



# Project Nr.8: Robot moves first steps

## Students:

- Vaghi Alessandro - 1992
- Sartori Edoardo - 1993

## Assistant:

- Antonio Vincenzo Taddeo

## Materials:

- Linux
- Firefox web browsers
- Lego Mindstorm V2.0
- Eclips SDK



## Introduction:

A robot is a machine that can act autonomously. We built and programmed a simple robot which emulates a dog. For this purpose, we used the Lego Mindstorm Kit and Java programming language. We learned how to program in Java and how to use the behavior programming approach.

## Problems:

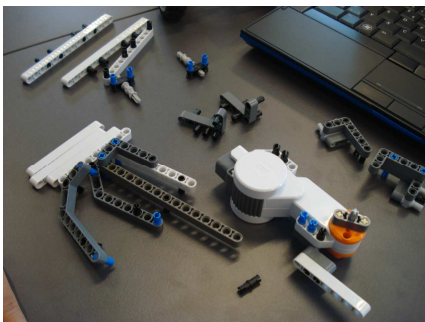
Programming in Java wasn't very easy. We tested several solutions with an approach based on learning-by-doing, until we found an appropriate code for programming the dog. Moreover, we had some mechanical and precision problems for managing our robot. These limited the efficiency of our dog.

## Result:

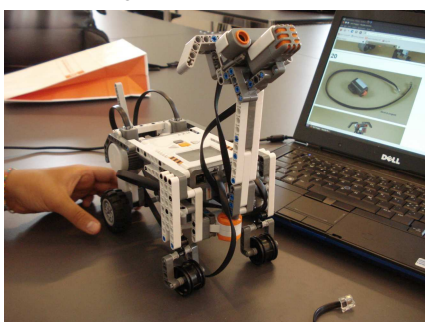
In summary, we programmed a set of robot functions for emulating a dog. Due to limited time, we could not develop really complex functionality. In particular, we implemented these behaviors: Moving forward, Exploring, Avoiding an obstacle, Barking, Sleeping and Leash Walking.

We are happy for this great experience by which we learned a lot as well as an useful programming language.

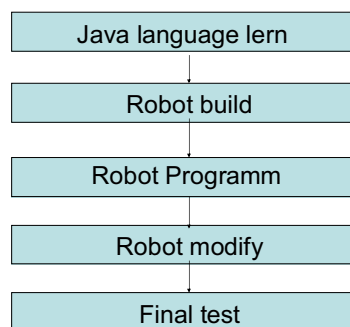
## The beginning



## Robot Project completed



## Our path



## Simple Java function for measuring the distance from an obstacle

```

public float distanza() {
    float disf;
    int dis;
    try {Thread.sleep(50);} catch
    (InterruptedException e) {}
    dis = sensore.getDistance();
    try {Thread.sleep(50);} catch
    (InterruptedException e) {}
    LCD.drawInt(dis, 0, 0);
    LCD.refresh();
    disf = (float) (dis / 2.54);r
    return disf;
}
  
```

