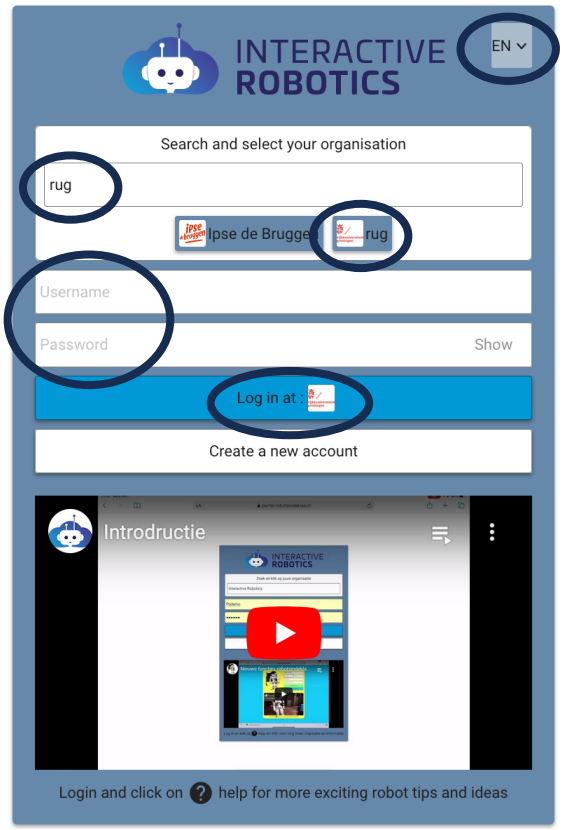
Alpha Mini Quick Start Guide

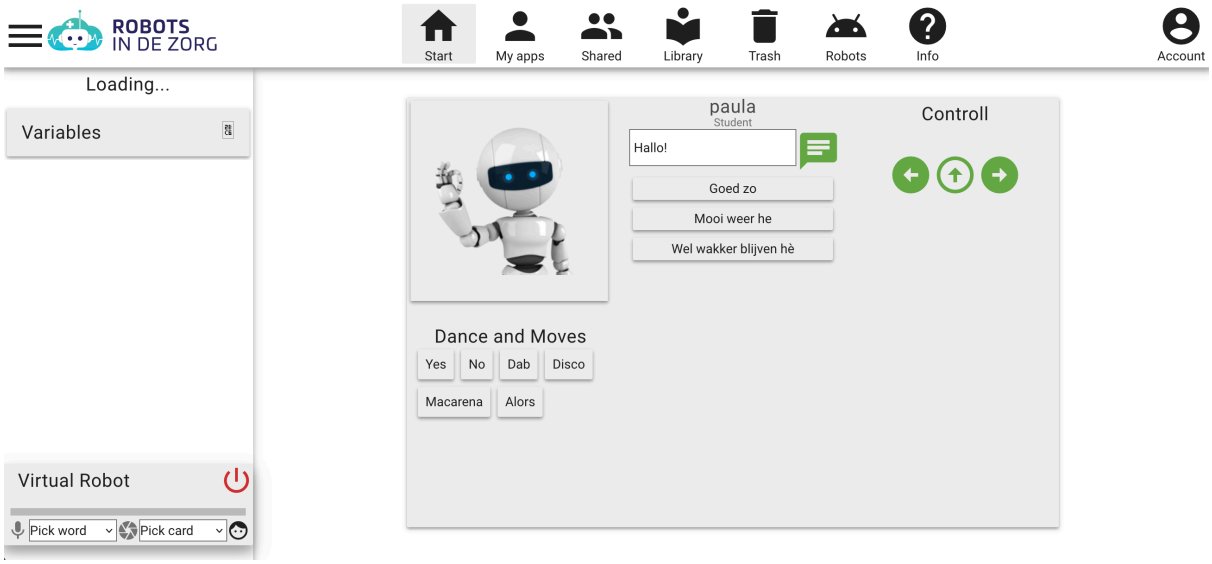
1. Log in:

1. Go to portal.robotsindeklas.nl
2. Select language (right top – pull down menu)
3. Select organization: search rug (press the rug-icon when it appears)
4. Fill in username and password
5. Press Login at <rug-icon>



