

Deliverable E: Project Schedule and Cost

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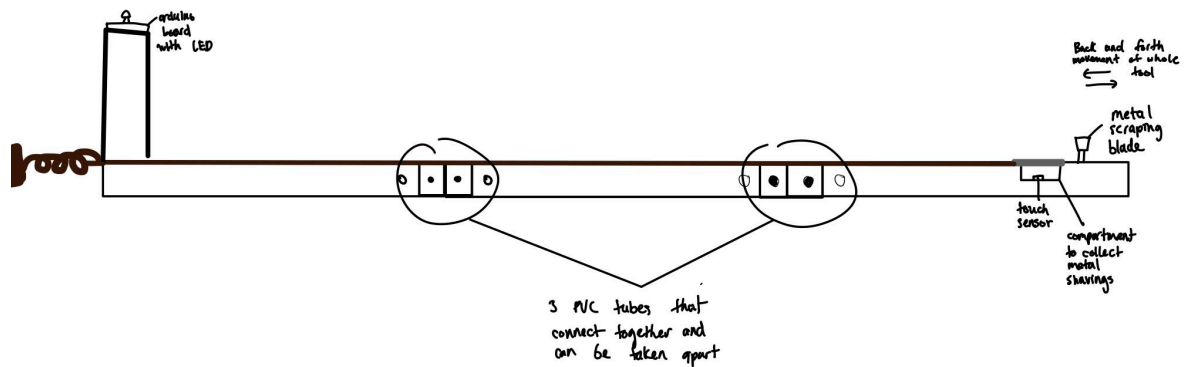
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Sana Hosseini

Aaliyah Ansari

Chaouki Dehane

1 Design



2 Task Plan

Task #	Task Description	Estimated Duration	Group Member
1	3D model of the design	1-2 days	
2	Collect Materials/equipment	1 day	Chaouki Dehane
3	Create 1st Prototype	1-2 days	All
4	Test 1st Prototype and Record Results	1 day	All
5	Create Concept for Prototype 2	1 day	All
6	Create Prototype 2	1-2 days	All
7	Test Prototype 2 and Record Results	1 day	All
8	Update previous Ideas for concepts for 3rd Prototype	1 day	All
9	Create 3rd Prototype	1-2 days	
10	Test Prototype 3 and Record Results	1 day	

11	Update final Concept	1-2 days	All
12	Create final Product	2 days	All
13	Design Day	1 day	All

3 Risks

Risk	Contingency Plan
Tasks not completed on time	Make sure to schedule who does what work and when
Conflict between Members	Go over conflicts as a group, hearing both sides of an argument and making sure to take into account every view point
Issues or breaking of Prototypes/parts	Make sure to schedule the building of the prototypes well in advance of due dates in order to have time to repair and come up with new ideas. As well as getting spares of the cheaper parts which have higher possibilities of breaking.
Going over Budget	Make sure to properly and accurately budget every part we will be using. As well as making sure items are in stock.
Product not working	Ensure we have plenty of time between building the final product and the due date so that we have appropriate time to come up with new ideas and alterations.
Group members Unavailable	Make sure for all tasks there is someone else in the group who would be available to assist if needed.

4 List of Equipment

Material	Cost (CAD)
SG90 Micro Servo Motor	5.50
Arduino Board	15.25
Sensor	12.00
LED	0.60
Wires	
Tubing 2 in 3 in	About 50
Coupling	

5 Prototyping Test Plan

Test #	Objective	Description	Analysis Method	Metrics	Level and Fidelity of Prototype	Kind of Prototype	Results	Interpretation (pass/Fail)
1	Test if scraper works as it is the most important feature	So we need to determine if the scraper works	Test scraper part on similar/same material as the pipe	Scrapes without braking Yes/No	Hi-Fi	Physical		
2	Test Sensor We need to know if the material has been scraped	Test if the sensor works	See if sensor activates when material is introduced	Lights when material is in contact?	Lo-Fi	Analytical		
3	Test rotation The device needs to rotate	Make sure the device can rotate while extended	Have fully extended and try rotating	Rotates properly?	Hi-Fi	Physical		
4	Test contraction The device needs to be able to contract	Make sure the device can fully contract with no issues	Make sure it can contract from fully extended to contracted	Contracts?	Hi-Fi	Physical		
5	Test collection The material needs to be	Test that it can collect the material and the collector	Collect random material and see if it is collected	Collected and removable	Hi-Fi	Physical		

	able to be removed and transport safely	can be removed	in the collector, and it is removable	?				
6	Test that all parts and features work together	Test all parts/features when put together as one	Assemble the device and test it in a realistic fashion	Features work and don't break?	Hi-Fi	Physical and Analytic		