Exercises and Assignment

Carmine Tommaso Recchiuto

A few additional things

Pseudocode: Pseudocode is an informal way of programming description that does not require any strict programming language syntax or underlying technology considerations.

Example:

```
If student's grade is greater than or equal to 60
        Print "passed"
else
        Print "failed“
```

A few additional things

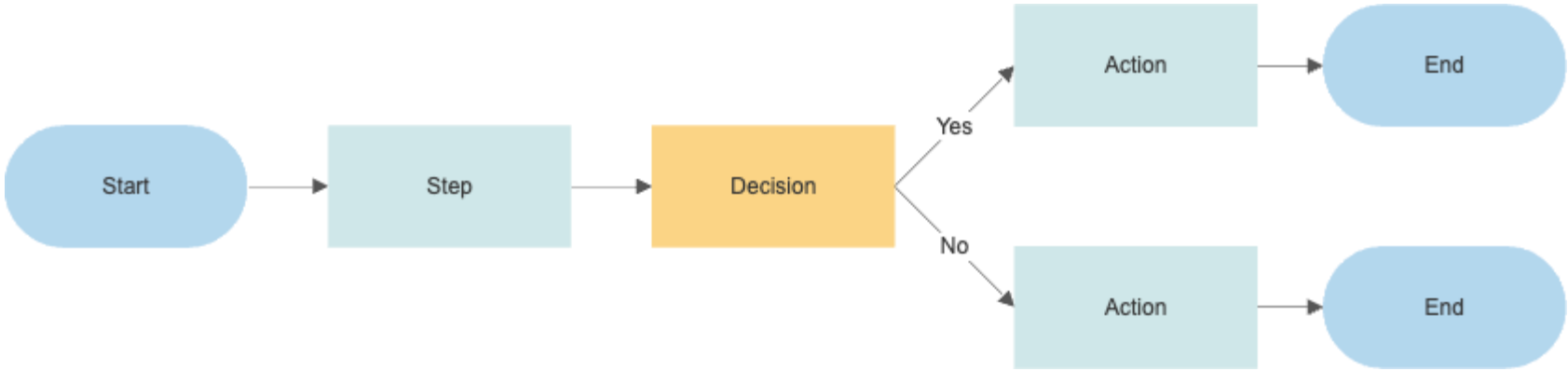
Other example: Exercise 2

```
While True:
        find_markers_distance_and_rotation
        if no_marker_detected:
                exit
        else if dist < threshold:
                grab_marker
        else if robot_well_aligned:
                go_straight
        else if robot_on_the_left:
                turn_right
        else:
                turn_left
```

Use indentation and meaningful names!

