

Remote coding with Ozobot (1)

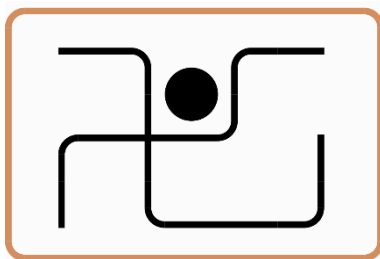
Mazes

This is not the lesson, in the sense of the lesson. This material is dedicated to each educator, who would like to create own STEAM (or not) lesson and needs the board for the bot to use. Having such a board the educator can create the scenario of STEAM lesson, adding the drawings or cliparts to the board or telling the students to draw on the printed board the specific objects, following the created scenario.

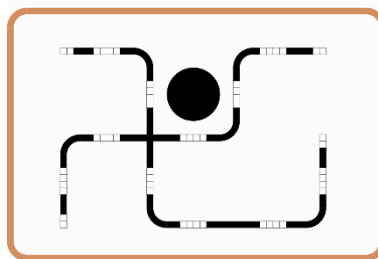
It all takes time, so at the beginnig the educator can use the ideas placed here, ready-to use and in the meantime customize the boards to the own necessities.

In the first part we have the mazes. The mazes are grouped by the format – A4 for the simpler exercises, addressed to the younger students and A3, bigger ones, to analyze more complicated problems or scenarios.

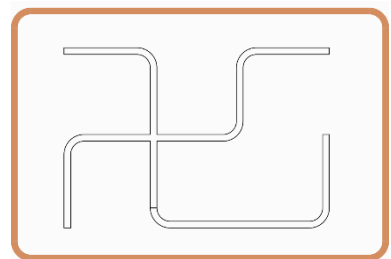
Each board we have in three versions – board for OzoBlockly (plain), board for color codes (with the empty places for the codes) and draft.



The board for OzoBlockly



The board for color codes



The draft

The student can use the draft to draw the road, regarding to the task, then code it for the bot.

Basic idea

For educator:

Take the board.

Indicate the start and the end and tell the students to find a way for Ozobot to drive, then code the road properly, using either color codes or OzoBlockly.

And at this moment the educator can modify this basic idea adding the condition:

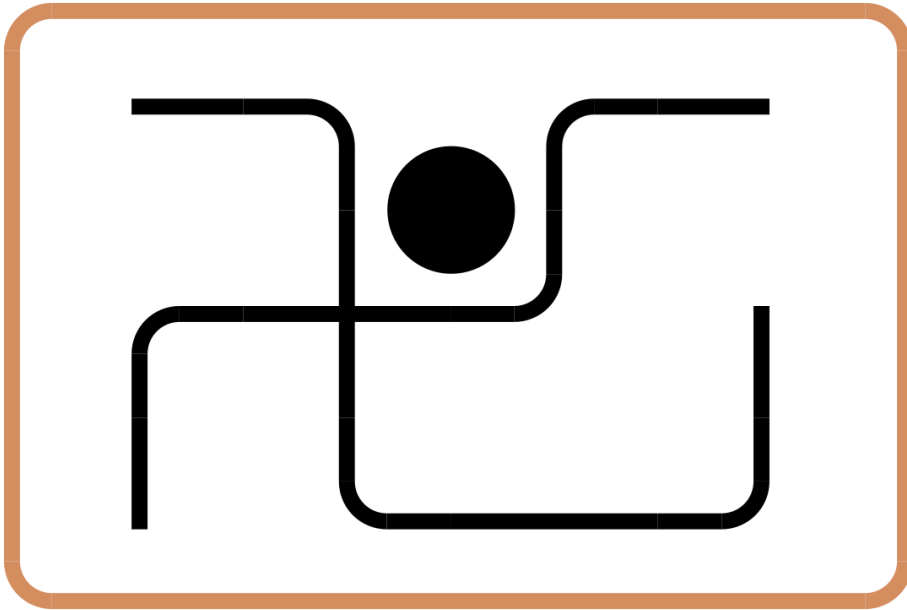
1. Find the shortest way
2. Find the longest way
3. Find the way, that Ozobot will drive through each segment of the road
4. Find such the way, which can be coded using the specific codes/commands (educator specifies)
5. Find the way which leads through the specific crosses/segments (educator specifies)

