

Stationary Robot (1)

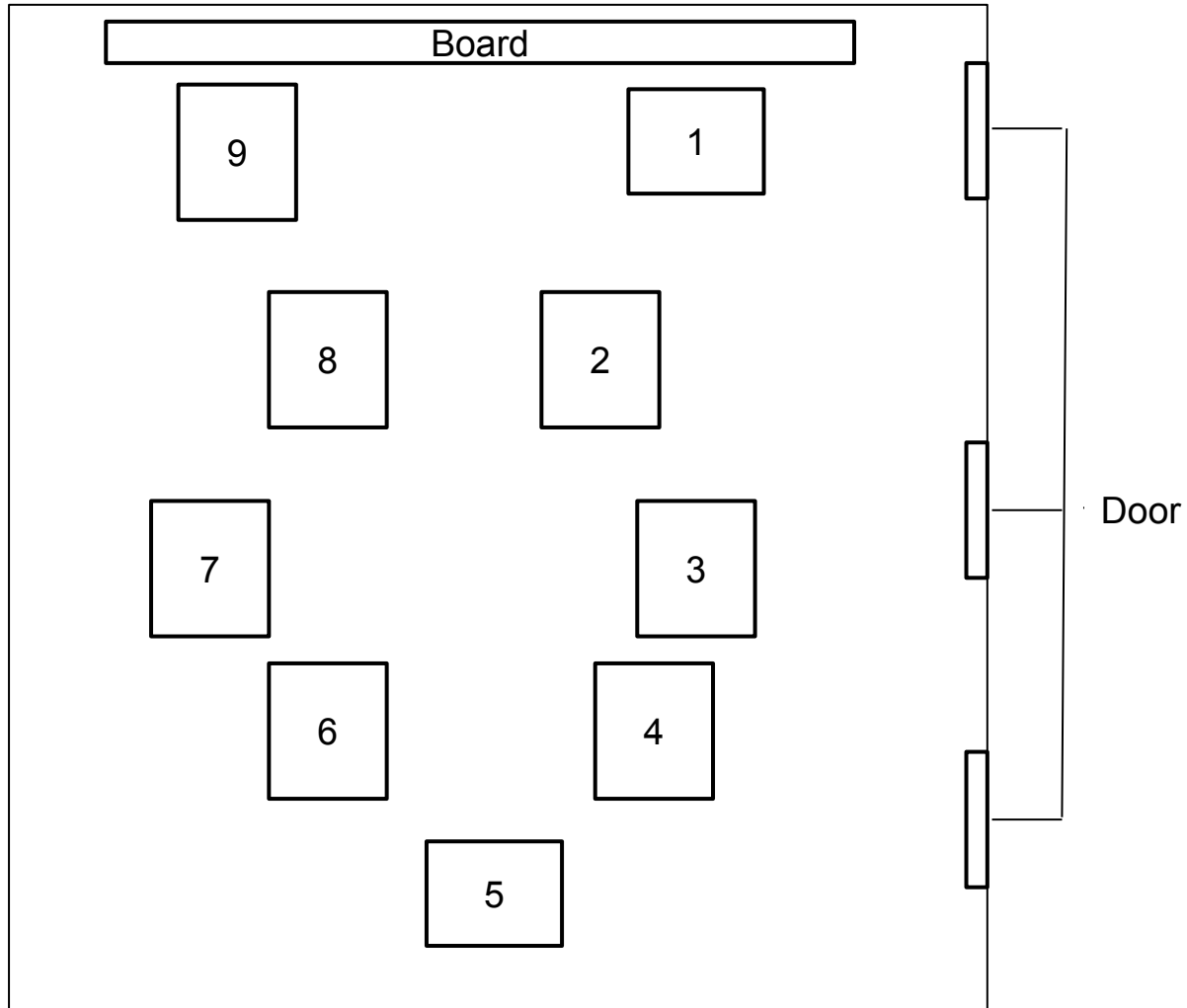
21st September, 2016

Instructor

Prof. Shih-Chung “Jessy” Kang

康仕仲

Seat arrangement



Facebook group



Automation and Robotics
Public Group

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Write something...

PINNED POST

Peng-Yuan Chen uploaded a file.
September 14 at 9:47pm

各位同學好，
本學期的課程網站網址如下：<http://nturlab.weebly.com/automation-and-robotics.html>，這個學期所使用的上課投影片、論文連結、作業等資料都會放

ADD MEMBERS
+ Enter name or email address...

