.

Keys to execute actions:

- Move up - ↑
- Move down - ↓
- Move left - ←
- Move right - →
- Push up - w
- Push down - s
- Push left - a
- Push right - d

Next action

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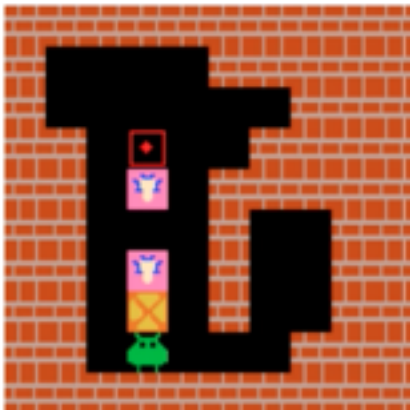
Instructions are provided in red color

Play sokoban

Not Secure | ae-robots.com:5050/sokoban/run

☆ | U

Provide all the relevant concept for the action: Push up



Game Information

Game goal: Push the box into red target
Action just executed: —
Points obtained: —
Total score: —

Restart Game

Concepts added for action: Push up

Add a new concept

Select from previously added concepts

The game goal, last action played, points obtained and total score are displayed here. The button to restart game is also present here.

Keys to execute actions:

Move up - ↑
Move down - ↓
Move left - ←
Move right - →
Push up - w
Push down - s
Push left - a
Push right - d

Next action

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Tutorial for the interface.

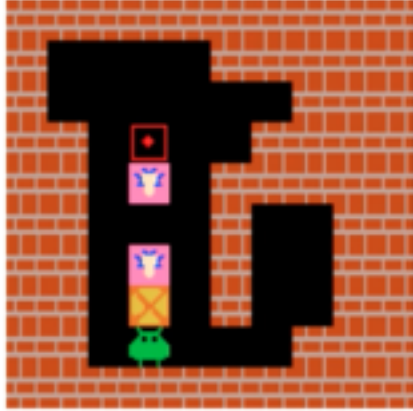
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Instructions are provided in red color

Play sokoban

Not Secure | ae-robots.com:5050/sokoban/run

Provide all the relevant concept for the action: Push up



Game Information
Game goal: Push the box into red target
Action just executed: —
Points obtained: —
Total score: —

Restart Game

Concepts added for action: Push up

Concepts provided are displayed here.

Add a new concept | Select from previously added concepts

To provide a concept for the current action (here the action Push up), either *Add a new concept* or *Select from the list of previously added concepts*.

Keys to execute actions:

- Move up - ↑
- Move down - ↓
- Move left - ←
- Move right - →
- Push up - w
- Push down - s
- Push left - a
- Push right - d

Next action

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Tutorial for the interface.


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Play sokoban

Not Secure | ae-robots.com:5050/sokoban/run

Provide all the relevant concept for the action: Push up

Game paused. Finish adding concept or cancel to unpause game.



Game Information

Game goal: Push the box into red target

Action just executed: —

Points obtained: —

Total score: —

Restart Game

Concepts added for action: Push up

After entering concept name and description, click *Add the concept*. You can cancel adding the concept by clicking on *Cancel*.

Concept name:

Enter concept name

Concept description:

Enter concept description

Add the concept

Cancel

Keys to execute actions:

Move up - ↑

Move down - ↓

Move left - ←

Move right - →

Push up - w

Push down - s

Push left - a

Push right - d

Next action

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Tutorial for the interface.

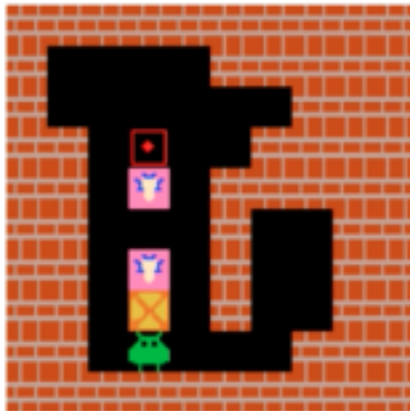
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Instructions are provided in red color

Play sokoban

Not Secure | ae-robots.com:5050/sokoban/run

Provide all the relevant concept for the action: Push up



Game Information

Game goal: Push the box into red target

Action just executed: —

Points obtained: —

Total score: —

Restart Game

Add a new concept

Select from previously added concepts

Concepts added for action: Push up

After providing concepts for the current action, move to the next action by pressing this button. Warning: once pressed you can no longer come back to the current action.

