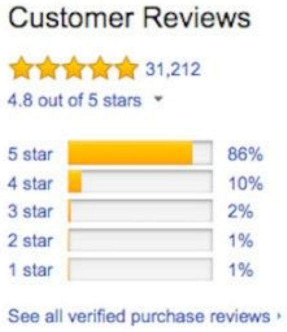
Our Solution to the Opioid Overdose Crisis

Team 5 - “Inevitable Dropouts”
Dhvani Patel, Mohamad Ahmad, Sheetal Harakh, Yi Ru Loh

Our Problem

“A need exists for people who use opioids to safely have their blood oxygen saturation monitored and location quickly sent to emergency services in case of overdose, with a device that is discrete and cost-effective.”

The Importance of Research and Benchmarking



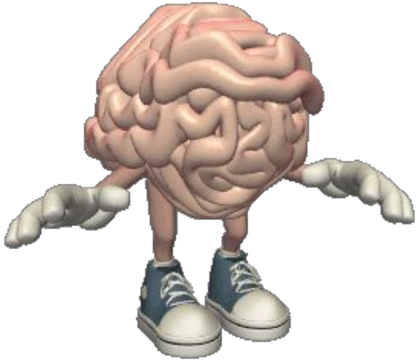
Customer Reviews

★★★★★ 31,212

4.8 out of 5 stars ▾

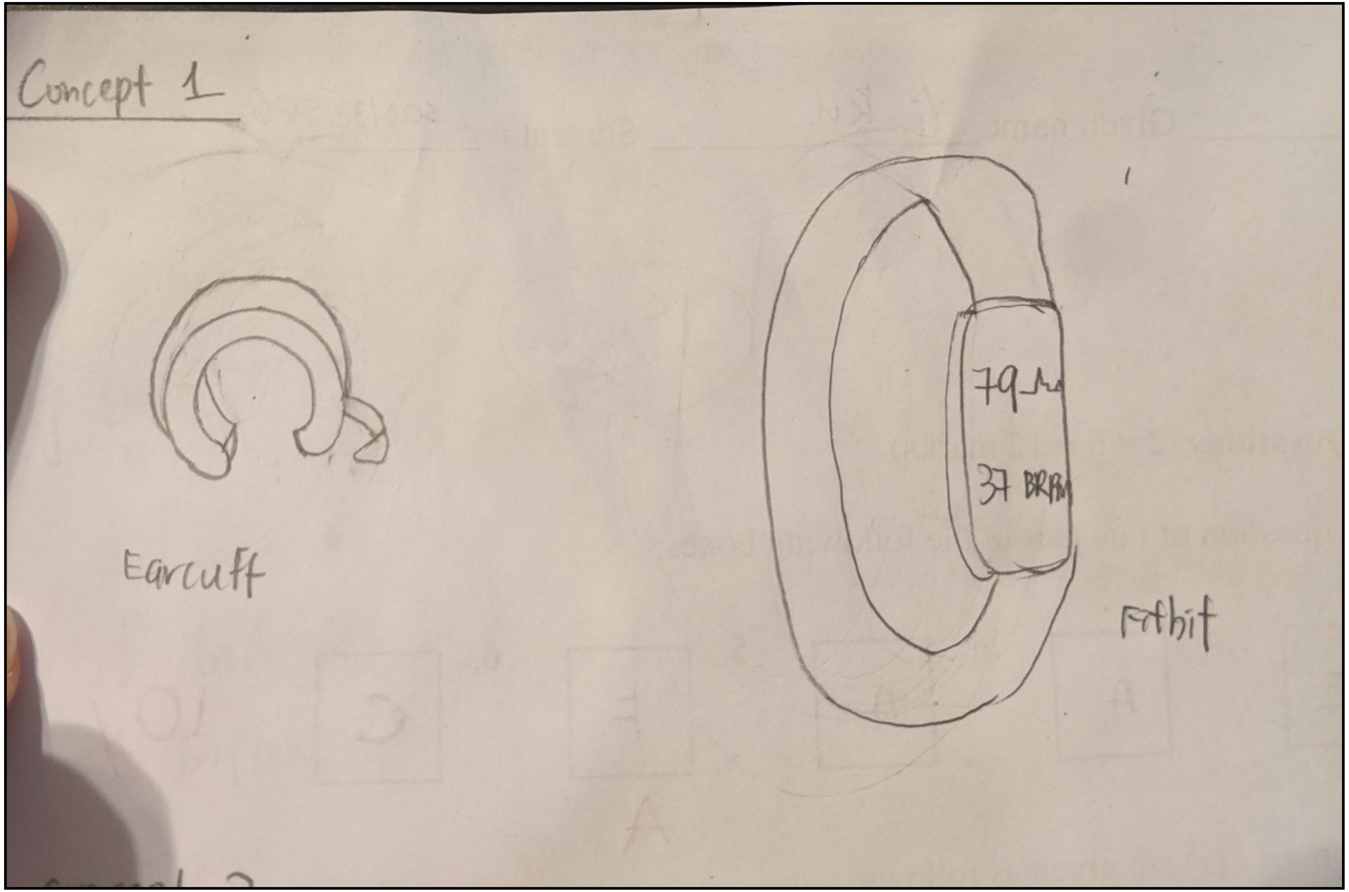
5 star	86%
4 star	10%
3 star	2%
2 star	1%
1 star	1%

