

Instructions:

You, as an astronaut, are going to collaborate with a robot to install a solar panel in a simulated environment. The robot is going to operate as a collaborative partner. Therefore, some of the tasks are going to be done by the robot, and some other tasks will be done by you. All the tasks are provided as labeled pegs that you and the robot are going to pick and place on the predefined spots on the shared board. Red pegs represent robot's tasks and blue pegs represent yours. The shared board also includes red and blue spots each labeled as the corresponding peg. The robot is supposed to use red spots to place its own pegs. You should place your own blue pegs only in the provided blue spots that are also labeled corresponding to your own pegs, i.e., if you have a blue peg called A (representing a task called A you are responsible for), there will be a spot on the shared board called A.

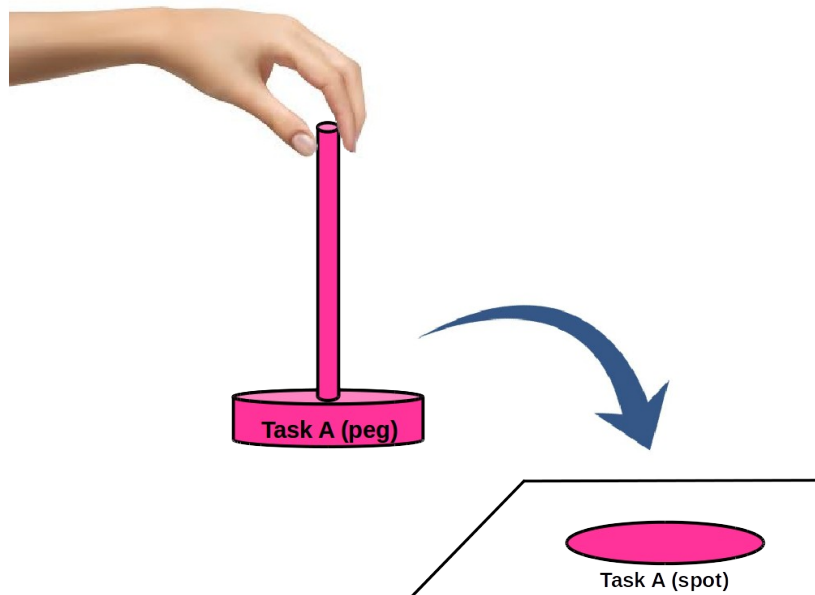


Figure 1: Task Execution

Success and Failure of Achieving a Task:

Picking and placing a peg in the right spot on the shared board is equivalent to a successful achievement for that particular task. ON the contrary, a task fails when the magnetic field on the board does not let the majority of a peg to fill the corresponding spot on the board (see Figure 2).

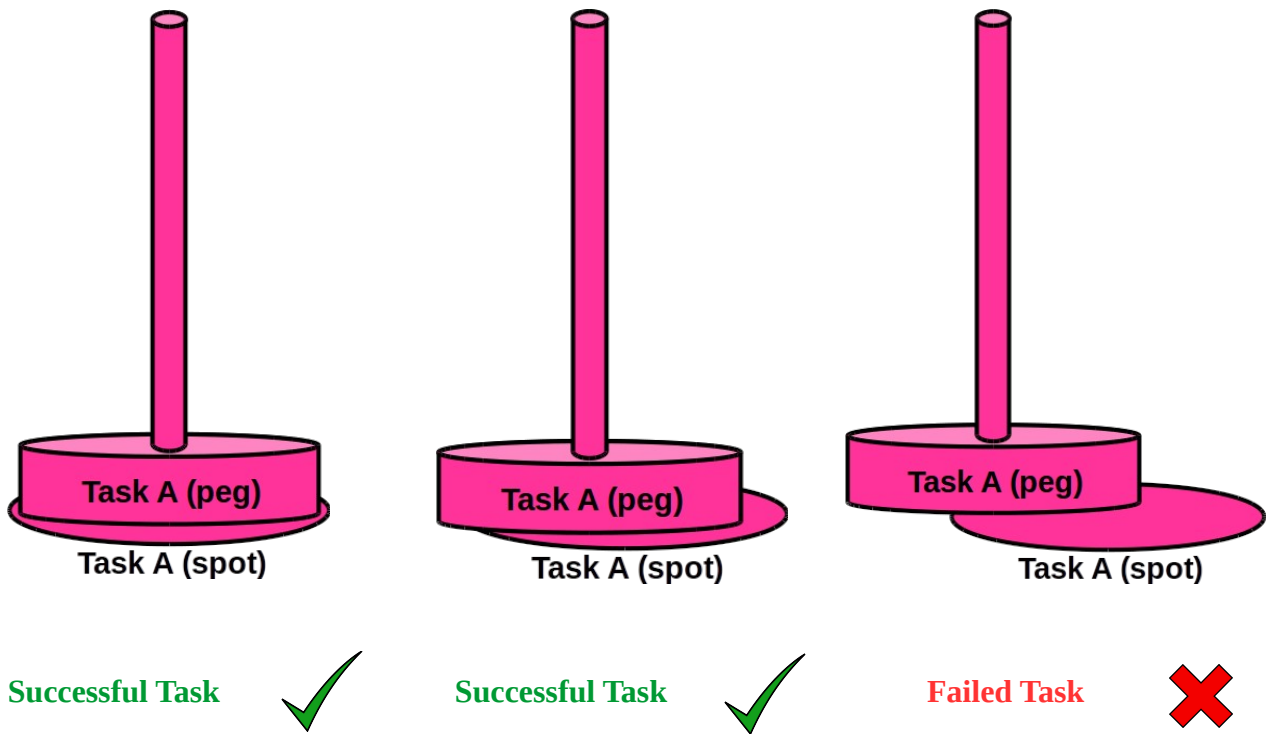


Figure 2: Success and Failure of a task

Order of Doing Tasks (Moving Pegs):

The order of doing tasks is based on numerical labels provided on the shared board beside each spot.

Task Failures:

There will be some tasks that will fail due to the induced magnetic field in the simulated environment. .

There are two sets of pegs