

BlueStamp Engineering

Name: Brian J.

Location: Palo Alto

Instructor: Laura Kambourian

Starter Project: #12 Big Time Watch Kit

Main Project: #212 RC Robot Tank

Major Steps to complete the Main Project:

1. Make sure all parts have arrived as planned
2. Assemble tank chassis with DC motors
3. Install arduino UNO and motor shield onto the chassis.
4. Code the arduino to make the tank move (technically the motors are moving). ***This is a milestone. Save all design files, record a video, and post to the website.***
5. Connect the controller (PS2) to the arduino by using the receiver.
6. Coding for remote control (so that it works as intended). ***This is a milestone. Save all design files, record a video, and post to the website.***
7. Get a ultrasonic sensor and learn how to use it.
8. Attach ultrasonic sensor to the motor shield + arduino.
9. Code the arduino to use the sensor to detect objects and that when it does, that the tank will avoid the object (either move back or rotate). ***This is a modification. Save all design files, record a video, and post to the website.***
10. Draw a design for a projectile launcher on paper. The projectile launcher may use a spring (recommended a pen spring), a rubber band, DC motor, or servo motor.
11. After designing, start making parts with wood or cardboard. Tools needed for wood would be a saw and a filer.
12. Assemble the wooden/cardboard parts and experiment with projectile launcher.
13. If the launcher works, mount it on the tank. If it doesn't, re-experiment or even restart from step 10.
14. Repeat steps 10-13 but for the reloader. A reloader is a device that loads the launcher with ammunition automatically. Ammunition is of your choice (I used screw nuts).
15. Once the reloader is done, attach to launcher. ***This is a modification. Save all design files, record a video, and post to the website.***
16. Create full documentation, write a blog post describing the system, and post everything on your webpage.