**Electronics-Robotics**

**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Building, testing, programming, and roaming using the whiskers**

While working on this extended project you will need to study and understand the material presented because at various points you may be asked questions about either the hardware or the software. You need to understand what each electronic component is doing and the purpose of each line of program code.

1. Go to <http://learn.parallax.com/tutorials/robot/activitybot/blocklyprop-robotics-activitybot/navigate-touch/build-whisker-switches>

 and build the whiskers.

1. Show your completed bot to the instructor, who may ask questions to verify your understanding of the material. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Go to <http://learn.parallax.com/tutorials/robot/activitybot/blocklyprop-robotics-activitybot/navigate-touch/test-whisker-switches> Test the whiskers to be sure they are working
3. Show your completed bot to the instructor, who may ask questions to verify your understanding of the material. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Go to <http://learn.parallax.com/tutorials/robot/activitybot/blocklyprop-robotics-activitybot/navigate-touch/whisker-wheel-response> and verify that your bot performs properly.
5. Go to <http://learn.parallax.com/tutorials/robot/activitybot/blocklyprop-robotics-activitybot/navigate-touch/roaming-whiskers> load the program and verify that your bot performs properly, responding to whisker hits.
6. Show your completed bot to your instructor, who may ask questions to verify your understanding of the material. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. The final test is to navigate a fairly simple maze. You will be timed and the time taken to complete the maze will determine your grade. (Fastest time, best grade.) You will see the maze beforehand, so you are free to modify your program to be more responsive to the particular maze.
8. Maze completion time: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. Extension: Add to the program so that when the robot is in reverse it beeps intermittently, like a bus or truck.