# Lecture 6: Educational robotics. Switches.

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1. Learn how to make your robot decide what to do out of different choices
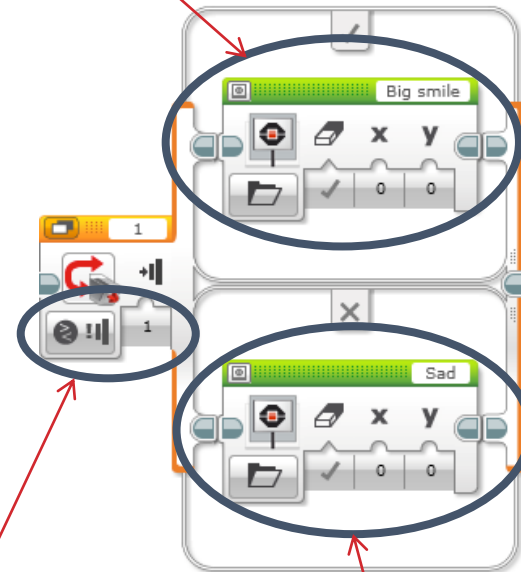2. Learn how to use a Switch Block

# Switch Blocks

Asking the robot a question and doing something different based on the answer

- Example: Does the robot see a line? Or not?

Basically a YES/NO QUESTION

Switch blocks are found in the orange/flow tab

Run this code if the answer is yes

The question being asked: is the touch sensor pressed
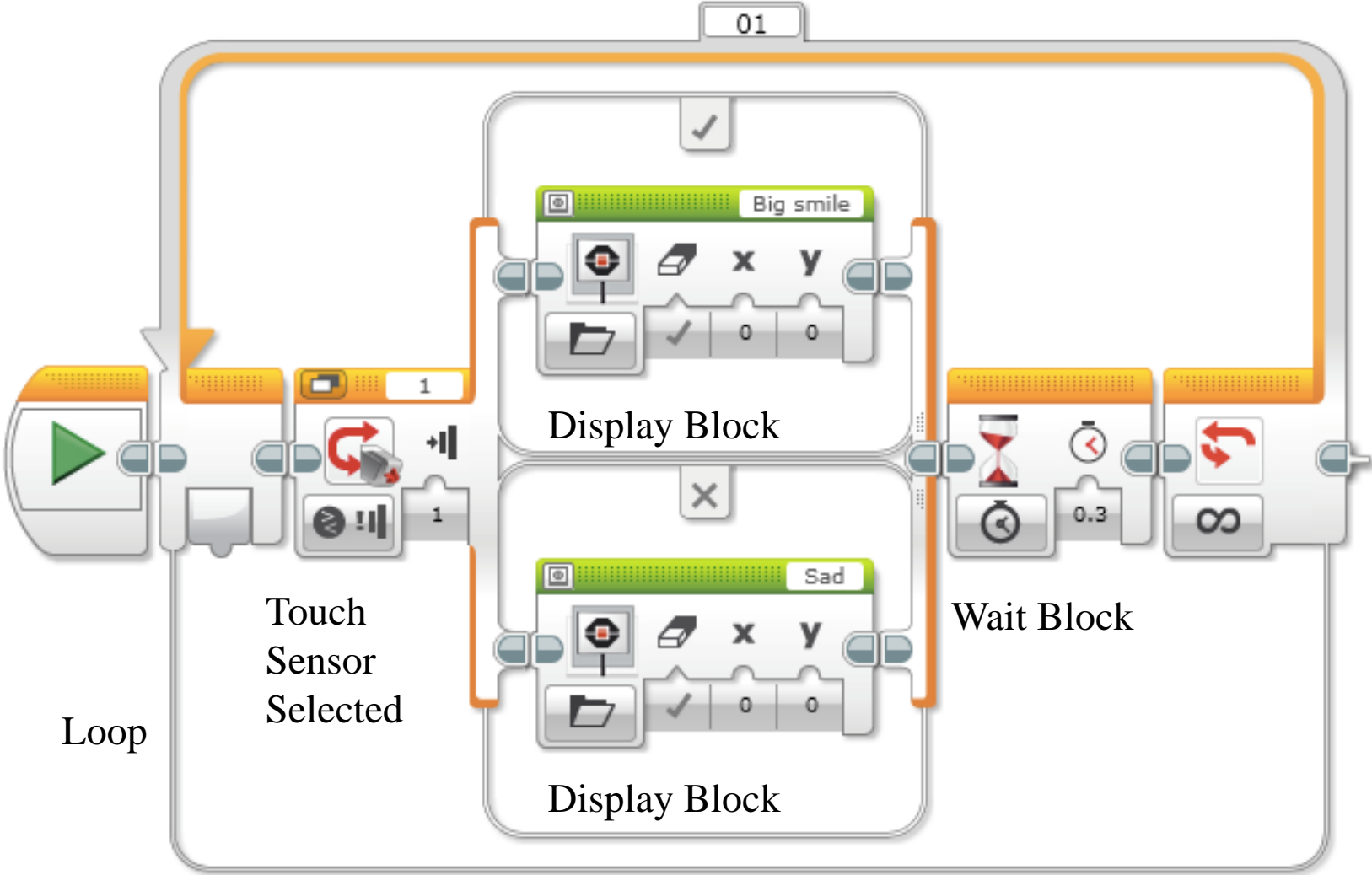
Run this code if the answer is no

**Challenge:** Write a program that changes the display based on if the touch sensor is pressed or not pressed.

If pressed, your EV3 is happy! Display a smiley face. If not pressed, the EV3 is sad! Display a sad face.