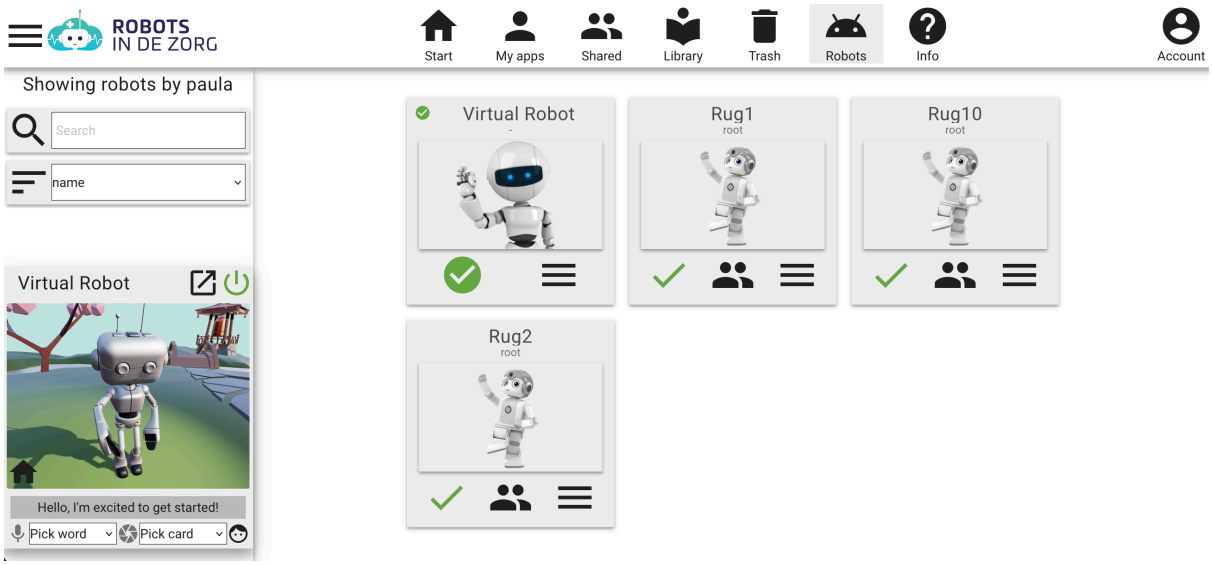
2. The portal

The portal is used to get started with connecting to the robot and to start programming. The portal has various tabs (see figure below). The portal is called ‘Robots in de zorg’ (robots in healthcare), which –like ‘robots in de klas’– is a subsection of the company Interactive Robotics. There are 8 tabs, of which you will generally use only two: Robots and Info, and which will be explained below. The others are used for programming the robot using a scratch-like/blockly programming environment. We will focus on programming the robot in Python. However, if you are interested in programming using the scratch-like environment, feel free to explore those tabs.



2.1 The robot tab

In the robot tab, you see the robots that you have access to. You always have access to the Virtual Robot. The robots Rug1, Rug2, …, Rug10 refer to the Alpha Mini robots with the same label. These may, or may not, be assigned to you.

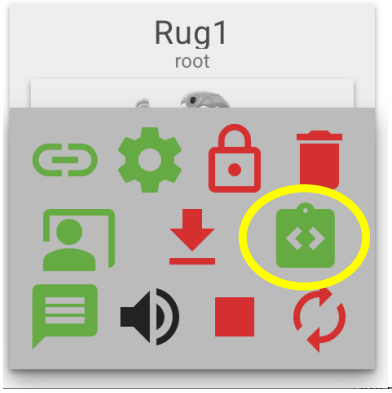


Virtual Robot

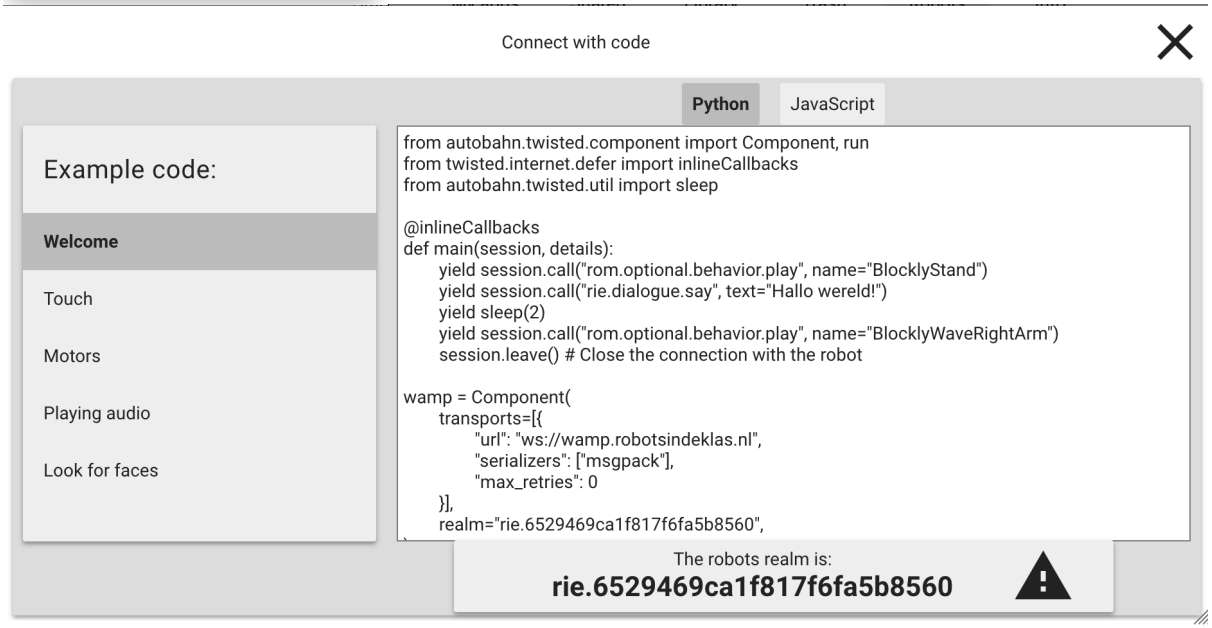
In order to work with the Virtual Robot, you will have to start this robot first by pressing the power button in the right hand corner. Once the Virtual Robot is connected and ready to play, you can program the robot. This works basically the same as with the real robot and will be explained below. Once you have written your python code correctly, you can run this from your computer, and the virtual robot will execute the code you've written. Be aware, though, that while the robot can perform all your called behaviours, it cannot sense the way the real robot can.

