EV3D4

Building the robot

      EV3D4 is a fan robot designed by Vassilis Chryssanthakopoulos from Greece. It is built out of the standard LEGO Mindstorms set. I have made no adjustments to the robot itself.

      This is me building EV3D4; I found the instructions online. It is a pretty simple robot.

Programming the robot

    This is where the real project starts. Originally I thought I would download the original programs, then create my own. But, I could not get the original programs, so my project became recreating the programs.

When starting coding I quickly realized that the standard move forward block would not work because of the motors positioning. The motors are backward because of the instructions. I kept puzzling over how to make the robot move forward when I had an idea. I searched for pictures of the original programming but those did not help. So I found a website that explains the blocks. It turned out to be very simple. I just had to make the wheel power go negative so it turns backward.

Programs

I made five programs for EV3D4:
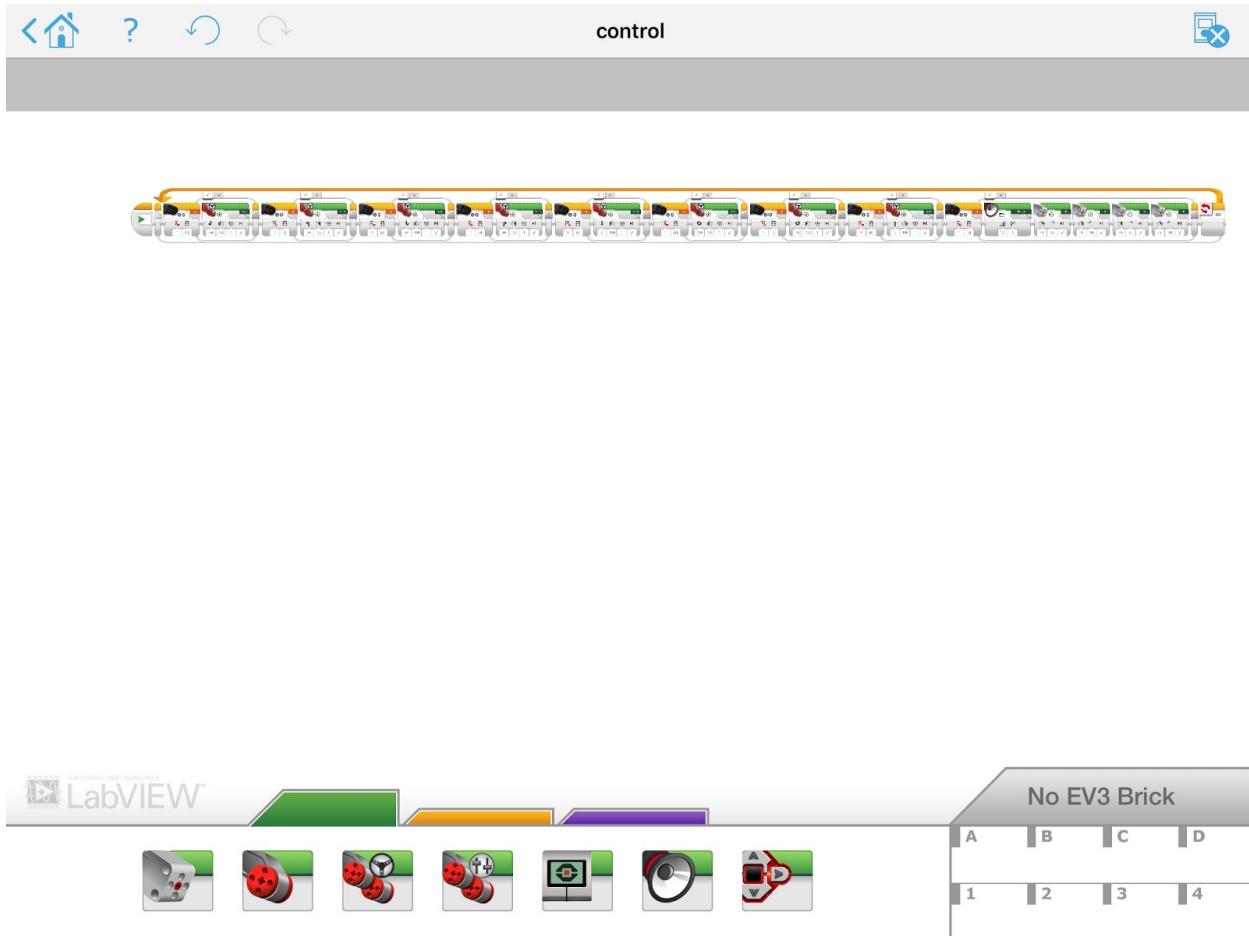
Wandering, in this program the robot goes around and if it sees something it shakes its head and backs up. Click here to watch a video of the program:https://www.youtube.com/watch?v=7-mJySMDjt8
Here is the code:
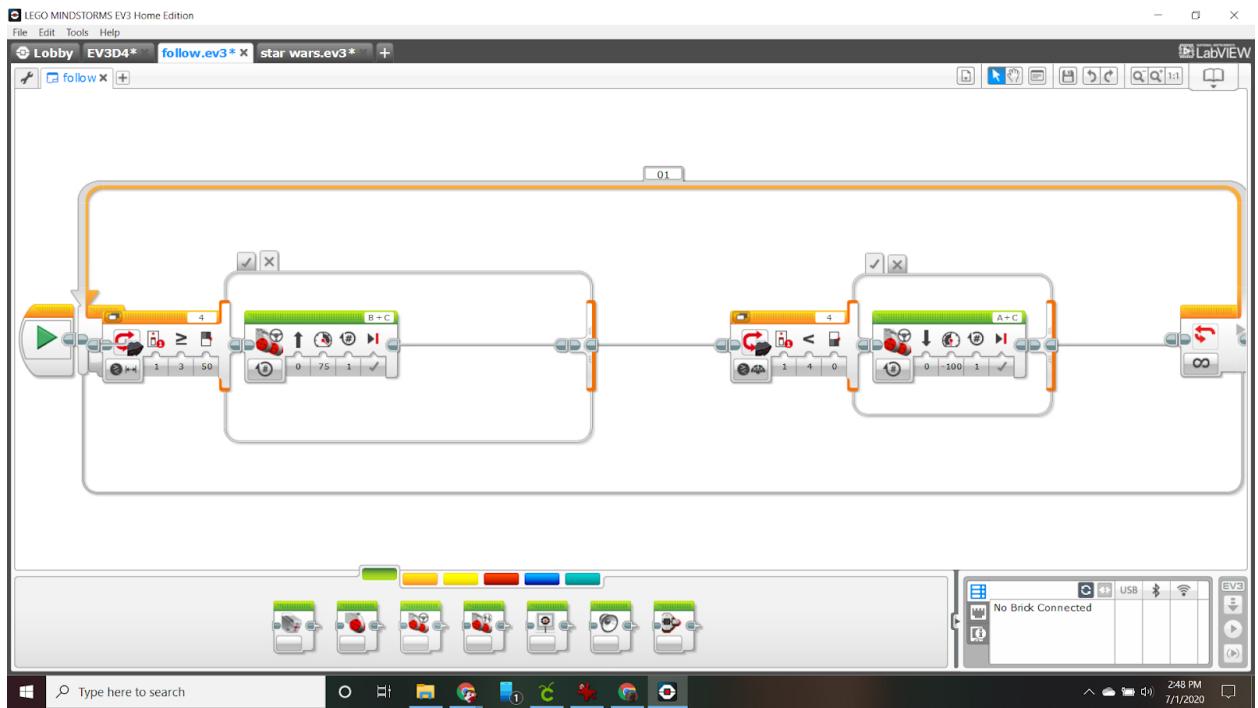
Control, in this program you can control the robot with the LEGO Mindstorms controller. Click here to watch a video of it:https://www.youtube.com/watch?v=106_06flLXU

