

Balancing Robot

Balancing robot (Segway robot) – robot based on the segway principles.



The aim of our project is to design a Segway-like, self-balancing robot, using Lego NXT 2.0.

Implementation: To achieve the best results a gyroscope is usually used. However, to make the project more interesting (and because we don't have a gyroscope), we will use two ADXL350 accelerometers to derive the robot orientation.

To keep the robot upright, a PID control scheme will be used.

Programming: we are going to use leJOS (Java based), primarily because it supports a faster transfer mode for the I2C bus than the standard firmware (10 kbaud vs 115 kbaud) and comes with a large standard library.

Picture is from : [Link](#).