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# Go Chase It!

REVIEW
CODE REVIEW
HISTORY

## Meets Specifications

Dear student,  
Congratulations on passing this project of the course. Continue on in the course with the same enthusiasm. All the best to gaining more knowledge throughout the course.

Happy learning. Have a great day.

Cheers.

Please don't forget to rate the review which will be helpful to me. Also leave a comment to let me know if I did something good or if you feel there is something that I need to improve in my review strategy to help serve students better as a reviewer.

## Basic Requirements

The student submitted all required files specified in the criteria.
<input checked="" type="checkbox"/> The student submitted all required files specified in the criteria.

**Feedback:** Well done. You have submitted all the required files.

The student followed the same directory structure detailed in the project description section.

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**Feedback:** Please try to follow the directory structure in future projects also so that the review will know where to find the files.

## Robot Design

Robot design requirements:

- Lidar and camera sensors.
- Gazebo plugins for the robot's differential drive, lidar, and camera.
- Housed inside the world
- Significant changes from the sample taught in the project lesson.
- Robot is stable when moving

Robot design requirements:

-  Lidar and camera sensors.
-  Gazebo plugins for the robot's differential drive, lidar, and camera.
-  Housed inside the world
-  Significant changes from the sample taught in the project lesson.
-  Robot is stable when moving

**Feedback:** Well done. Great work on your first robot design in the course. Keep trying new designs to improve your skill level in creating new models.

## Gazebo World

Gazebo world requirements:

- Same as the world designed in the Build My World project or a new world that you design on the building editor for this project.
- Includes a white-colored ball

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✓ Same as the world designed in the Build My World project or a new world that you design on the building editor for this project.

✓ Includes a white-colored ball

**Feedback:** Great. The world contains a white ball that the robot can chase later. Keep up the good work.

## Ball Chasing

`drive_bot` requirements:

- A `ball_chaser/command_robot` service.
- Service accepts linear x and angular z velocities.
- Service publishes to the the wheel joints.
- Service returns the requested velocities.

`process_image` requirements:

- Subscribes to the robot's camera image.
- A function to analyze the image and determine the presence and position of a white ball.
- Requests a service to drive the robot towards a white ball (when present).

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- ✓ A function to analyze the image and determine the presence and position of a white ball.
- ✓ Requests a service to drive the robot towards a white ball (when present).

**Feedback:** Great work. The code is well written and commented. It works perfectly as expected.

## Launch Files

`world.launch` requirements:

- Launch the world (which includes a white ball).
- Launch the robot.

`ball_chaser.launch` requirements:

- Run the `drive_bot` C++ node.
- Run the `process_image` C++ node.

`world.launch` requirements:

- ✓ Launch the world (which includes a white ball).
- ✓ Launch the robot.

`ball_chaser.launch` requirements:

- ✓ Run the `drive_bot` C++ node.
- ✓ Run the `process_image` C++ node.

**Feedback:** Great work on your first project code. It works extraordinarily well. Keep up the great work.

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