Line Following Robot Processes

Left Hand Side
- LightSensor
- Filter
- Controller
  - Motor

Buttons

Display

Right Hand Side
- LightSensor
- Filter
- Controller
  - Motor

User Interface
Bluetooth Connected Robot

PC has a user interface that sends commands to the robot using a Bluetooth connection.

Robot responds to commands from the User Interface to adjust the speed of the motors.

Each wheel can be controlled independently from 10 to 100% power.
PC to Robot Communication

PC and Robot are essentially processes running in parallel.
They use the Bluetooth connection to pass messages between each other.
PC User Interface Processes

User Interface

Cursor position

Calculate Percentage Power for each Motor

Left and Right Percentages

Apply Percentage to Maximum Power

Left and Right Motor Power

Bluetooth Transmit
Robot Processes

Left Motor

Left Motor Power

Right Motor

Right Motor Power

Distribute Motor Power

Left and Right Motor Power

Bluetooth Receive