Group 2

Team Organization & Task Allocation

Team Organization:

In this project our team will be limited to only two members because of the inability of a third member to participate. We two members will try to divide all the tasks equally so that neither of us will be overworked and so that each does our fair share of the work.   Success of our team will depend on both the ability to coordinate tasks and having maximum communication. We will try to maintain a democratic atmosphere between us so that any of the suggestions or comments will not be left unheard. We will try to work using continuous feedback from each other so that if there is any possibility of lagging behind in any of the areas then the other member can provide assistance.

In our previous organization, our team had three participating members - the fourth member had dropped during the first week of class. Our previous team organization did not work out so well because of two reasons:
1. A major delay was caused by the failure of one team member to meet. Because he was unable to meet and because the construction of the prototype was already complete, all three members were sitting idle. Because of this, the whole project was set back and testing did not take place early enough. To remedy this first problem, as mentioned above, we will use continuous feedback and we will exchange the robot kit as quickly as possible when needed. Also, we will commence the testing phase as early as possible.
2. After the Demonstration of the first project, the absent member mentioned above offered to complete the project 1 final report. However, he was unable to complete it. It was the fault of the other two members to not check on the progress of the absent member. If the other two members had checked on the progress and had noticed that it was not being done at a reasonable rate, they could have turned in the final report by the due date. Again, as mentioned above, we will use continuous feedback between members to fix this problem.

Task Allocation:

A few important tasks that will be covered during this project are listed and described below, followed by a task allocation table which describes who will work on which task.

1) Brainstorming:

   This will be the first step to start the project. This is important because only two members are working and it is important to share each other's views of how we are going to approach the problem. Both the team members will sit together to decide what the key features of the robot design will be, how it will work, and which sensors to use so that robot will be designed accordingly.

2) Prototype Robot Design:

   A prototype model of the robot will be built without adding strengthening Lego components so that it can be easily disassembled and rebuilt during the testing phase.

3) Programming Prototype:

   The initial programming structure will be completed to test the prototype robot model and will be further reworked according to the problems seen while testing.

4) Testing Prototype:

   This will the most important task which will basically consist of testing how the prototype robot reacts with its environment when the robot structure and programming code are integrated together to work as one. This task is a continuous loop task in which the prototype model and programming code will be modified frequently until final results are established. This task will not be considered complete until the final design works accurately in the target niche.

5) Finished Robot:

   After it is established that the program code and prototype model are responding the way they should, the final task will be making the robot structure robust enough so that it will not fall apart during the demonstration or while retesting.

6) Documentation, Written Report and Presentation:

   Both team members will take notes during meetings and while completing their individual tasks so that the report writing work will not be left until the very last moment and so that time can be used effectively preparing for the presentation.

Task Allocation Table

Task	Member Assigned	Reason for Allocation
Brainstorming	Amandeep Gill & Joshua Shuller	Both members present their views to start the project.
Prototype Robot Design	Amandeep Gill	-Mechanical Engineering background. -Provide change from last project.
Programming Prototype	Joshua Shuller	Interest in programming.
Testing Prototype -Make changes to design. -Debug problems in code.	Amandeep Gill & Joshua Shuller	Members can make necessary changes for the problems encountered during testing.
Final Design	Amandeep Gill	Worked on initial design.
Written report	Josh Shuller & Amandeep Gill	Both members will do work related to their assigned task.

Summary:

```
while (!robotWorks) {
    if (Aman.buildPrototype() == SUCCESS) {
        if (Josh.programPrototype() == SUCCESS) {
            robotWorks = JoshAndAman.testPrototype();
        }
        Josh.takeNotes();
    }
    Aman.takeNotes();
}
Aman.constructFinalRobot();
AmanAndJosh.writeReport();
```