Olivia Chan, Alisa Wu

SUMOBOT Robot Report

Master Schedule

Team Function: To Build a Competitive SUMOBOT Robot that has the ability to sense and knock other robots off of the platform.

Group Members	**Roles / Assignments / Jobs**
Alisa Wu	Project Manager, Chief Engineer
Olivia Chan	Chief Programmer, Engineer

Expected Start Date: March 21, 2023 **Expected End Date:** April 18, 2023

Materials
1 Arduino Uno Rev3 Board
Electrical Wires
2 Wheels
1 Steel Ball Bearing Wheel
1 7.4 V Lithium Polymer Rechargeable Battery
1 9V Battery
1 9V Battery Holder with Switch
3 Ultrasonic Sensors
1 Breadboard
2 L9110 Dual-H-Bridge Motor Drivers
2 LEDs
2 LDR Sensors
2 Motors
Plastic (3D Printed Body)
Cardboard (Support/Base)

Planning Organizer

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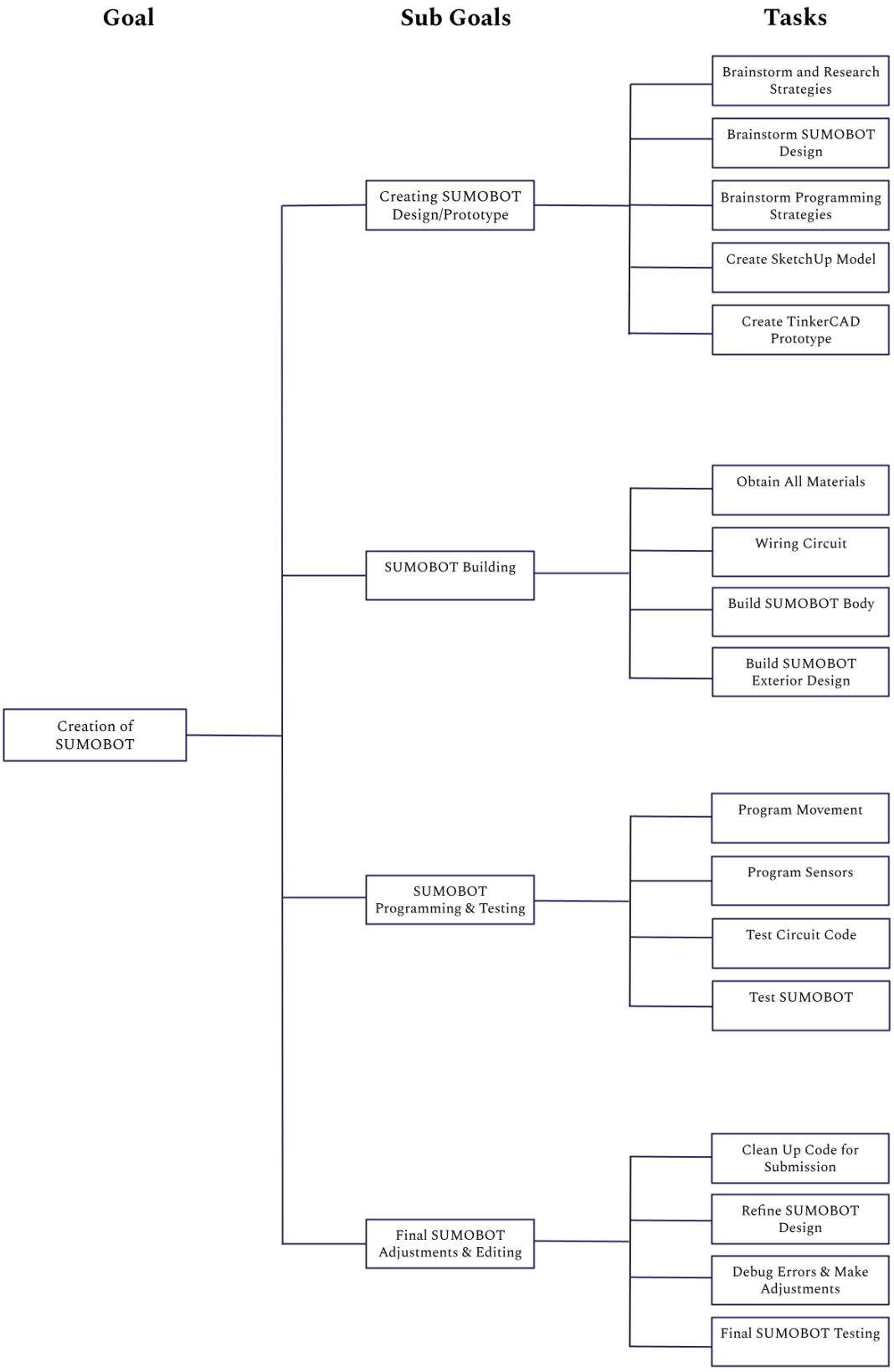