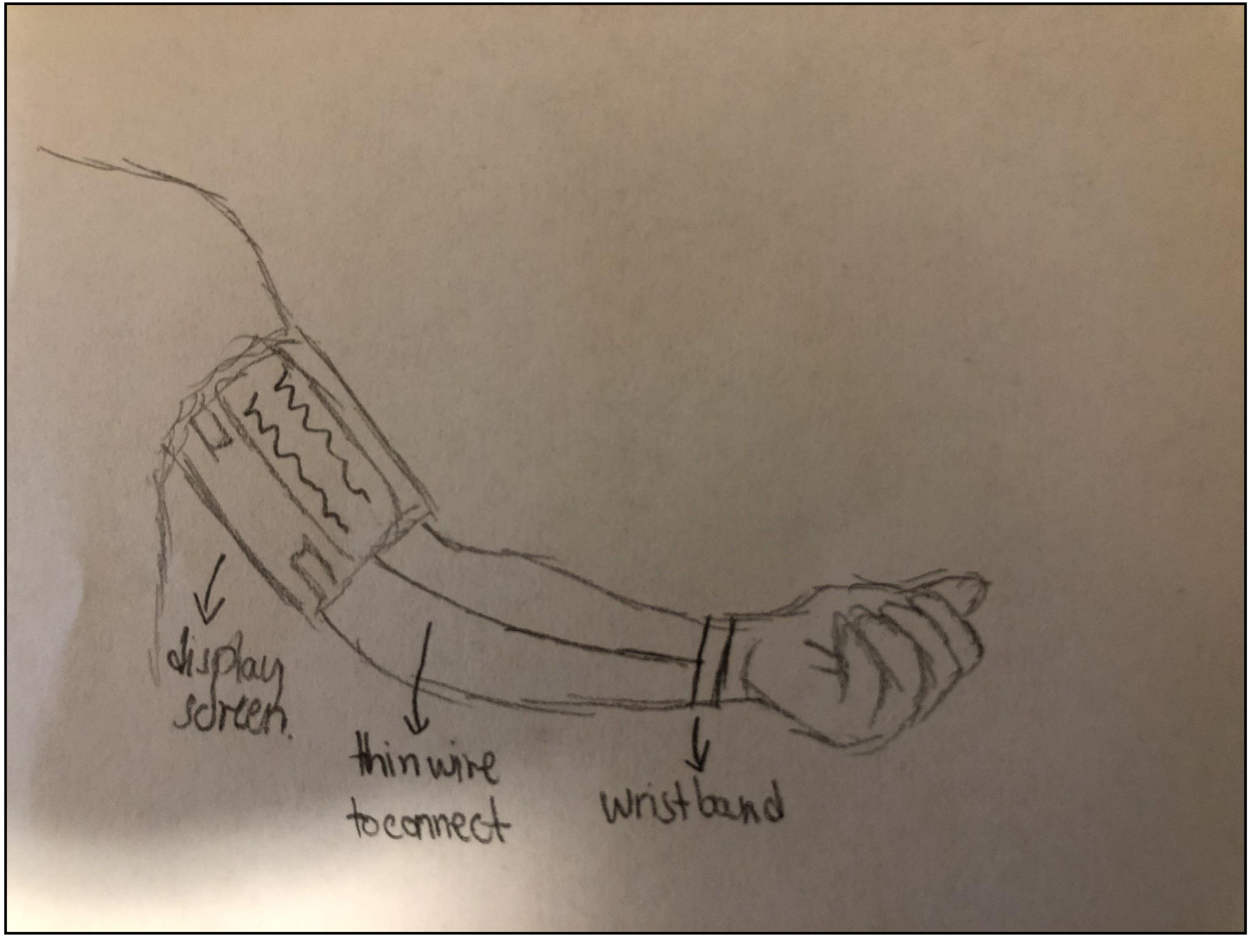
See all verified purchase reviews ›