MEMBERS 146 Members (29 new)

DESCRIPTION Edit
This is a course forum for "Automation and Robotics" at National Taiwan University.

TAGS Add Tags
Add a few descriptive keywords.

Google drive

- After you provide your gmail address, we will add you to the shared folder.
- Folder name: 2016 Fall, Automation and robotics @ NTU

Course website

- <http://nturlab.weebly.com/>



RLab@NTU

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COURSES

Automation and Robotics

Course Overview

This course is designed for graduate students and senior undergraduate students to understand the latest development of robotics in construction automation. By studying and discussing the assigned materials (including book chapters, journal/conference papers and selected web pages), students will be familiar with fundamental robotics and varied applications of robots in the construction industry. Multiple programming projects will be assigned to help students gain the hand-on experience of robot development and controls.

Three modules are included in this course: 1. Automation, 2. Mobile Robot, 3. Human-interactive Robot. Each module include multiple hands-on labs, assigned readings, a hands-on project and a report. We believe the most effective education for this course is learning-by-doing and learning-by-thinkng. We

Course Overview
Automation and Robotics

14th September, 2016
Instructor
Prof. Shih-Chung "Jessy" Kang
康仕仲

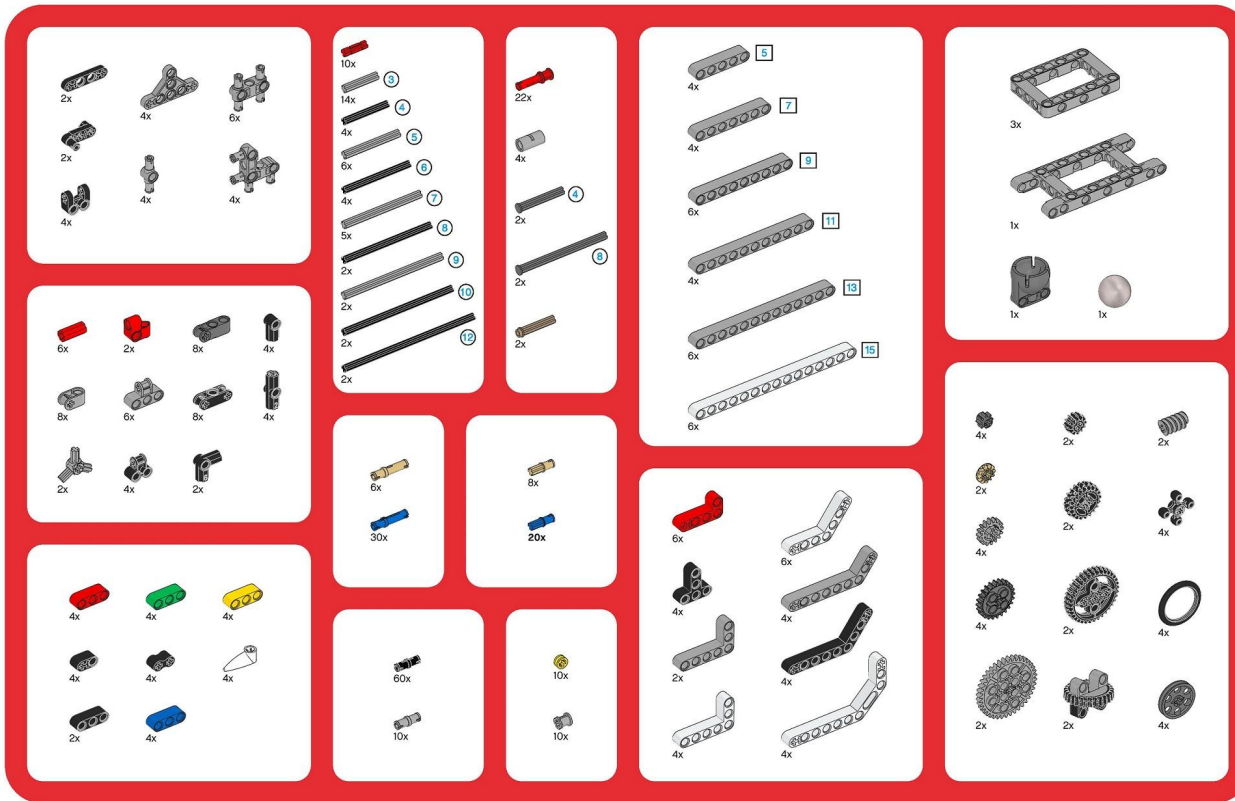
Scribd. 1 of 22

Penalty card rule

- Penalty card
 - **Yellow card**: you can discuss with your teammates and show a yellow card to a particular person in your team as a caution.
 - **Red card**: The particular person will get one red card after already collecting TWO yellow cards, and the instructor will privately talk to him/her to let him/her know his/her situation.

