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#### Welcome

### **Project Willy**

- Willy
- Publicity
- Sponsors

### **Startup Willy**

- Driving Willy
- Remote
- Willy Web

### Configuration

- GIT Setup
- Ubuntu
- Remote
- Wiki

#### ROS

- Introduction to ROS
- Navigation

#### **Technical**

- Development Guide
- Findings
- Hardware
- Known Bugs
- Parameters
- Software

### Web interface

- Development Guide
- SAD
- RosNodeIs
- Interaction

#### Research

- Hardware
- Peripherals
- Sensors
- Social interaction

- Software
- Web interface

### Design

- Background
- Design Guide
- Technical
- Realisation

#### **Status and Advice**

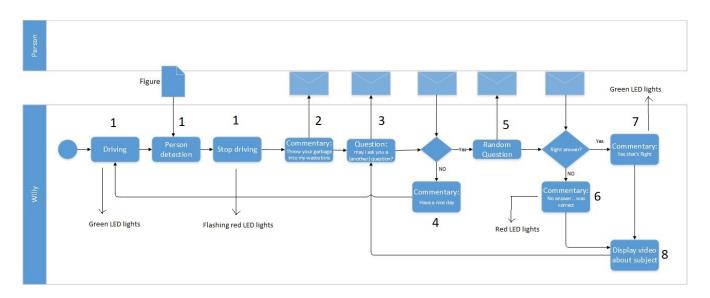
- Status
- Todo & Advice

#### **Archive**

- (2016/2) Initial design
- (2017/1) Base & Functionalities
- (2017/2) Research

## 1. Interaction

## 1.1. Flow Chart



## 1.2. Screen Designs

## 1.2.1. English

1. This is the screen shown when Willy is driving around, and there is not yet a person to interact with.



2. This screen is shown when a person is starting to interact with Willy. At the bottom there are two arroys pointing to the garbage bins.



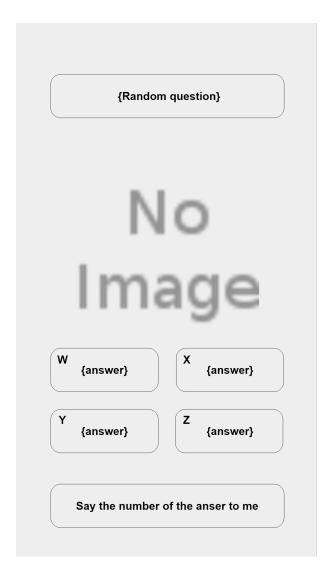
3. After that Willy asks permission to ask a question to the person in front of Willy.



4. When the person says 'no', then this screen is shown, after wich the robot continues driving.

Have a nice day!

5. When the person says 'yes', a random question is shown with a number of multiple choise answers.



6. When the given answer is wrong, this screen is shown.

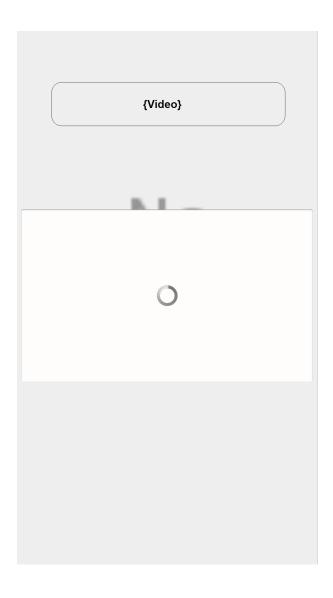
No, anser {...} is incorrect!



7. When the given answer is right, this screen is shown.



8. After the question, Willy starts to play an informative video about garbage.



## 1.2.2. Dutch

For comments at each image, see the English version above.

# No Image

Gooi uw afval in mijn afvalbakken!

## No Image

No No Image Image

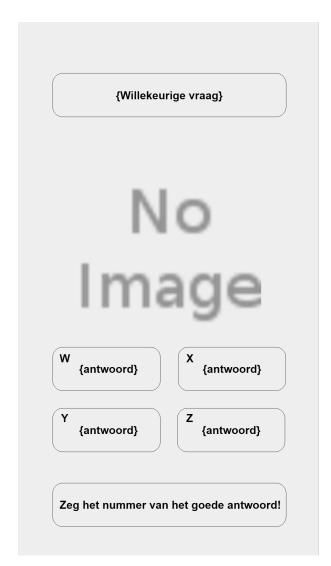
Mag ik je {nog} een vraag stellen?

## No Image

Zeg ja of nee

### Fijne dag verder!

# No Image

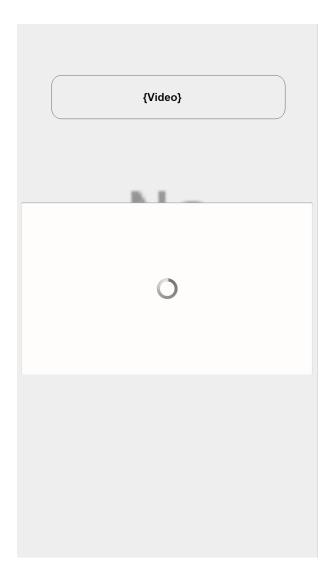


Nee, antwoord  $\{...\}$  is fout.

# No Image

Ja, dat is goed!

# No Image



## 1.2.3. Speech configuration

```
curl -sL https://deb.nodesource.com/setup_9.x | sudo -E bash -
sudo apt-get install -y nodejs
sudo apt-get install -y build-essential
sudo apt-get install python-pyaudio python3-pyaudio sox
pip install pyaudio
sudo apt-get install libmagic-dev libatlas-base-dev
git clone https://github.com/ArtOfRobotics/Speechtest.git
cd Speechtest
node server.js
```