BRAINSTORMING

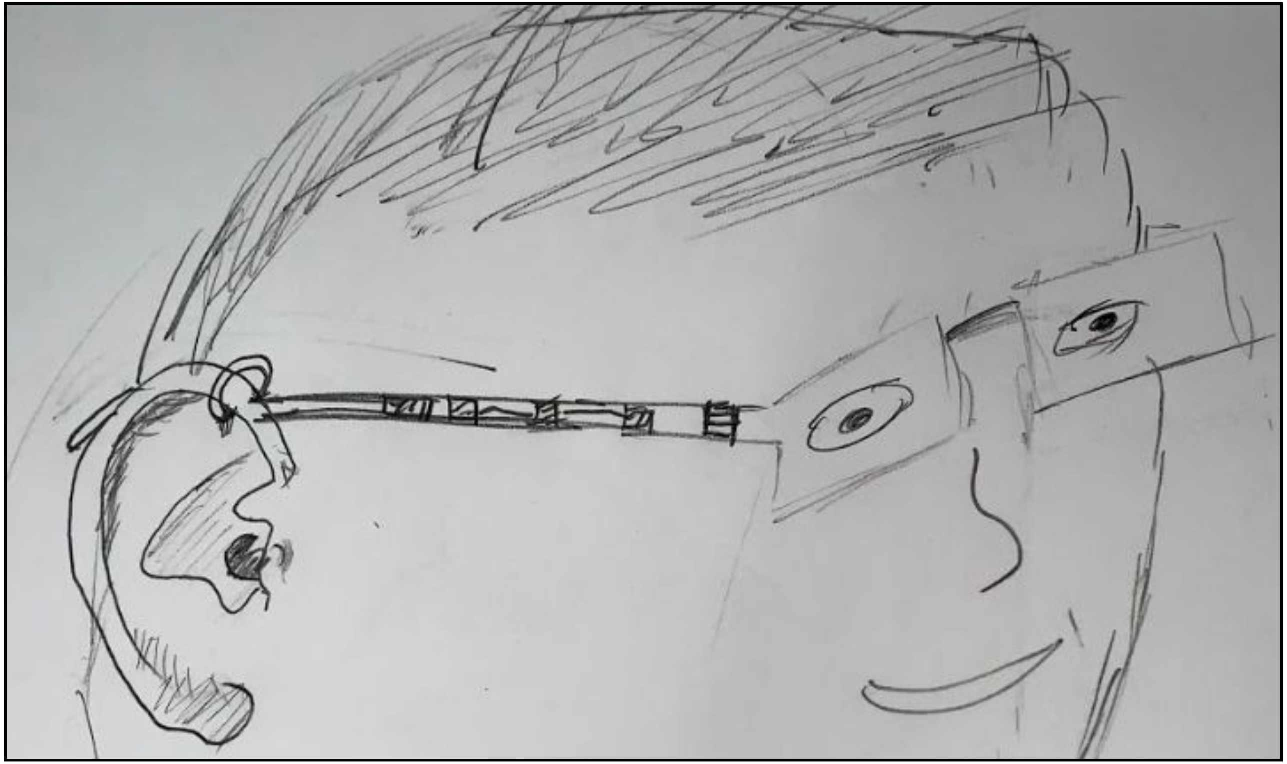
Ru's Concept

