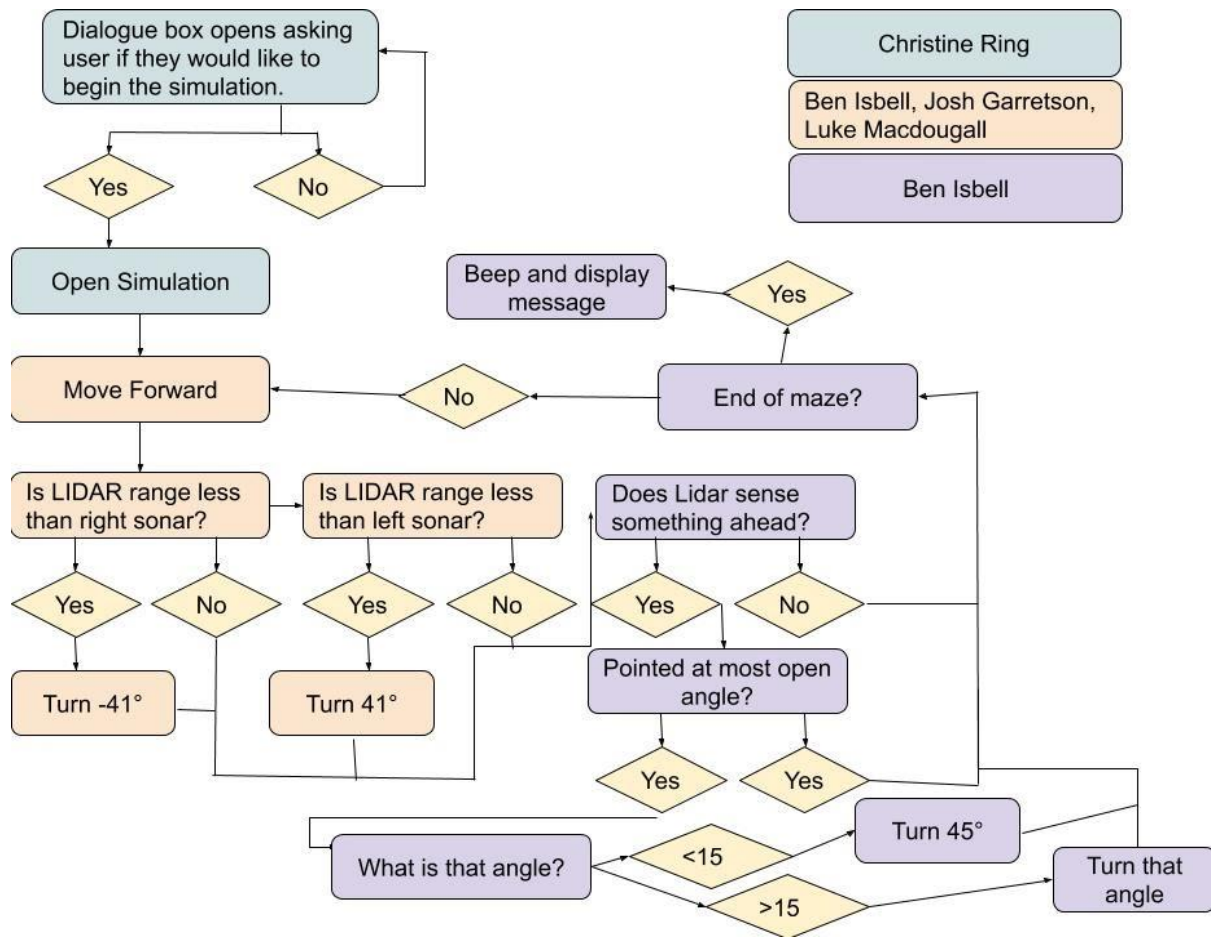


Virtual Robot Project

EF 230

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For our virtual robot project, we elected to create a maze and code a robot to solve it. Our approach to solving this maze consisted of making a program that tells our robot to find the path that has the most space in front of it before hitting a wall and move in that direction. We were able to do this by creating a code with a series of conditionals and loops, utilizing the Sonar and LIDAR features of the robot simultaneously. We recognize that this may not be the most time efficient route, but we felt like it was the best way to ensure that our robot would be able to tackle nearly any maze, no matter the shape. We also added a feature that asks if the user would like to start the simulation. If they select yes, the robot will start going through the maze. When the robot finishes the maze, a beeping sound is emitted, and a message is displayed.



Output information

COMMAND WINDOW

```
setting turn path to shortest route. Going to turn clockwise
Done turnAngle
Done travelDist

LidarForward =
    1.3364

Sright =
    1.3528

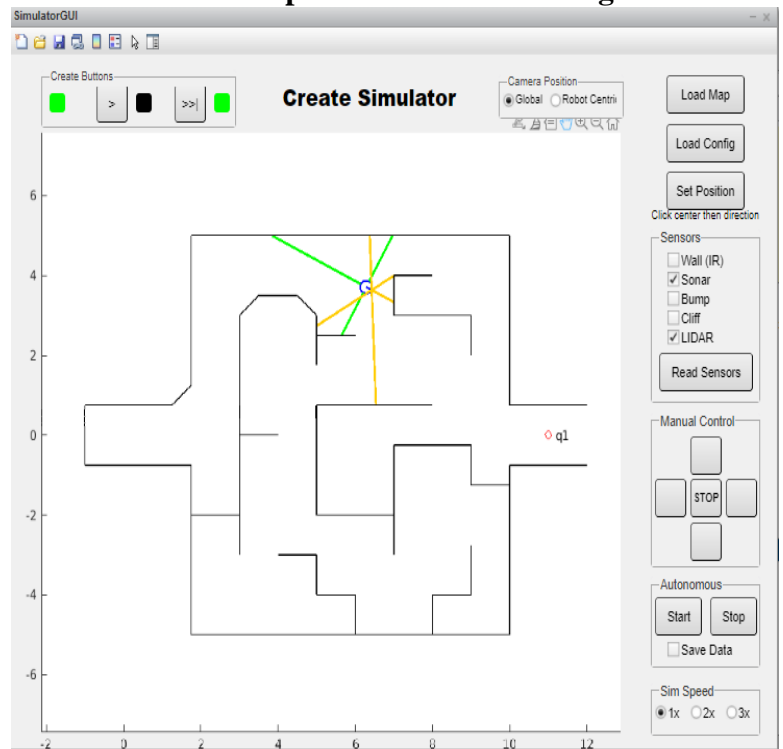
Sleft =
    0.9668

Sright =
    0

Sleft =
    0

Done travelDist
```

Map while robot is running



RoombaVideo.mp4