Sample

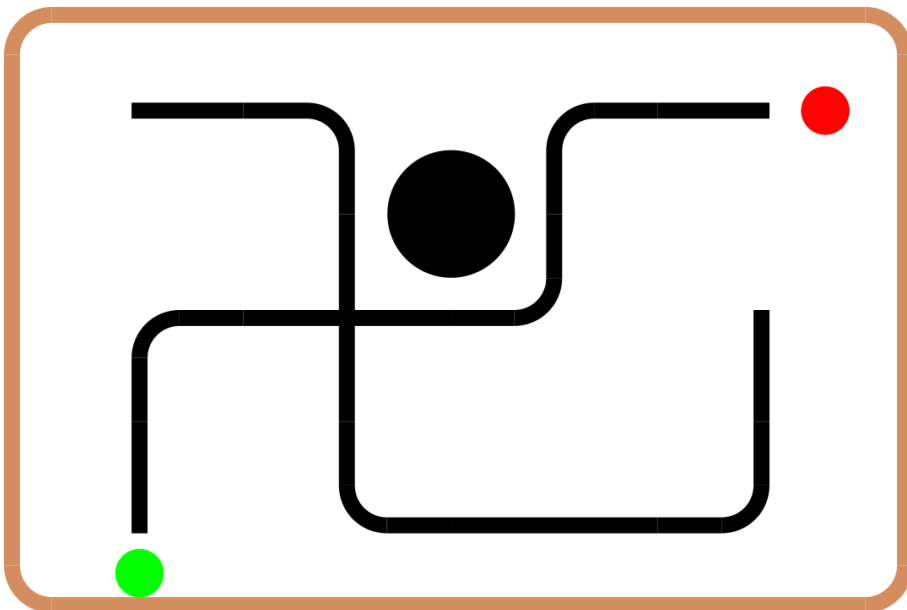
Let's take the board above.

Let's find the way that Ozobot drives through each segment of the road, starting at the red circle, ending at the green circle. Ozobot can drive the segment more than once.

Step 1 – the plain board.

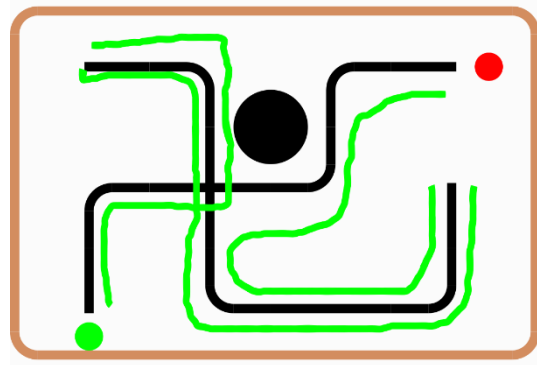


Step 2 – indicating start/end

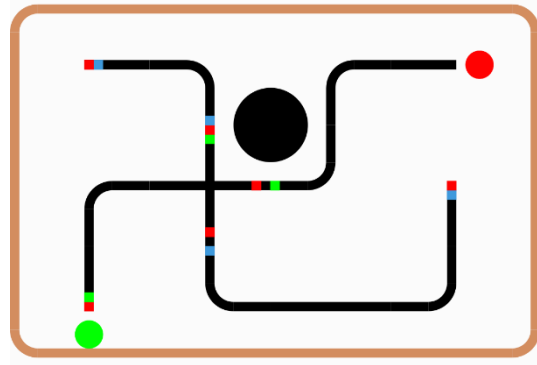


For student:

Step 1 – student is planning the solution, using the draft



A black and white diagram of a Swastika symbol. The symbol consists of four arms extending from a central point, each arm ending in a small circle. A solid black circle is positioned in the center of the symbol. The entire diagram is enclosed within a thick orange border.



