

Assignment 1 Individual Report

By William Wallace, in Group 13

Participants in Group 13: Pakjira Jitsawatpaiboon, Dominic Stufkens, Minh Tran
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General

I found that our group worked very well. Mostly everyone was motivated and willing to help, for example if one member wasn't adept enough at Python to work on one part of the project, they'd find another way that they could help – like by working on an algorithm instead.

Our approach initially involved meeting together to discuss how we would communicate with one and other and how we generally wanted the robot to work. We decided on communicating by Facebook and attaching the updated version of our code each time we made additions. We also took great care in explaining what additions to the code were made after each version, so that the whole group could understand and tweak it if necessary. We prioritised building the parts of the robot that we thought were essential, for example forwards movement, and turning, and then we build less essential algorithms of the robot closer to when the deadline was due for submission, for example using the US sensor and the touch sensor. This is because we felt that using these sensors was not essential to the task since we could hard code the robot to do so, but we wanted to incorporate them at the end if we could.

Splitting up the work

Our group decided to split up the workload up largely based on our strengths and weaknesses. I have made my contributions more visible in **bold** text:

- **Each of us set up PyCharm on our own university profiles, and I helped Minh get his set up since he was having trouble with it initially.**
- Pakjira and I lived closest to the university, so **we took turns at taking the robot home, charging it, and returning it the morning.**
- **Each of us contributed to the algorithms and pseudocode that the robot used.** This was done by each watching how the robot would work and discussing and brainstorming how we could solve each problem.
- Pakjira and Dominic were the most familiar with Python, so they were largely involved with coding the robot based on how each of us in the group drafted the pseudocode. Dominic was involved in coding the robot at the very start, for example to get it to move and turn. Alternatively, Pakjira was more involved in coding the error correction, US and touch sensors. This is because nearing the deadline, Dominic was unable to work on COSC343 because he had a more urgent deadline due to another university paper. They also cleaned and commented the code as they went. By getting only two people to code the robot rather than four, this reduced the chance that one person's code would interfere with another person's code. This also increased efficiency because less errors were made in the coding process.
- Fine tuning of the robot was necessary to get the robot to turn approximately 90 degrees, so that it did not go off-course. **I was involved in tweaking the robot to carry this out.**
- Minh was involved in testing the US sensor.
- **I wrote the bulk of the group report based after consulting each member of the group for their input on what topics needed to be discussed.** Pakjira contributed to the report by adding the relevant sections of code and making it more accurate, and additional comments were made by Dominic just before submission.

Lessons Learned

- You can greatly boost morale in the group by showing your gratitude for the work that someone else has contributed. Morale goes a long way.
- Communication is important. Always tell the group about what you have updated to the code. This will cause problems otherwise!
- Group work can be fun if everyone gets along. It feels good to know that you have members to support you and that you aren't doing everything alone.