GANNT Chart

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Time (2023)					
Tasks	**Mar. 21 - 24**	**Mar. 27 - 31**	**Apr. 3 - 7**	**Apr. 10 - 14**	**Apr. 17 - 18**
Brainstorm and Research Strategies					
Brainstorm SUMOBOT Design					
Brainstorm Programming Strategies					
Create SketchUp Model					
Create TinkerCAD Prototype					
Obtain All Materials					
Wiring Circuit					
Build SUMOBOT Body					
Build SUMOBOT Exterior Design					
Program Movement					
Program Sensors					
Test Circuit Code					
Test SUMOBOT					
Debug Errors & Make Adjustments					
Refine SUMOBOT Design					
Clean Up Code for Submission					
Final SUMOBOT Testing					

PERT Chart

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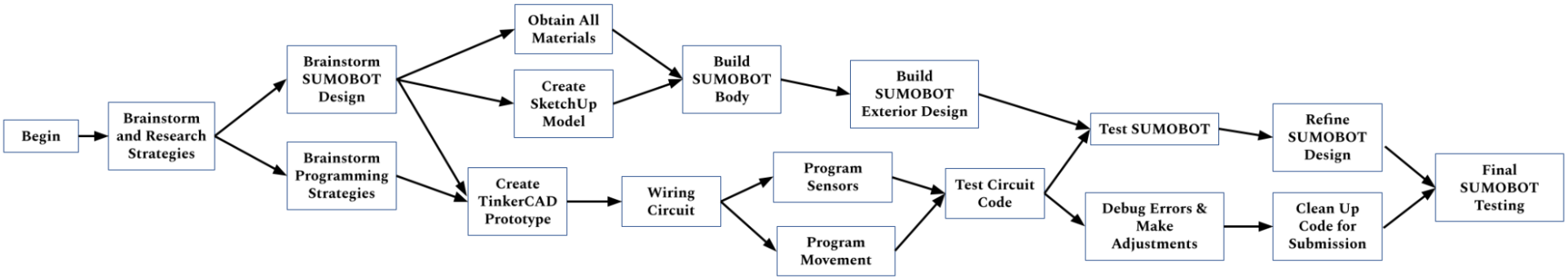

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Weekly Log

Date		Task	Things to be finished		Remarks
From	To		Expected	Actual	
Mar. 21	Mar. 24	Brainstorm and Research Strategies	Research 5 strategies	As Expected	
		Brainstorm SUMOBOT Design	Brainstorm 3 designs	2 Designs brainstormed	Need more time for discussion and research
Mar. 27	Mar. 31	Create SketchUp Model	Finish interior + exterior	As Expected	
		Brainstorm Programming Strategies	Brainstorm 3 strategies	As Expected	
		Create TinkerCAD Prototype	Complete wiring + basic code	Wiring done + some code implemented	Code still needs to be implemented for all parts.
		Obtain All Materials	Purchase motor shields, batteries, and motors.	Obtained batteries and motor shield	Still need to purchase motors
Apr. 3	Apr. 7	Wiring Circuit	Solder wires + parts, attach components together.	As Expected	
		Build SUMOBOT Body	3D print body using SketchUp model	As Expected	Need to reprint wheels, not the right size
		Build SUMOBOT Exterior Design	Decorate the exterior	Not completed	Will be finished after programming.
Apr. 10	Apr. 14	Program Movement	Program robot to move smoothly	As Expected	Had movement issues, fixed by flipping motor around
		Program Sensors	Program robot to detect moving objects with its 3 sensors	As Expected	
		Test Circuit Code	Integrate movement and sensor code	As Expected	
		Test SUMOBOT	Attach circuit to the body and test the whole robot	As Expected	Resolved problems with Arduino not connecting with breadboard by replacing breadboard
		Debug Errors & Make Adjustments	Fix code errors + bot as needed (make it sturdy)	As Expected	
Apr. 17	Apr. 18	Refine SUMOBOT Design	Make final changes to the physical bot.	As Expected	Added metal edge to the SUMOBOT
		Clean Up Code for Submission	Check code structure for organization, add comments	As Expected	
		Final SUMOBOT Testing	Test SUMOBOT at least 10 times without failure	As Expected	