START



END

Step 2b – student creates the OzoBlockly code

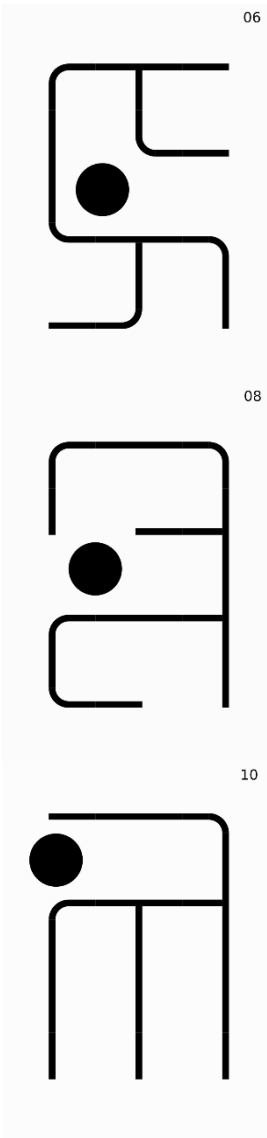
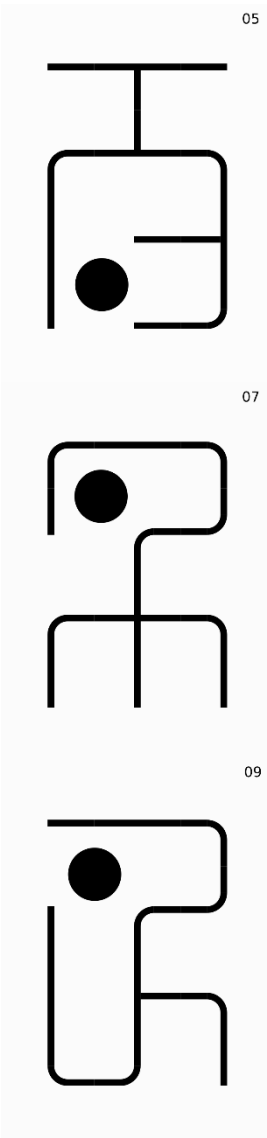
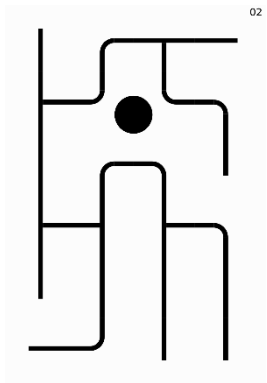
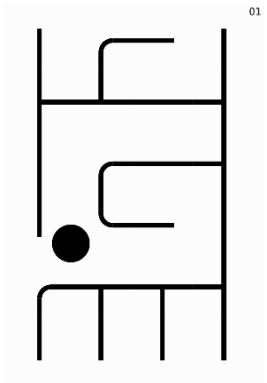
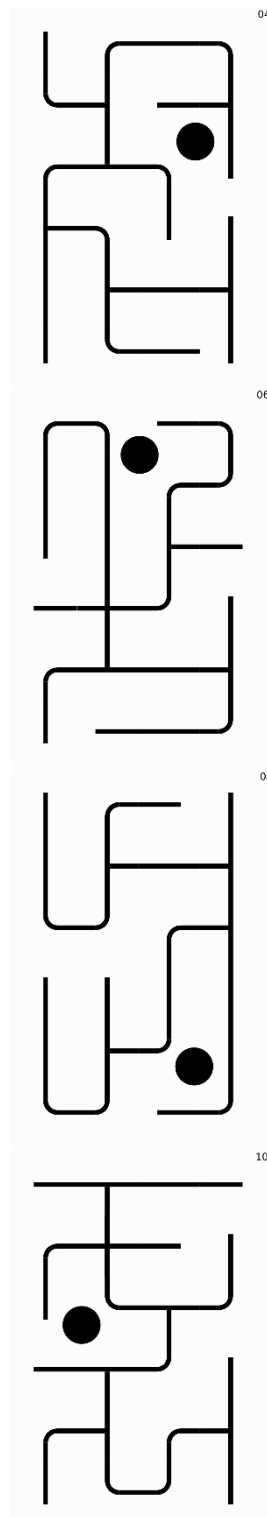
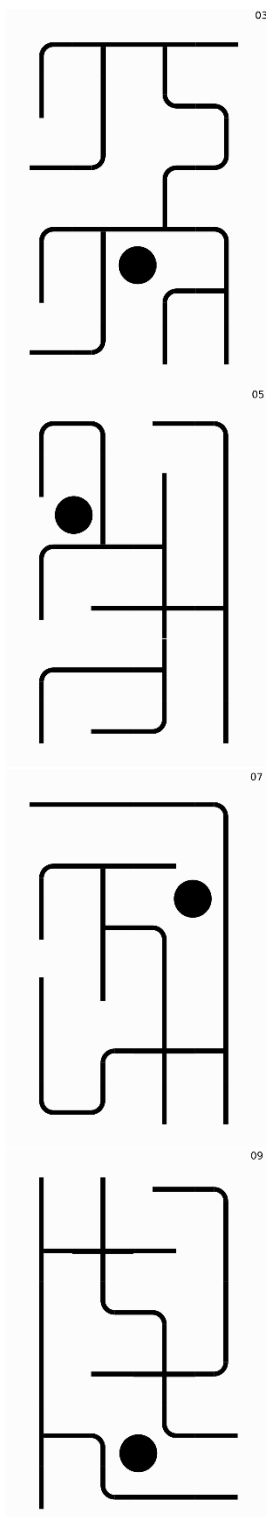
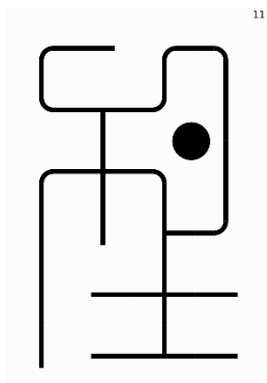


