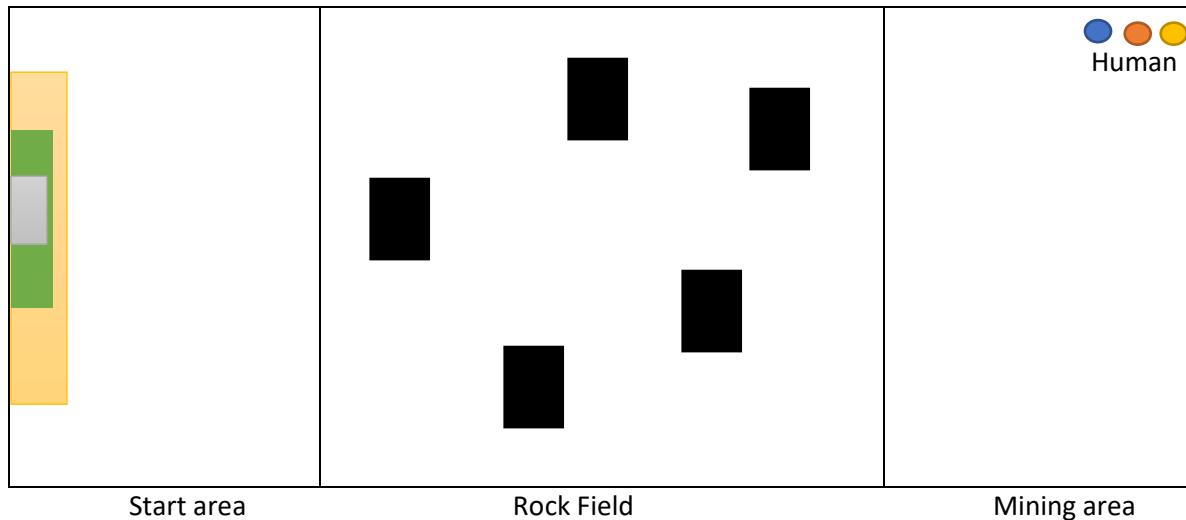


If you have the original version of this file downloaded, delete it, this one is updated with the proper colors and information as of April 15th.

Final Project 2019



1. Traverse from start area to mining area
 - a. Start at any orientation and turn and go to mining area
 - b. Identify mining area when you cross over it (there will be a line – the line is same color as the line following assignment) verbally by robot
 - c. Subtract points for rocks hit (rocks are white notebooks, three will be set out).
2. Mining area, mine ice.
 - a. Find human with ice
 - b. Drive to human
 - c. Ask human for ice
 - d. Human has three types of ice that correspond with colors of scoring areas.
 - e. Ignore colors that are not your goal (you will declare your goal before you run), only take color ice of your end goal.
 - f. Close gripper on ice and take it away. Ice will be the colored poster board on goal cut and wrapped around a pen that the robots can hold.
3. Return to start area across rock field.
 - a. Subtract points for rocks hit
 - b. Identify start area when crossing line verbally (by robot). Start line will be a line of paper similar to the gold paper line, but this one will be blue.
4. Depositing of ice
 - a. Three goals big, medium and small each with unique color.
 - i. Yellow big goal

- ii. Green medium goal
 - iii. Pink smallest goal
- b. Drop ice in goal that matches the color you took from user.
- 5. Do it under time limit A, and get a 8 point bonus
 - a. Miss all the rocks and do it under time limit B and you get 12 bonus points

Other Rules:

1. You can put visual markers on the end of the playing field, East of mining area and West of starting area,
2. You can put something for visual cue on the dumping bins, which can be the same as your West of Starting area marker. But it has to be able to attach without breaking or altering box and it can't be a funnel, or higher than the box side, it can be a backboard if you'd like, but can't be bigger than the box height. Start measuring from box top. The visual cue can't be bigger than the target box in height, width or length.
3. If not attempting beginning orientation you can place your robot on center X facing the way you want it. Then three notebooks will be set up after robot is placed.
4. Open Lab times are posted on the announcements on D2L and in an email I sent out.
5. Robots with working arms will be saved for people working in the ball retrieval, so if you're just working on navigation you can use a non-arm robot while programming.
6. EACH TEAM GETS THREE ATTEMPTS AND WE USE THE HIGHEST POINT TOTAL.
7. Score sheets will be attached on D2L below this link.
8. If you need to turn your robot manually during the run you can do that, but each time you touch your robot you will lose 4 points.