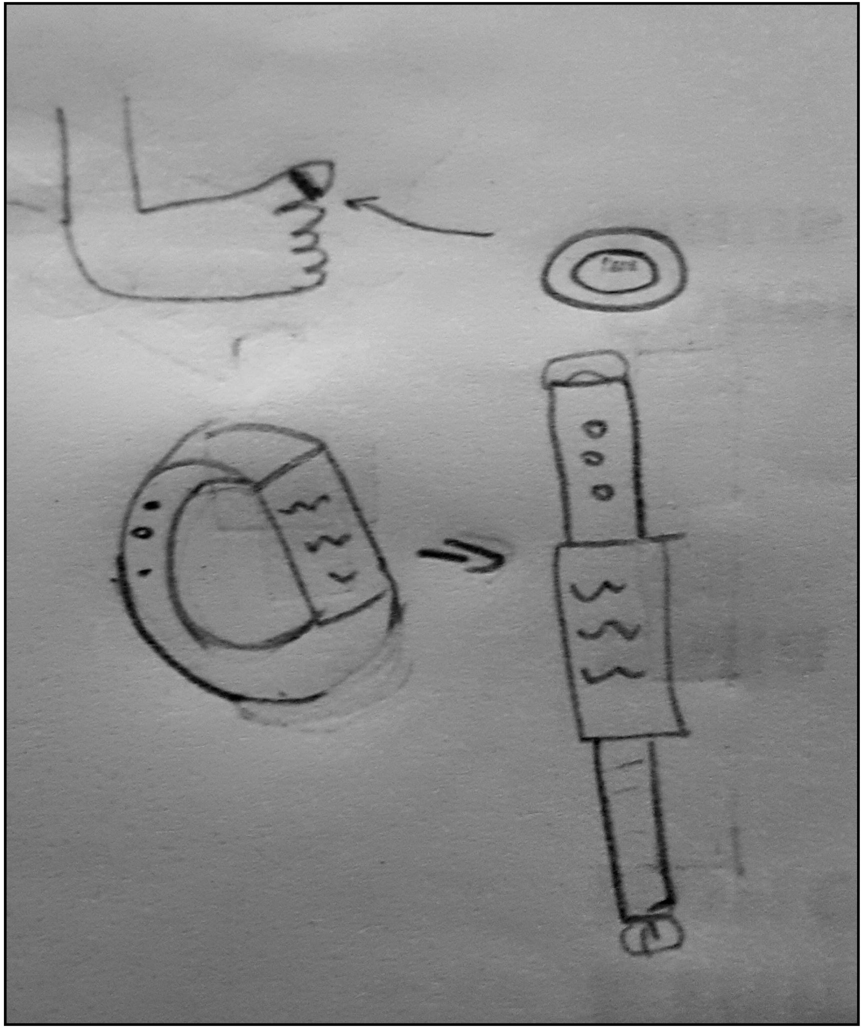




Dhvani's Concept

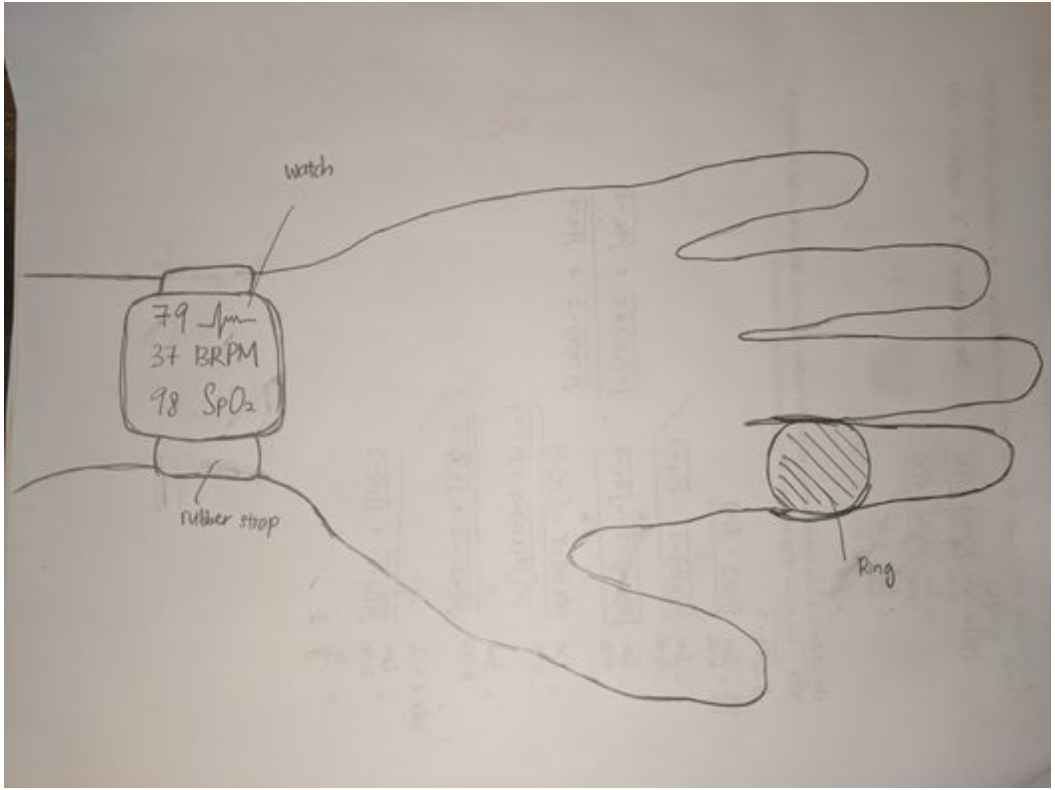