Lego prepatation

45544



Rechargeable Battery
 Akku
 Pila rechargeable
 Bateria Recargável
 Akkumulátor

Interactive Servo Motors
 Interaktive Servomotoren
 Servomoteurs interactifs
 Servomotores interactivos
 Interaktív szervomotorok

Gyro Sensor
 Kreisel sensor
 Capteur gyroscopique
 Sensor giroscópico
 Gyroszkóp

Touch Sensors
 Berührungssensoren
 Capteurs tactiles
 Sensores de Toque
 Érintésszkezők

Color Sensor
 Farbsensor
 Capteur de couleur
 Sensor de Cor
 Színérzékelő

Ultrasonic Sensor
 Ultraschallsensor
 Capteur ultrasonique
 Sensor ultrasónico
 Sensor ultra-sónico
 Ultrahangos érzékelő

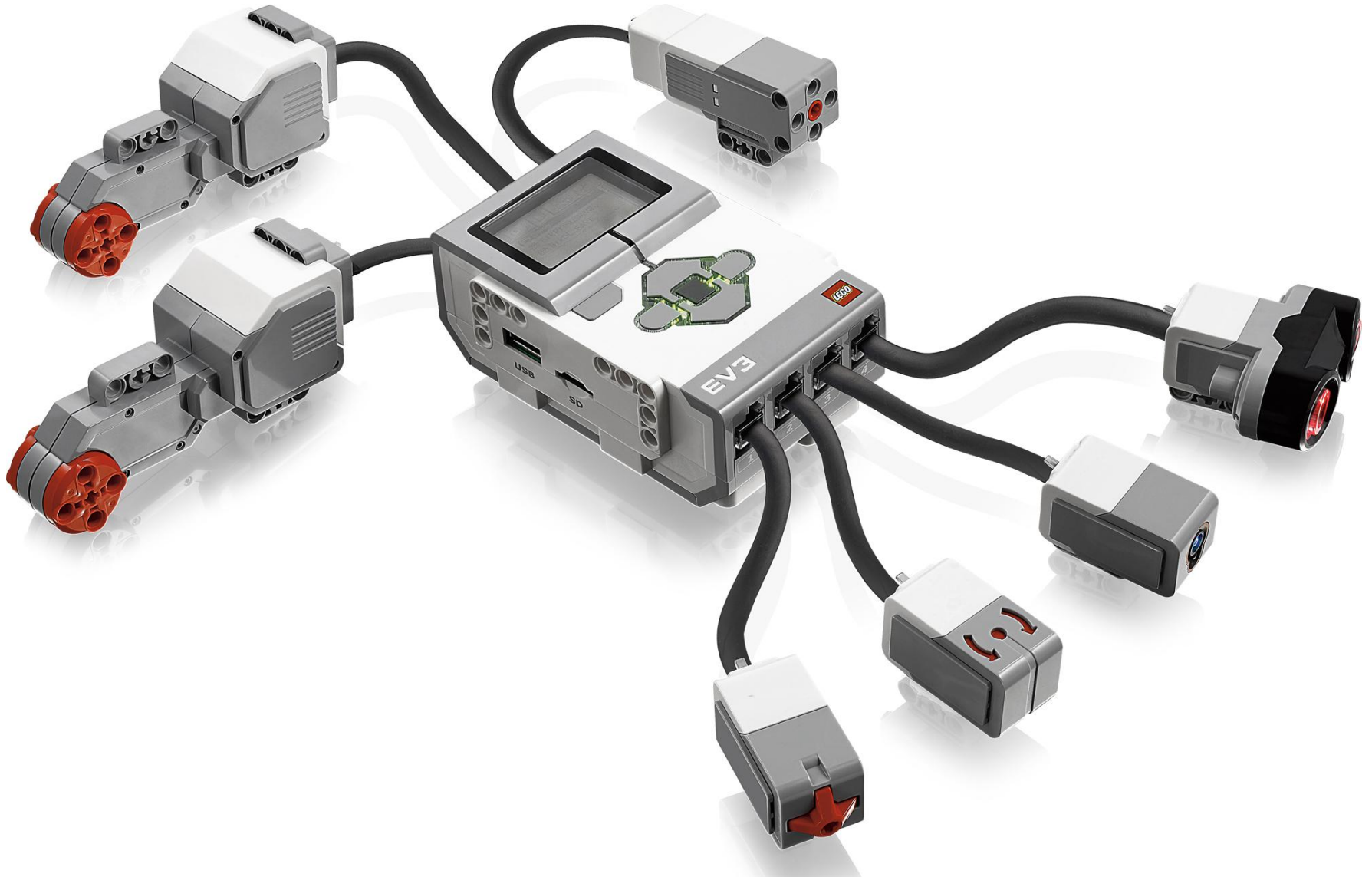
Intelligent EV3 Brick
 Intelligenter EV3-Stein
 Brique EV3 intelligente
 Ladrillo Inteligente EV3
 Péca EV3 Intelligente
 Intelligens EV3 építőelem