A few additional things

The same can be done by using a flowchart

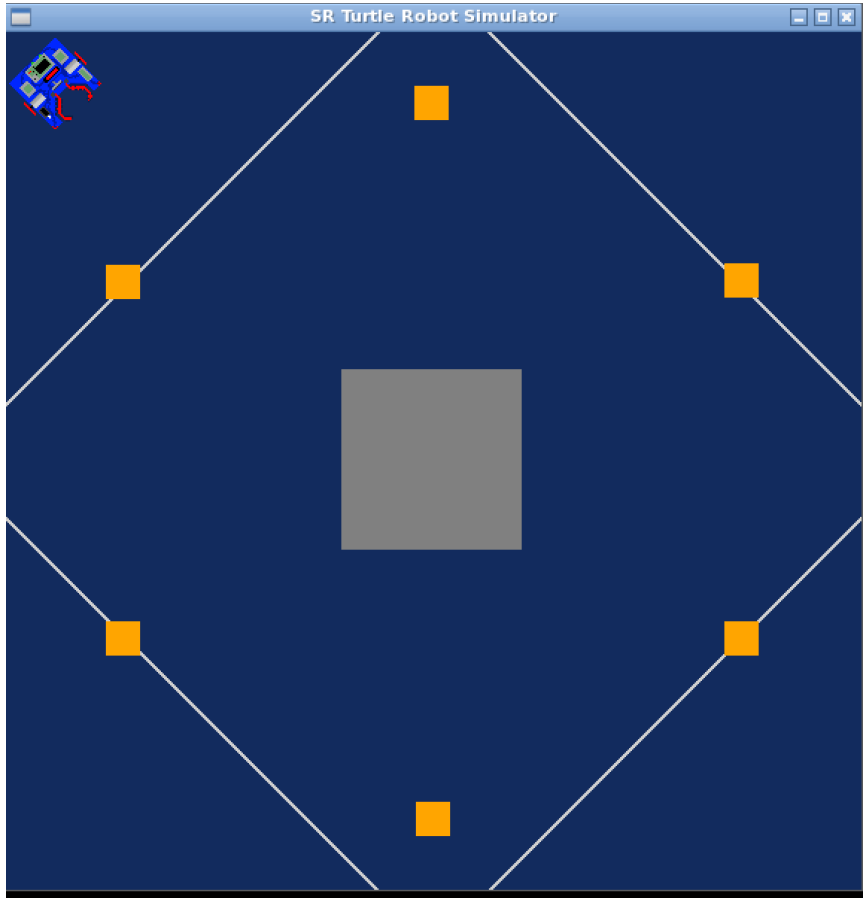


Assignment

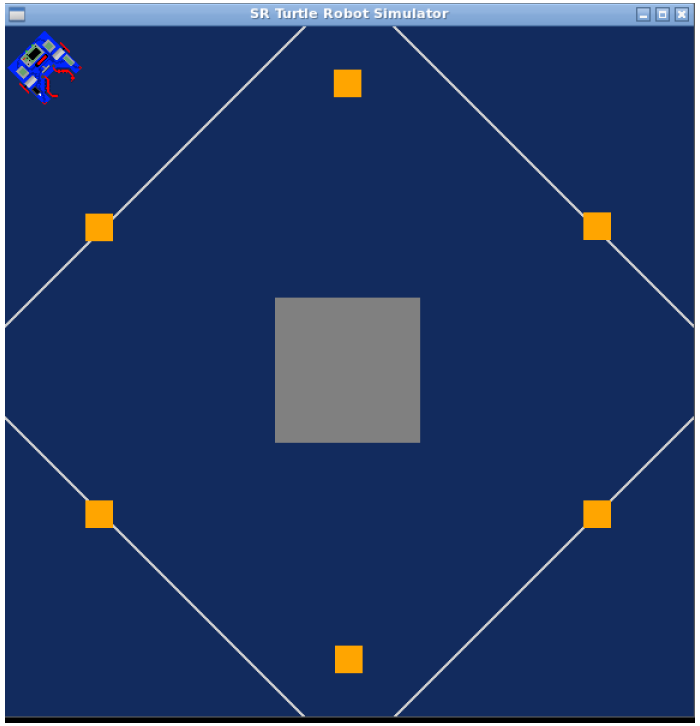
Clone the repository https://github.com/CarmineD8/python_simulator
and switch to the *assignment23* branch and run:

python2 run.py assignment.py

You will see this environment:



Assignment



Write a python node that controls the robot to put all the golden boxes together.

Some hints:

- you can use the code associated to each marker to know what are the boxes that have been already paired;

- you can reuse, maybe modiyfing them a little bit, the functions that you have developed during the exercises.

Assignment

Additional Requirements:

- Create a flowchart of your code, or describe it in pseudocode (Pseudocode Examples (unf.edu))
- Add some comments to the code
- Use functions to avoid having a single block of code
- Publish the new package on your own repository. The flowchart (or the pseudocode) should be added to the ReadMe of the repository. (consider using Markdown syntax to write your readme: Basic Syntax | Markdown Guide)
- **Deadline: 12/11/2022**

Evaluation

- Code performance
- Code structure and clarity
- Respect of the requirements
- Organization of the repository (e.g., README in which you describe what the code does (possibly with flowchart or pseudocode), how to run the code, possible improvements, …)