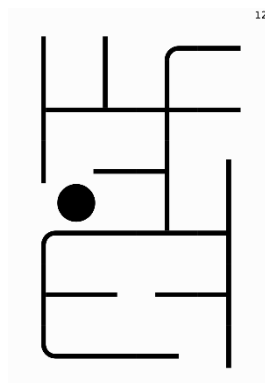
Table of the boards A3



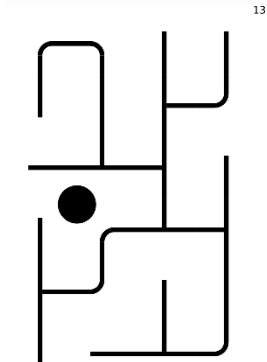




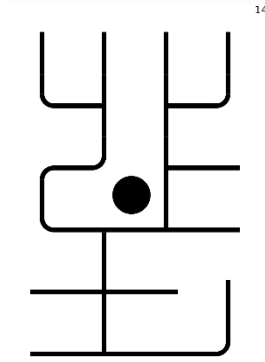
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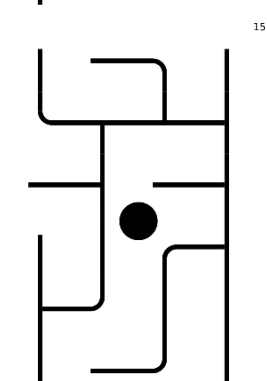
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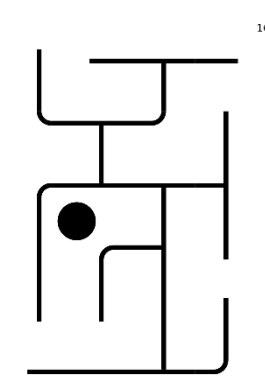
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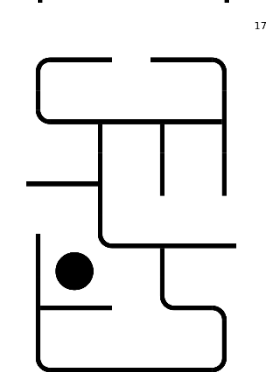
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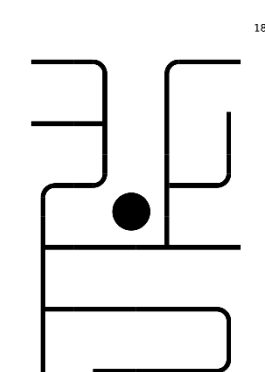