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In-Class Exercise: Lab 1 Color sorter

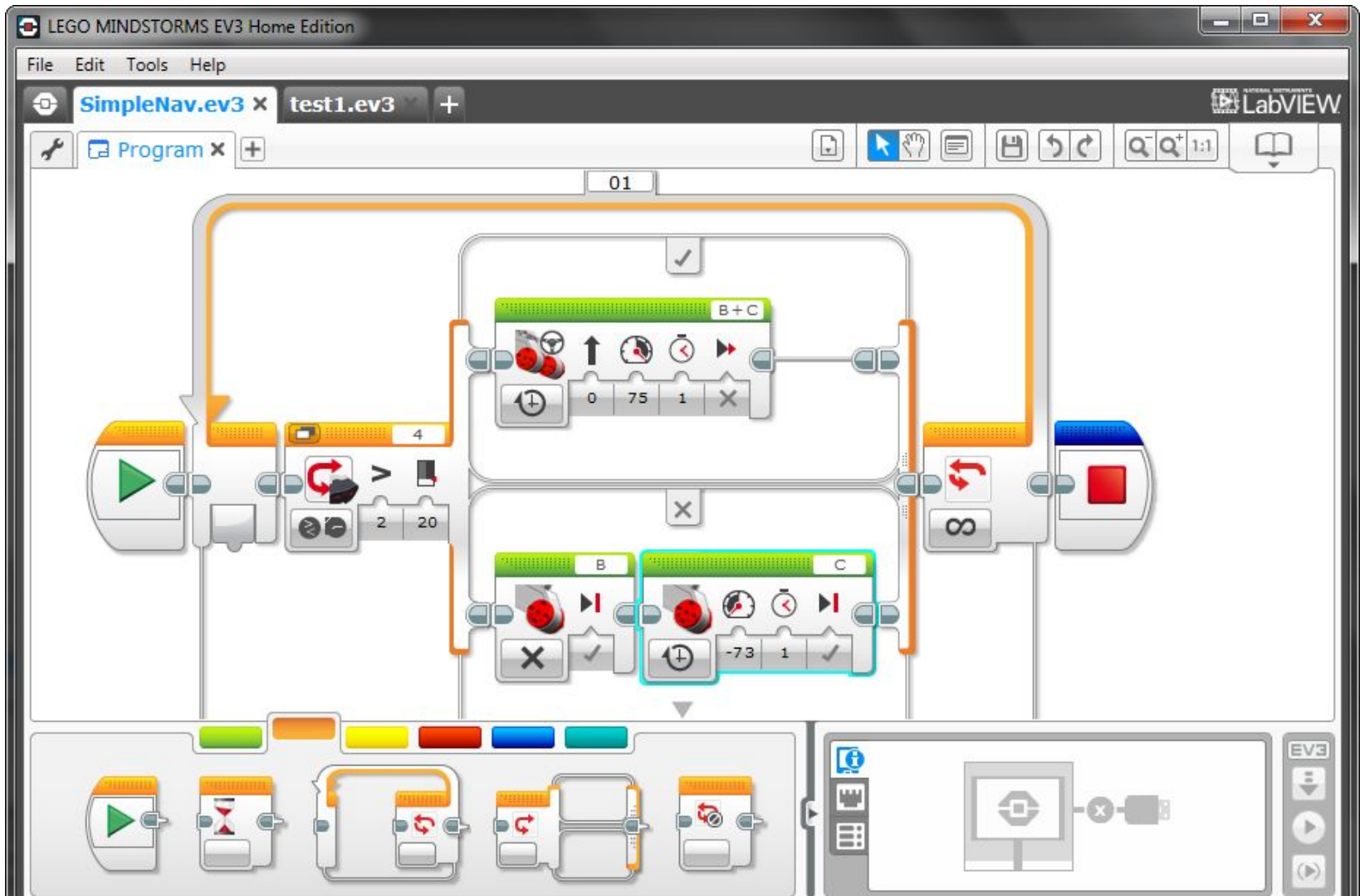
Lab 1 – Color sorter