Keys to execute actions:

Move up - ↑

Move down - ↓

Move left - ←

Move right - →

Push up - w

Push down - s

Push left - a

Push right - d

Next action

Prev Next

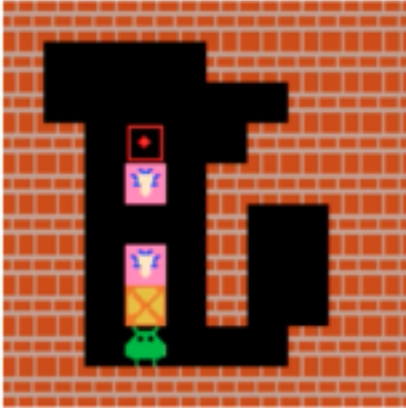
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Instructions are provided in red color

Play sokoban

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Provide all the relevant concept for the action: Push right



Game Information

Game goal: Push the box into red target
Action just executed: —
Points obtained: —
Total score: —

Restart Game

Add a new concept

Select from previously added concepts

Note- do not press the back or refresh button anytime during the study.

Concepts added for action: Push right

Once you have provided concepts for all the required actions, press *Finish study* to complete the study.

Keys to execute actions:

Move up - [↑](#)
Move down - [↓](#)
Move left - [←](#)
Move right - [→](#)
Push up - [w](#)
Push down - [s](#)
Push left - [a](#)
Push right - [d](#)

Finish study

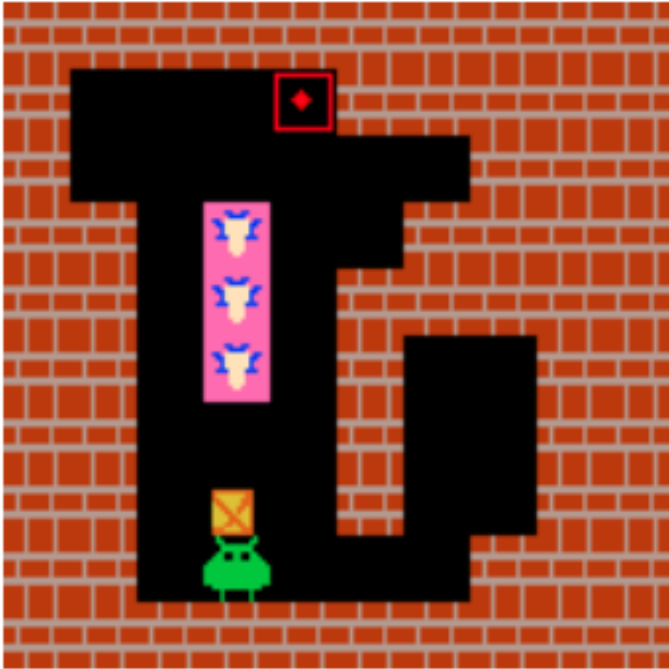
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Play Sokoban

Play the game and provide all the relevant concept for the action: Push up

Total cost: —



Game Information

Game goal: Push the box into red target

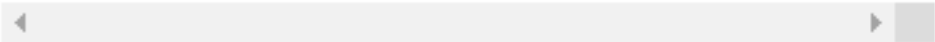
Action just executed: —

Points obtained: —

Total score: —

Restart Game

Concepts added for action:
Push up



Add a new concept

Select from previously added concepts

Keys to execute actions:

- Move up -
- Move down -
- Move left -
- Move right -
- Push up -
- Push down -
- Push left -
- Push right -

Next
action

Play the game and provide all the relevant concept for the action: Push up



Game Information

Game goal: Push the box into red target

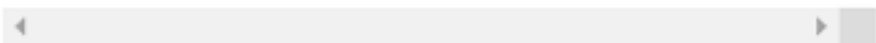
Action just executed: —

Points obtained: —

Total score: —

Restart Game

Concepts added for action:
Push up



Provide Concept name:

Enter concept name

Provide Concept description:

Enter concept description here. Remember that concept description should include enough information about the concept such that it can be identified from the picture. Think of it as a description you might provide to a friend so that they can pick all

Keys to execute actions:

- Move up -
- Move down -
- Move left -
- Move right -
- Push up -
- Push down -
- Push left -
- Push right -

Next
action

Add the concept Cancel