Physical robot

Before you can work with a real robot, make sure that both the robot and your laptop are connected to the same WIFI-network (e.g., Setup3). When the robot is connected to the server, a green check mark will become visible in the top-right corner.



Once your robot is connected and ready to play, you can program the robot. To do this, click on its hamburger menu, and a menu with icons will appear as in the picture to the left. Then, you click on the green **<>**-icon (circled) and a popup will appear with some example code (see picture below).



To run one of the examples, copy the code into your favourite python IDE, save it as a python file and run it.

Note: To program, you need to have the following python packages installed: autobahn and OpenSSL. You can do this using pip:

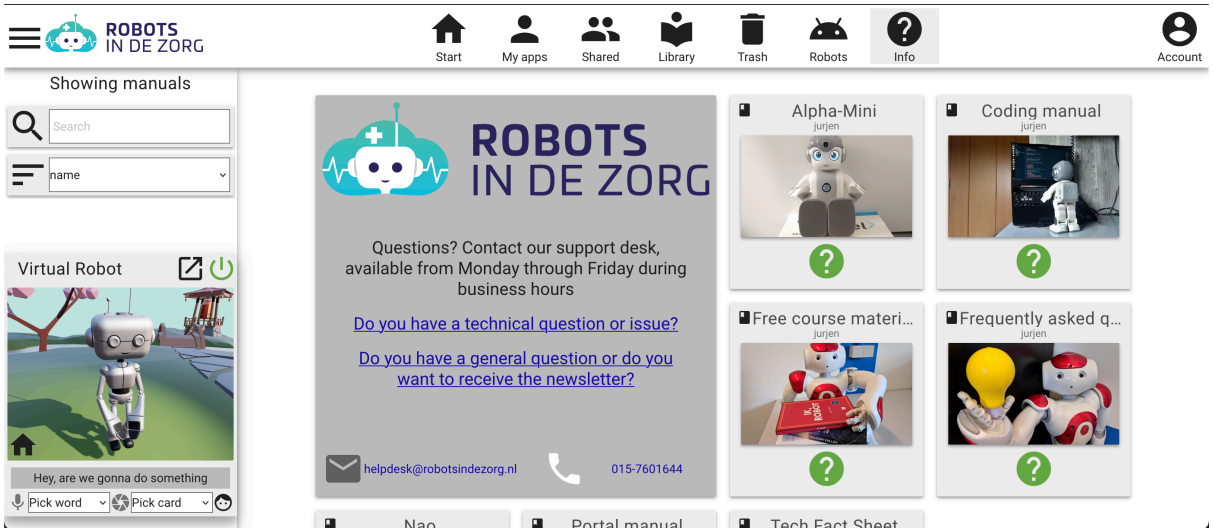
```
pip3 install autobahn [twisted, serialization] pyopenssl
```

Importantly, make sure that the **realm is actual**. This means that the realm (here rie.6529469ca1f817f6fa5b8560) should be the same as indicated in the popup, since each time the robot is reconnected, it may change, especially when some time has passed. When your code fails to run because it cannot connect to the robot, this is probably due to the fact that you do not use the actual realm. In that case, open this popup, and copy the current realm into your source code.

For more information about programming the robot, please refer to the Coding manual (see Section 2.2).

2.2 The info tab

The info tab contains various links to manuals. For us, the important manuals are **Alpha-Mini** containing basic information about the robot, and the **Coding manual** that contains information how to code the robot in Python and JavaScript. To access these manuals, click on the **?**-icon.



3. Some rules & regulations

Please be considerate when working with robots, not only for the robots, but also for yourself and other's around. The following rules and regulations apply:

- Always be careful with handling the robots, especially when they move.
- If, however, something breaks or does not work properly, report this to either your TA, to Marc or to Paul.
- After finished with the robot, place the robot, cable and power-adaptor back in its case (make sure the numbers match!) and return the robot to the TA or Marc.
- Feel free to explore the robot's dances etc, but keep its volume to an acceptable level in order not to disturb others.
- If you have questions or run into a problem, refer to the TA, Marc or Paul.

And, most of all:

Have fun!!