Lab 1 – Color sorter

Lego EV3 Software Setup

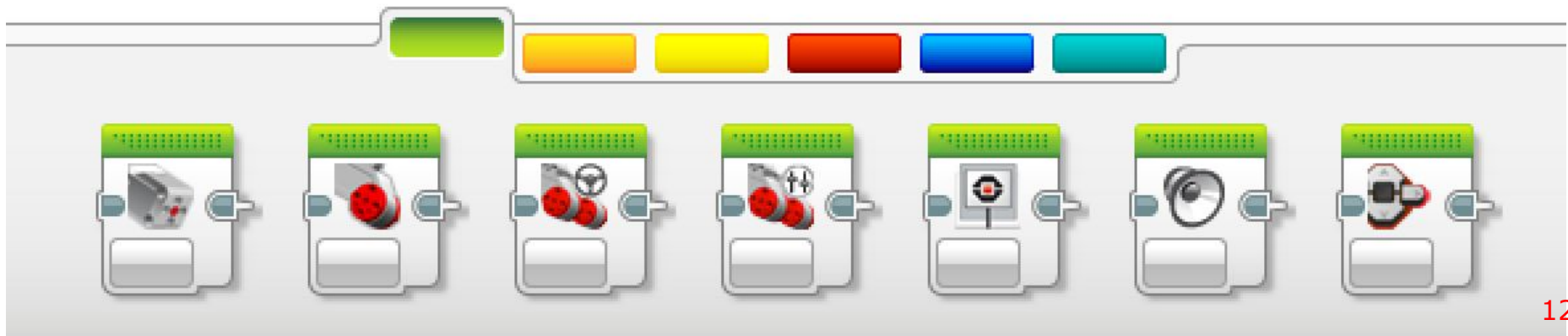
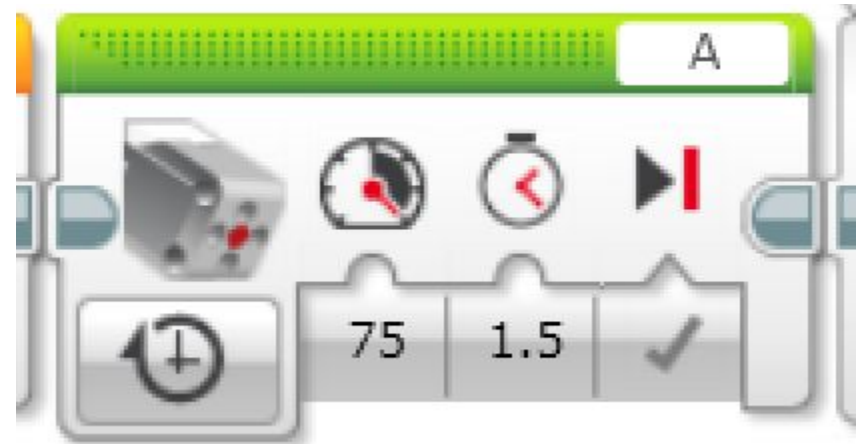
EV3 software download: <http://goo.gl/kLffP6>



