Mobile Robotics Assignment2

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Introduce:

In assignment, my team is want to design let the robotic can drive avoid the obstacle, measure the distance and degrees, find objects and know where to stop.

Project Robotic Used:

Toucher sensor;

Gyro Sensor;

Ultrasonic sensor;

Servo motor;

Color sensor;

when robotic turn on, it walks forward until it uses his touch sensor touch the obstacle. And then robotic will backwards to get enough space for rotate 90 degrees.

We using the gyro sensor to measure the degrees between the current degree and aim degree, and that make sure the robotic will get 90 degree rotate. Robotic will doing 4 time right-angle rotate which has 2 positive 90 degrees and two negative 90 degrees. We made that is for robotic can steer clear of obstacle and back to right way.

After robotic steer clear of obstacle, it will keep walk forward until it meets the object. At this moment, robotic ultrasonic sensor will measure the distance between itself and object which is smaller than 7 cm. When it arrives the distance that can catch the object. It will use the front servo motor to lay down the robotic arms to catch the object.

After get object, robotic will keep walk forward until it uses color sensor find the white underneath and the robotic will rise it arms to leave object in here.

Finally, robotic will control motor speeds, let motorB slow than motorA so Robotic will autumnally to rotate about 180 degrees. And then robotic will go back where it started, there is a white underneath to let robotic recognize that is place it need to stay.