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# ← Project review - ROS. Day08

<b>≡</b> Type of project	Individual
O Duration	30 min
Passed Peer Reviews	0/2

Git project

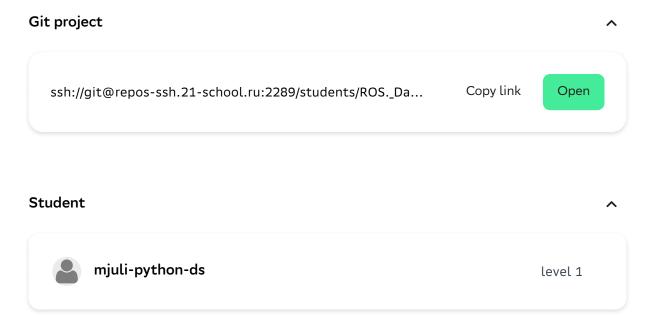
Student

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About

## Introduction

The methodology of School 21 makes sense only if peer-to-peer reviews are done seriou sly. Please read all guidelines carefully before starting the review.

- Please, stay courteous, polite, respectful and constructive in all communications during this review.
- Highlight possible malfunctions of the work done by the person and take the time to discuss and debate it.
- Keep in mind that sometimes there can be differences in interpretation of the tasks a nd the scope of features. Please, stay open-minded to the vision of the other.
- If you have not finished the project yet, it is compulsory to read the entire instruction before starting the review.

## **Guidelines**

- Evaluate only the files that are in src folder on the GIT repository of the student or group.
- Ensure to start reviewing a group project only when the team is present in full.
- Use special flags in the checklist to report, for example, an "empty work" if repositor y does not contain the work of the student (or group) in the src folder of the develop br anch, or "cheat" in case of cheating or if the student (or group) are unable to explain th eir work at any time during review as well as if one of the points below is not met. How ever, except for cheating cases, you are encouraged to continue reviewing the project t o identify the problems that caused the situation in order to avoid them at the next rev iew.
- Doublecheck that the GIT repository is the one corresponding to the student or the group.
- Meticulously check that nothing malicious has been used to mislead you.
- In controversial cases, remember that the checklist determines only the general order of the check. The final decision on project evaluation remains with the reviewer.

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# Main part

## Exercise 00 - Publisher and color space switcher.

- Does the package compile successfully?
- Launch file day\_08\_ex\_00.launch starts successfully?
- Run rosrun rqt\_graph rqt\_graph in console. Are there 2 ROS nodes?
- Run rostopic list in console. Are there topics /image/color and /image/gray?
- Run rostopic hz /image/color in console. The frequency is approximately 10?
- Run rostopic hz /image/gray in console. The frequency is approximately 10?
- Look at images in the topics using rosrun rqt\_image\_view rqt\_image\_view. Do you see c olor image in the /image/color topic and gray image in the /image/gray topic?

No 🗸 Yes

## Exercise 01 - Image correction.

- Does the package compile successfully?
- Launch file day\_08\_ex\_01.launch starts successfully?
- Run rosrun rqt\_graph rqt\_graph in console. Are there 2 ROS nodes?
- Run rostopic list in console. Are there topics /image/origin, /image/contrast\_brightness and /image/gamma?
- Look at images in the topics using rosrun rqt\_image\_view rqt\_image\_view. Do you see c olor image in the /image/origin?
- Run rosrun rqt\_reconfigure rqt\_reconfigure in console and select params for corrector. Does the image in the /image/contrast\_brightness topic change when changing the cont rast and brightness settings in rqt\_reconfigure?
- Does the image in the /image/gamma topic change when changing the gamma setting s in rqt\_reconfigure?
- Set contrast = 5 and brightness = 55 in rqt\_reconfigure. The image in the /image/contra st\_brightness topic should become pretty awesome.
- Set gamma = 0.25 in rqt\_reconfigure. The image in the /image/gamma topic should bec ome pretty awesome (but the contrast-brightness image should be better).

No 🗸 Yes

## Exercise 02 - Canny detector.

- Does the package compile successfully?
- Launch file day\_08\_ex\_02.launch starts successfully?
- Run rosrun rqt\_graph rqt\_graph in console. Are there 2 ROS nodes?
- Run rostopic list in console. Are there topics /image/origin and /image/canny?
- Look at images in the topics using rosrun rqt\_image\_view rqt\_image\_view. Do you see c olor image in the /image/origin?

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- Run rosrun rqt\_reconfigure rqt\_reconfigure in console and select params for canny dete ctor. Check that you can set only 3 (3x3), 5 (5x5) or 7 (7x7) for blur kernel size and cann y kernel size.
- Does the image in the /image/canny topic change when changing settings in  $rqt\_recon$  figure?
- Set Blur kernel 3x3, Canny kernel 5x5, Canny low threshold 387, Canny high threshold 4085 using rqt\_reconfigure. You should see detected edges in the /image/canny topic. It should look like the image in the instruction for this exercise.

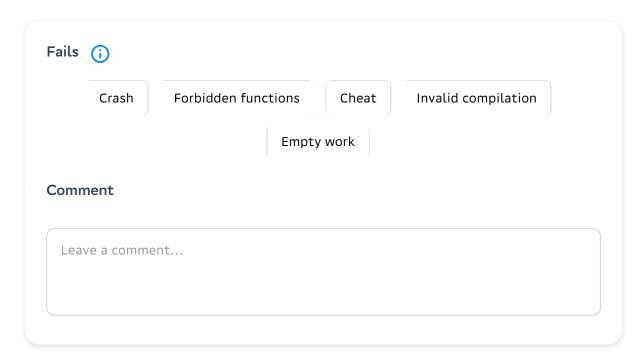
No 🗸 Yes

## Exercise 03 - Aruco detector.

- Does the package compile successfully?
- Run rosbag play --loop Day08/misc/bags/day\_08\_circle.bag in console.
- Launch file day\_08\_ex\_03.launch starts successfully?
- Run rostopic list in console. Are there topics /camera/markers and /tf?
- Look at images in the topics using rosrun rqt\_image\_view rqt\_image\_view. Do you see c olor image in the /camera/color/image\_raw and the same image with detected markers i n the /camera/markers topic?
- Run rviz, select marker\_frame as a fixed frame and add TF data. You should see moving trajectories of the camera. It should look like a circle.

No 🗸 Yes

#### **Feedback**



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Review

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