CS101 Homework #2

Sokoban

Due: October 14th, 2024 (23:59 KST)

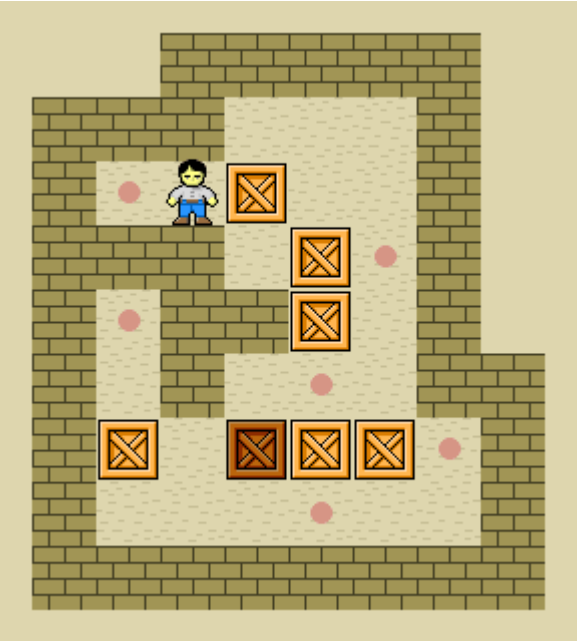
Please read the homework description carefully and ensure your program meets all the requirements stated. Since homework is an individual task, you **MUST** write your own code. If you plagiarize someone's work, even if it's a single line or word, both you and the provider of the code will get an **F** for the entire course. You will also get **F** if you use the code generated by AI chatbot service.

- DO NOT write code outside the allowed areas: go_north(), go_west(), go_south(), go_east(), hubo_actions(), try_move(), USE_SOKOBAN_TILES and STAGE. Otherwise, your program may not be properly graded, and the result can be irreversible.
- Your code **MUST** be written and submitted to Elice. You cannot earn any points by simply running your code. The grader grades your code only after you click the submit button; grading will be done automatically. You can resubmit as many times as you wish. Your homework score will be the score of your latest submissions. **No late submission is allowed**.
- You **MUST** use "Forums – HW2 Q&A" in Elice to ask questions or put comments while you **DO NOT** reveal your code. TAs can always access your code via Elice. TAs will not answer any contact via other channels.
- **DO NOT** use any additional Python external library except cs1robots.

Homework 2 consists of three tasks (Task 1 to 3) that need to be implemented and graded separately. Task 1 worth 7 points, Task 2 worth 8 points, Task 3 worth 10 points. So, you can obtain a maximum of 25 points.

Preliminaries

Sokoban (倉庫番, Sōko-ban, lit. 'warehouse keeper') is a puzzle video game in which the player pushes boxes around in a warehouse, trying to get them to storage locations. The game was designed in 1981 by Hiroyuki Imabayashi, and first published in December 1982.



From Wikipedia
https://en.wikipedia.org/wiki/Sokoban

You are required to develop a Sokoban-like game using the `cs1robots` library. Through a series of tasks, you will incrementally implement the game system. Playing a stage of the game at the link below is strongly recommended to understand the game's mechanics.

Play Sokoban online: https://www.sokobanonline.com/play/lessons/2246_lesson-1-1

After you have completed all the implementations, you can verify the game you developed by setting the value of `USE_SOKOBAN_TILES` to `True` in Task 3. The tile images for beepers with counts of 1, 2, and 3 will be changed to target, box, and fill, respectively.

Additionally, you can play various maps by changing the `STAGE` value (1 ~ 5).