# Week 2

# Spot Finder

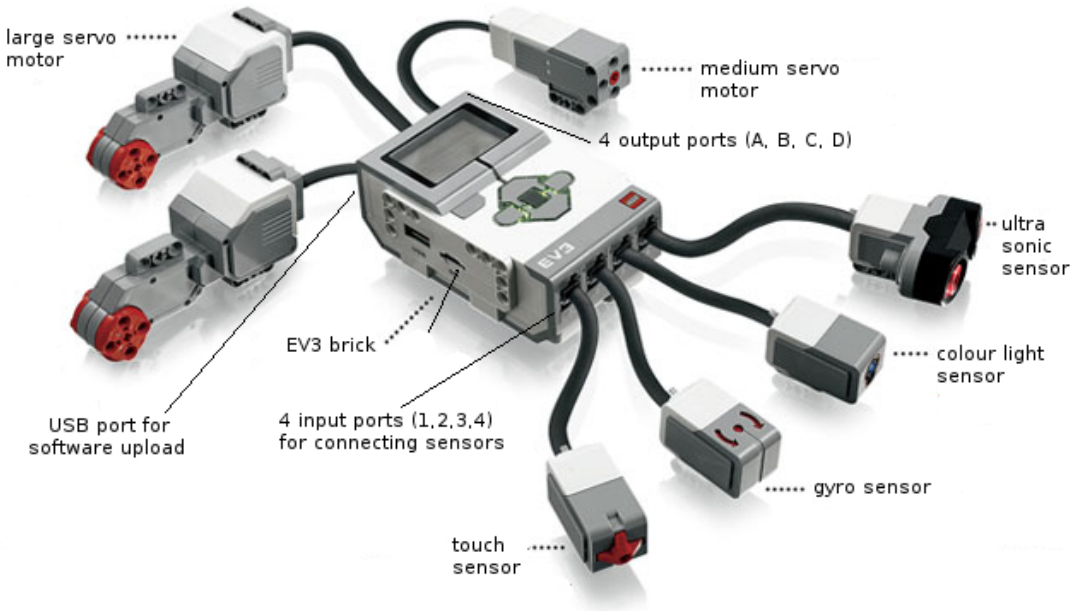
## Lego Mindstorm EV3 Components

## EV3 MicroPython

## Basic Educator Programs



## Lego Mindstorm EV3 Components

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# EV3 MicroPython



`https://pybricks.com/ev3-micropython`

- We will use EV3 MicroPython to program the Lego mindstorm
- EV3 MicroPython based on standard Python language
- Comes with an easy-to-use development environment
- Many help-pages explaining Lego mindstorm related variables etc.

# Basic Educator Programs



`https://pybricks.com/ev3-micropython/examples/robot_educator_basic.html`

- Basic Movement
- Obstacle Avoidance
- Line Following

**Note:** This module is not about robot programming. It is about designing Embedded Systems and programming is secondary.

# Task 3: Spot Finder

Requirements:

- The robot to alternate between two white spots on lab carpet which are approximately 1m apart.
- The robot to achieve at least 10 turns within one minute, without missing a spot.
- Any sensors can be used.



# Task 3: Spot Finder

Submission:

1. Document selection of sensor(s) with justification
2. Provide a picture of the driving base with the selected sensor(s)
3. Document the algorithmic idea.
4. Document the algorithm in pseudo-code.
5. Provide well-commented MicroPython source code of the implementation.

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