Lab 1 – Color sorter

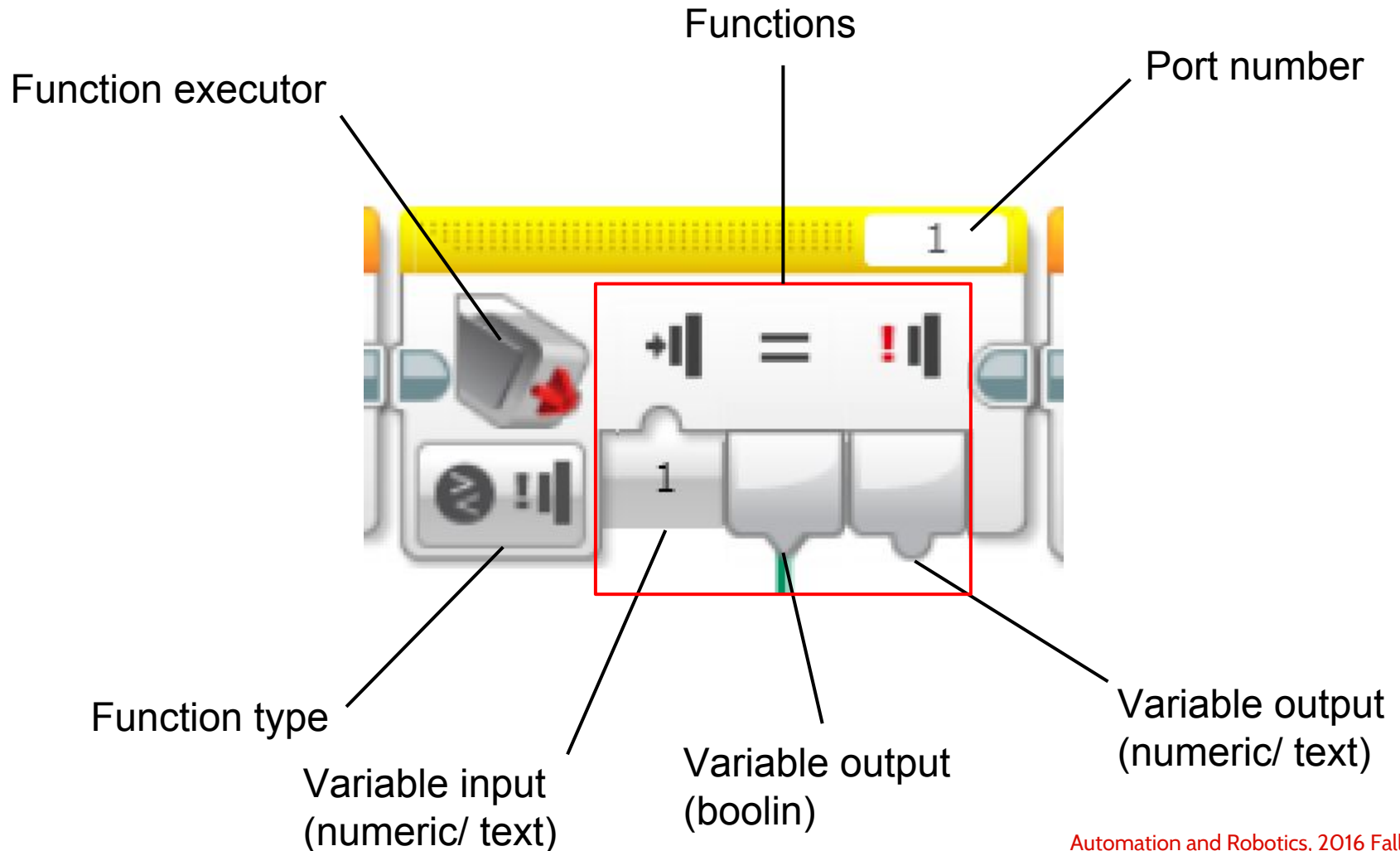
Lego EV3 programming

- Blocks (basic units of your program)
 - Action
 - Flow Control
 - Sensor
 - Data Operation
 - Advanced
 - My Blocks



Lab 1 – Color sorter

Lego EV3 programming



Lab 1 – Color sorter

Demonstration video



Lab 1 – Color sorter Challenge

- Please modify the mechanism to remove the “manual scanning” stage.

Thank You

Instructor: **Prof.康仕仲 sckang.caece.net**

TA: **楊耀奮 yyben@caece.net**

陳鵬元 pychen@caece.net

Course website:

<http://nturlab.weebly.com/automation-and-robotics.html>