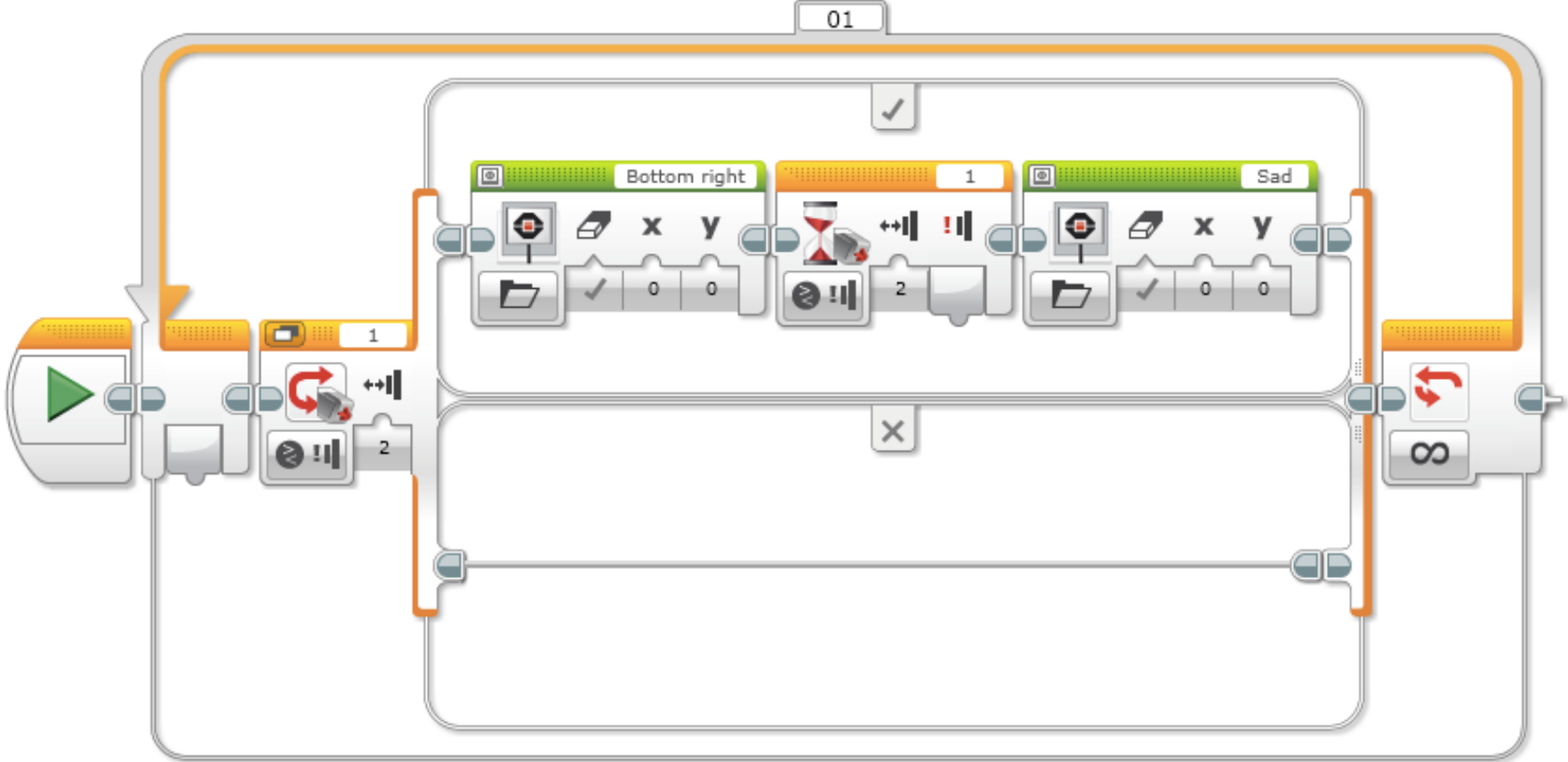**Hint:** You will need to use the display block, loops and switch blocks!

01

Display Block

Big smile

Display Block

Sad

Wait Block

Loop

Touch
Sensor
Selected

Can you write a program that display big eyeballs if you touch it once and a sad face if you touch it a second time and toggles back and forth.

Challenge 2 Solution

# References

Benedettelli, D. (2014), *THE LEGO® MINDSTORMS® EV3 LABORATORY build, program, and experiment with wicked cool robots*. William Pollock, USA.

Griffin, T. (2014), *THE ART OF LEGO® MINDSTORMS® EV3 PROGRAMMING*. No Starch Press, USA.

Valk, L. (2014), *THE LEGO® MINDSTORMS® EV3 DISCOVERY BOOK*. William Pollock, USA.

Filipov, S.A. (2013), *Robotics for children and parents*, Fradkova, A.L., St. Petersburg.