Robotics Students

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Robotics Students is a system to test robots' behaviors developed by engineering students.

To use it please follow the next instructions:

1. Using an Ubuntu-Linux operating system, unpack robotics_students.tar.gz in the user's directory.

2. Unpack data_students.tar.gz in the user's directory.

3. Open an X terminal and go to the directory where the programs are with the following command:

    cd robotics_students

Change the permitions of the file robotics_students_make with the following command:

    chmod 777 robotics_students_make

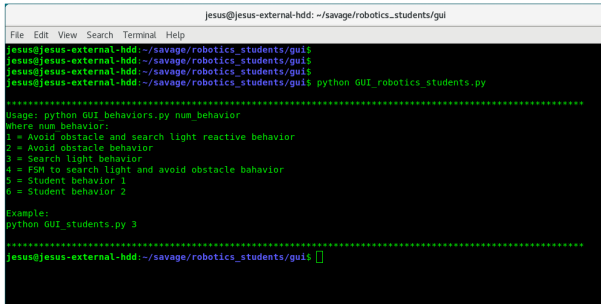Compile the source files with the following command:

    ./robotics_students_make

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During compilation is possible that some warnings will appear.

4. GUI usage:

If there were no critical compilation errors, go to directory gui and type the following command to see the system usage:

python GUI_robotics_students.py

GUI_behaviors.py

5. Select the type of behavior to be tested after the command python GUI_robotics_students.py
For example to test "Student behavior 1", type the following command:

    python GUI_robotics_students.py 6

In the PLANNER window select the robot's origin with the mouse's left button. Select the robot's destination with the mouse's right button.
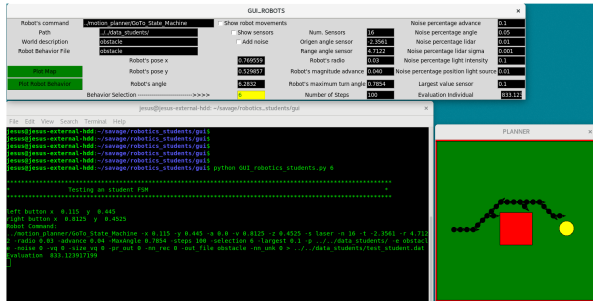
GUI_behaviors.py

6. Different behaviors can be selected in the Behavior Selection option. In the field World description can be selected the environment where the simulated robot operates, there are 14 environments: obstacle, random_1, random_2,..., random_13. When a new environment is selected push the Plot Map button to display it.

The result of robot's results can be seen again pushing button Plot Robot Behavior. To display the robot's sensors select the check button Show sensors.

GUI_behaviors.py

To display the movement of the robot step by step select the check button Show robot movements. To add noise to the sensors and to the movement select the check button Add Noise.