Here is the code:
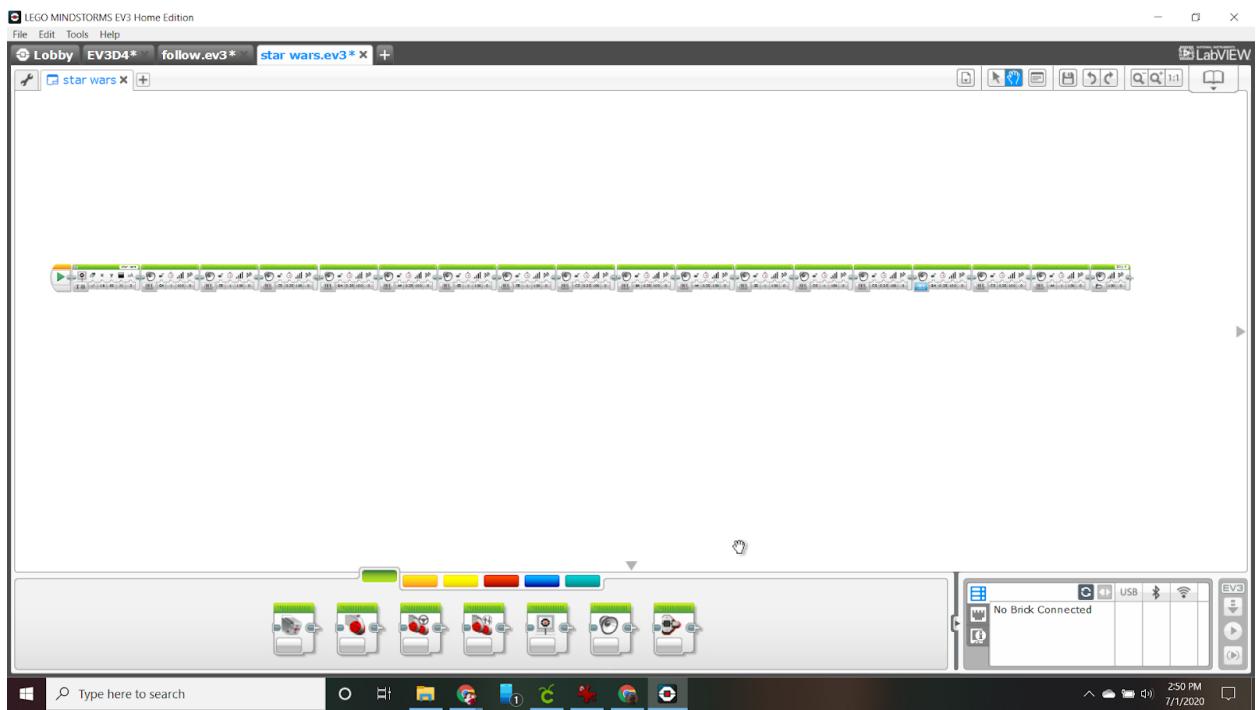
Follow, in this program, the robot will follow the IR beacon on the remote using the IR sensor. Click here to watch a video:https://www.youtube.com/watch?v=QJTlfBXuEMA
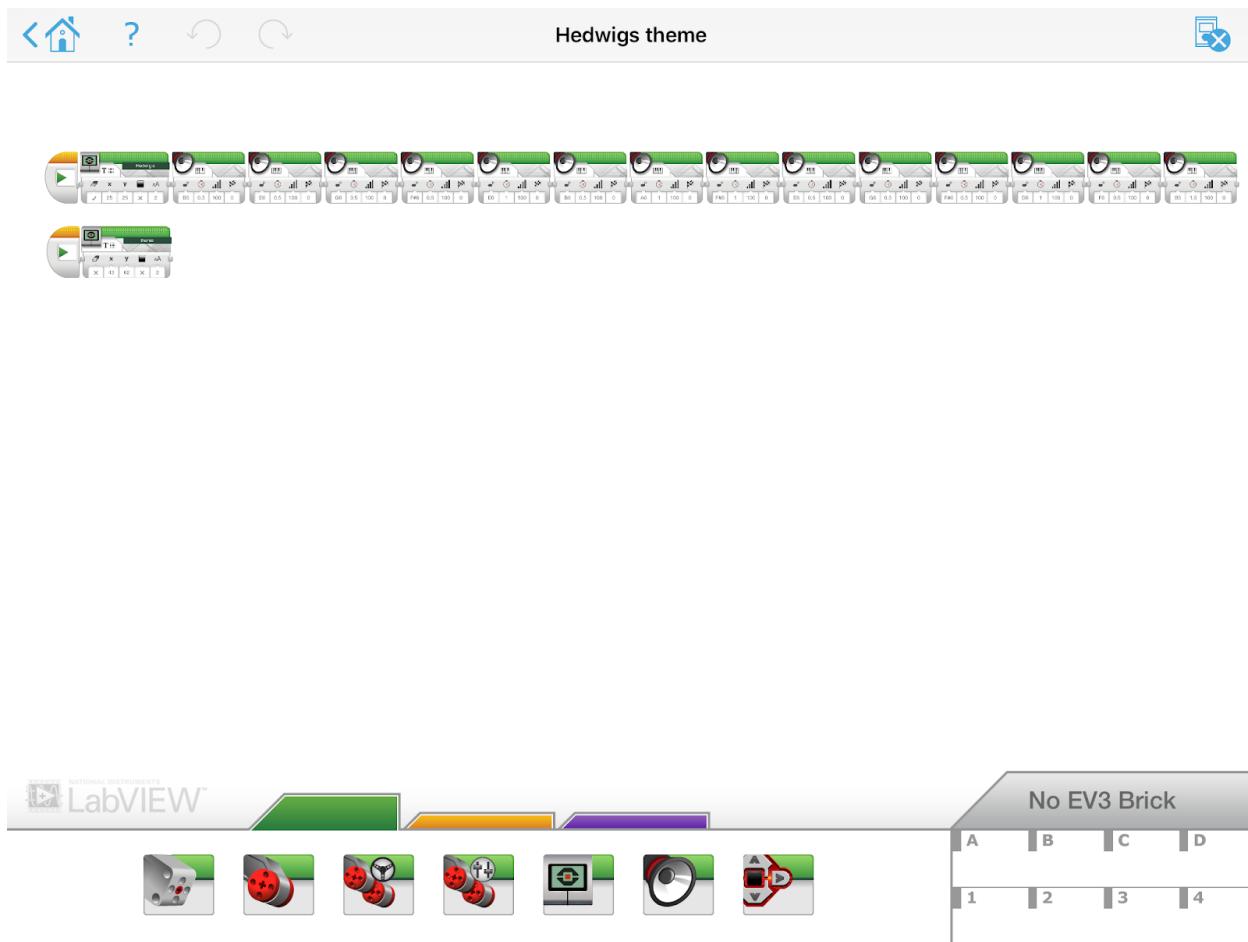
Here is the code:

Hedwig's Theme/Star Wars, in these programs they play the songs and have the song name on the screen. Click here to listen:https://www.youtube.com/watch?v=OR8Ijzdi6tY

Here is the code: Star Wars

Hedwig's Theme

Conclusions

Overall, I think that this is a better project than last year because I did not expect much, so that instead of a project that had things missing it had more than planned. Also, I think that it helped me understand my limits and to set goals I can reach.