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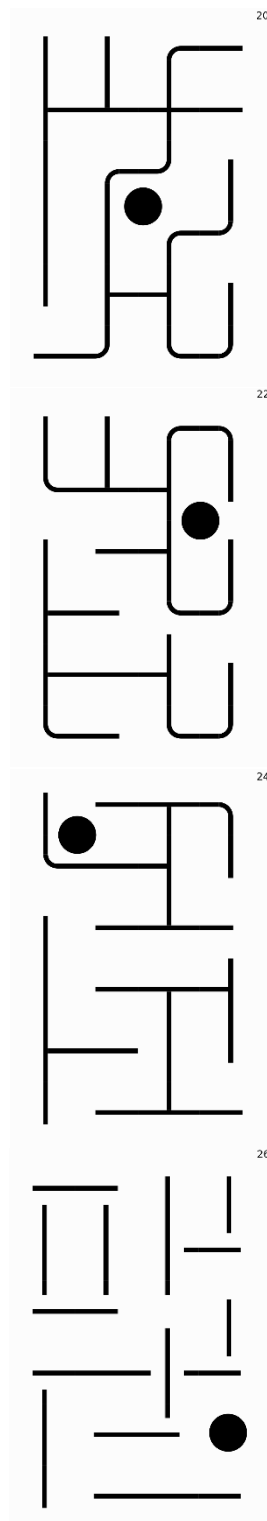
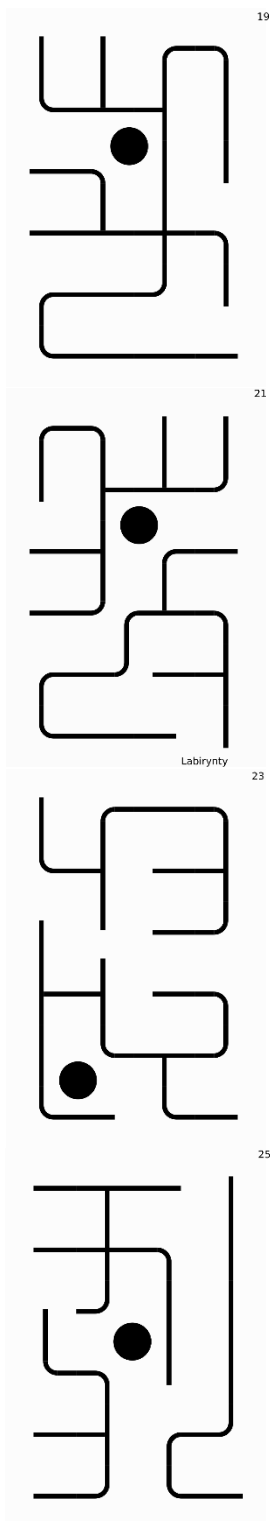
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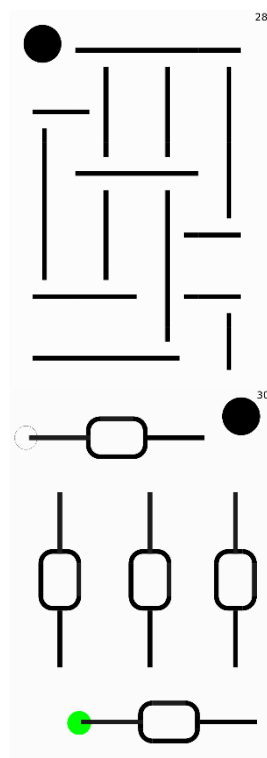
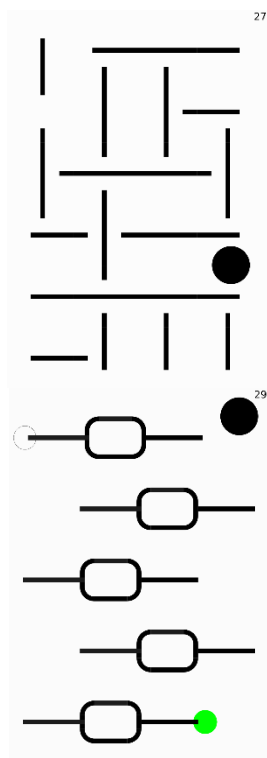


17



18





The boards are organized as follows:

Main folder (A3, A4):

- BLANKS/files for OzoBlockly)
- CODE BLANKS/files for color codes
- DRAFTS/files for drafts

All the files are in PDF format.

If you need PNG format – feel free to contact me: dorota.maria.kowalczyk@gmail.com

Stay safe and healthy!

Thank you 😊