



Project Nr.8: Robot moves first steps

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Materials:

- Linux Fedora-based PC
- Firefox web browser
- Lego Mindstorms nxt
- LeJOS- Java for Lego Mindstorms nxt
- Fedora Eclipse



Project goal:

The project uses a Lego Mindstorms nxt robot to explore an area with an ultra sonic sensor and find a possible parking place. If it finds one, it has to park in it, automatically, and then leave the parking place. Otherwise it continues to drive forward.

The program is written in JAVA using the LeJOS API. The development environment consists of Fedora Eclipse.

Programming the robot-car:

We built the robot car taking inspiration from available models in internet. Then, we created by using Fedora Eclipse some robot behaviors that have been managed by an arbitrator depending on specific conditions (e.g. robot finds a parking place enable the self-parking procedure).



Lego Mindstroms nxt



Lego Mindstroms nxt robot-car



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mypilot.stop()
LCD.clear();
LCD.drawString("is parking",
0, 0);
Motor.B.rotate(-40);
mypilot.travel(-16);
//mypilot.stop();
Motor.B.rotate(80);
mypilot.travel(-12);
//mypilot.stop();
Motor.B.rotate(-40);
mypilot.travel(3);
LCD.clear();
LCD.drawString("has parked",
0, 0);

```

Extract of JAVA code: behavior when the robot starts to park.