Appendix H: Logbook

Team Name:	The Special Group
Group Number:	14
Team Members:	1) Lim Yap Khye
	2) Chong Zheng You
	3) Sharvin
	4) Lim Wei Neng
	5) Jacky Hu

Week 3 Project Log:

Period: 4 AUG 2024 - 10 AUG 2024
Review: 1. Although the number of group members is still in flux, we have roughly defined the division of labor between software and hardware. Two members are mechanical engineering, one is electrical engineering, and two are mechatronics engineering. The mechanical engineers will design the components and main mechanisms, while the rest of the group will handle programming and debugging. 2. Starting this week, we started to prepare for the planning. We need to refer to the previous projects done by the seniors and make a list of projects of what we want to accomplish.
Achievements: 1. (Group14) Reading seniors' projects and briefly getting the ideas of how the final project will be.
Action Plan: 1. Brainstorm ideas of what we are going to do for our project. (PIC: Group14 , Due Date: 17 AUG 2024, 11:59pm)

Week 4 Project Log:

Period: 11 AUG 2024 - 17 AUG 2024
Review: 1. Brainstorm ideas of what we are going to do for our project. (PIC: Group14, Due Date: 17 AUG 2024, 11:59pm, Outcome: extend to 24 AUG 2024, 11:59pm)
Achievements: 1. (Group14) Come out with the idea of “Tin crusher” but the details of it still need to be considered.
Action Plan: 1. Details of “Tin crusher”. (PIC: Group14, Due Date: 24 AUG 2024, 11:59pm) 2. Learn how to use Automation Studio to build and simulate circuits. (PIC: Group14, Due Date: 31 AUG 2024, 11:59pm)

Week 5 Project Log:

Period: 18 AUG 2024 - 24 AUG 2024
Review: 1. Brainstorm ideas of what we are going to do for our project. (PIC: Group14, Due Date: 24 AUG 2024, 11:59pm, Outcome: completed) 2. Details of “Tin crusher”. (PIC: Group14, Due Date: 24 AUG 2024, 11:59pm, Outcome: completed) 3. Learn how to use Automation Studio to build and simulate circuits. (PIC: Group14, Due Date: 31 AUG 2024, 11:59pm, Outcome: in progress)
Achievements: 1. (Group14) After careful consideration, we have decided to build a “Tin crusher” as our project. 2. (Group14) The system will use two cylinders and one sensor to sort and compress the cans. 3. (Group14) We still learn to use Automation Studio and get used to it. There are more components we need to know.
Action Plan: 1. Design of compression chamber on Solidworks and methods of sorting. (PIC: YKLim, ZYChong, Due Date: 31 AUG 2024, 11:59pm) 2. Design of the funnel for putting cans on the conveyor belt. (PIC: YKLim, ZYChong, Due Date: 31 AUG 2024, 11:59pm)

Week 6 Project Log:

Period: 25 AUG 2024 - 31 AUG 2024
Review: 1. Learn how to use Automation Studio to build and simulate circuits. (PIC: Group14, Due Date: 31 AUG 2024, 11:59pm, Outcome: completed) 2. Design of compression chamber on Solidworks and methods of sorting. (PIC: YKLim, ZYChong, Due Date: 31 AUG 2024, Outcome: completed) 3. Design of the funnel for putting cans on the conveyor belt. (PIC: YKLim, ZYChong, Due Date: 31 AUG 2024, 11:59pm, Outcome: completed)
Achievements: 1. (Group14) We all know how to use AS to build complex circuits and simulate them. 2. (YKLim, ZYChong) The outline of the compression chamber has been designed and has two designs for different sizes of cans which we still need to consider later. 3. (YKLim, ZYChong) The outline of the funnel has been designed, but the size is pending on the layout of our project system.
Action Plan: 1. Learn how to use Automation Studio to build PLC circuits. (PIC: Group14, Due Date: 7 SEP 2024, 11:59pm) 2. Try to build AS circuit of the project according to IDA circuit. (PIC: WNLim, Due Date: 7 SEP 2024, 11:59pm) 3. Online Group meeting (PIC: Group14, Date: 1 SEP 2024, 10:00pm)

Week 7 Project Log:

Period: 1 SEP 2024 - 7 SEP 2024
Review: 1. Learn how to use Automation Studio to build PLC circuits. (PIC: Group14, Due Date: 7 SEP 2024, 11:59pm, Outcome: extended to 14 SEP 2024, 11:59pm) 2. Try to build the AS circuit of the project according to the IDA circuit. (PIC: WNLim, Due Date: 7 SEP 2024, 11:59pm, Outcome: extend to 14 SEP 2024, 11:59pm)
Achievements: 1. (Group14) Each member has already had some idea of how PLC works but obviously we need more time to digest what we've learnt (since it's harder than we thought). 2. (WNLim) Logic thinking is hard, therefore, extended for 1 week to take time thinking of the system logic. 3.
Action Plan: 1. Start preparing the components and materials we are going to use. (PIC: YKLim, ZYChong, Due Date: 21 SEP 2024, 11:59pm) 2. Learn how to startup and use TIA to build and simulate circuits. (PIC: SGupta, JHu, Due Date: 14 SEP 2024, 11:59pm)

Week 8 Project Log:

Period: 8 SEP 2024 - 14 SEP 2024
Review: 1. Learn how to use Automation Studio to build PLC circuits. (PIC: Group14, Due Date: 14 SEP 2024, 11:59pm, Outcome: completed) 2. Try to build the AS circuit of the project according to the IDA circuit. (PIC: WNLim, Due Date: 14 SEP 2024, 11:59pm, Outcome: extend to 21 SEP 2024, 11:59pm) 3. Start preparing the components and materials we are going to use. (PIC: YKLim, ZYChong, Due Date: 21 SEP 2024, 11:59pm, Outcome: in progress) 4. Learn how to startup and use TIA to build and simulate circuits. (PIC: SGupta, JHu, Due Date: 14 SEP 2024, 11:59pm, Outcome: completed)
Achievements: 1. (Group14) All members are familiar with how the PLC works and how to build PLC circuits in AS. 2. (WNLim) We have made some changes in the project circuit, so we need to make corresponding changes in AS. 3. (YKLim, ZYChong) Most of the materials and components are delivered but we are waiting for the inductive sensor to start planning the layout of the project. 4. (SGupta, JHu) SGupta is familiar with TIA manipulation whereas JHu needs to practice more on it.
Action Plan: 1. Starting to build a brief circuit on TIA based on the AS circuit. (PIC: SGupta, JHu, Due Date: 21 SEP 2024, 11:59pm) 2. Online Group meeting (PIC: Group14, Date: 15 SEP 2024, 10:00pm)

Week 9 Project Log:

Period: 15 SEP 2024 - 21 SEP 2024
Review: 1. Try to build the AS circuit of the project according to the IDA circuit. (PIC: WNLim, Due Date: 21 SEP 2024, 11:59pm, Outcome: completed) 2. Start preparing the components and materials we are going to use. (PIC: YKLim, ZYChong, Due Date: 21 SEP 2024, 11:59pm, Outcome: completed) 3. Starting to build the circuit on TIA based on the AS circuit. (PIC: SGupta, JHu, Due Date: 21 SEP 2024, 11:59pm, Outcome: completed)
Achievements: 1. (WNLim) Finished building the circuit in AS. 2. (YKLim, ZYChong) All components and materials are received and we can start building the system. 3. (SGupta, JHu) Finished building the circuit in TIA.
Action Plan: 1. Build the actual circuits in the lab and test it (PIC: SGupta, YKLim, Due Date: 5 OCT 2024, 11:59pm) 2. Build the junction box. (PIC: YKLim, WNLim, Due Date: 5 OCT 2024, 11:59pm) 3. Build the compression chamber and funnel (PIC: YKLim, ZYChong,Due Date: 5 OCT 2024, 11:59pm)

Week 10 Project Log:

Period: 29 SEP 2024 - 5 OCT 2024
Review: 1. Build the actual circuits in the lab and test it (PIC: SGupta, YKLim, Due Date: 5 OCT 2024, 11:59pm, Outcome: extend to 12 OCT 2024, 11:59pm) 2. Build the junction box. (PIC: YKLim, WNLim, Due Date: 5 OCT 2024, 11:59pm, Outcome: completed) 3. Build the compression chamber and funnel (PIC: YKLim, ZYChong, Due Date: 5 OCT 2024, 11:59pm, Outcome: completed)
Achievements: 1. (SGupta, YKLim) Something goes wrong in the output which needs to be fixed this week. 2. (YKLim, WNLim) The junction box is built and labeled, and ready to be connected to the circuits. 3. (YKLim, ZYChong)The compression chamber and funnel is built and ready to be placed.
Action Plan: 1. Build the whole circuit according to the TIA and AS circuits (PIC: Group14, Due Date: 12 OCT 2024, 11:59pm) 2. Online Group meeting (PIC: Group14, Date: 6 OCT 2024, 10:00pm)

Week 11 Project Log:

Period: 6 OCT 2024 - 12 OCT 2024
Review: 1. Build the actual circuits in the lab and test it (PIC: SGupta, YKLim, Due Date: 12 OCT 2024, 11:59pm, Outcome: completed) 2. Build the whole circuit according to the TIA and AS circuits (PIC: Group14, Due Date: 12 OCT 2024, 11:59pm, Outcome: completed)
Achievements: 1. (SGupta, JHu) It was found that you can't have two identical outputs at the same time, as this affects the final output. Changes have been made to fix the problem. 2. (Group14) Finished building all the circuits in the system and ready for testing. 3.
Action Plan: 1. Test and finalise the circuit. (PIC: Group14, Due Date: 19 OCT 2024, 11:59pm) 2. Adjust positions of the components to allow the system to work smoothly. (PIC: Group14, Due Date: 19 OCT 2024, 11:59pm) 3. Ensure safety standards are met. (PIC: Group14, Due Date: 19 OCT 2024, 11:59pm) 4. Ensure presentation criterias are discussed and accounted for before the final preparations. (PIC: Group14, Due Date: 19 OCT 2024, 11:59pm)

Week 12 Project Log:

Period: 13 OCT 2023 - 19 OCT 2023
Review: 1. 2. 3.
Achievements: 1. Safety Standards are upheld and achieved. 2. Presentation script developed. 3. Circuit works as intended.
Action Plan: 1. Prepare project for the presentation (PIC: Group14, Due Date: 20 OCT 2024, 11:59pm) 2. Take a group pic in front of the completed project. 3. Practice presentation with script