Mohamad's Concept



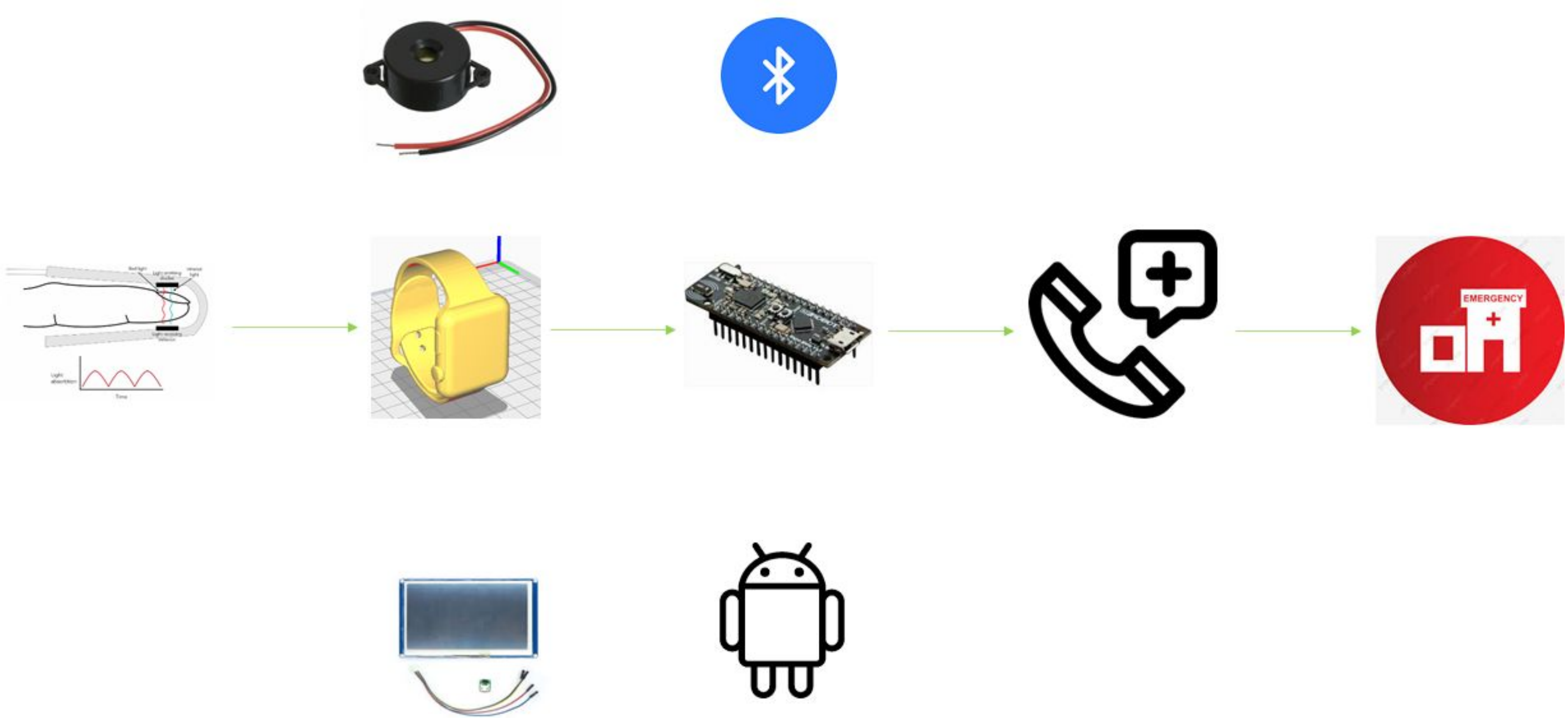


Sheetal's Concept

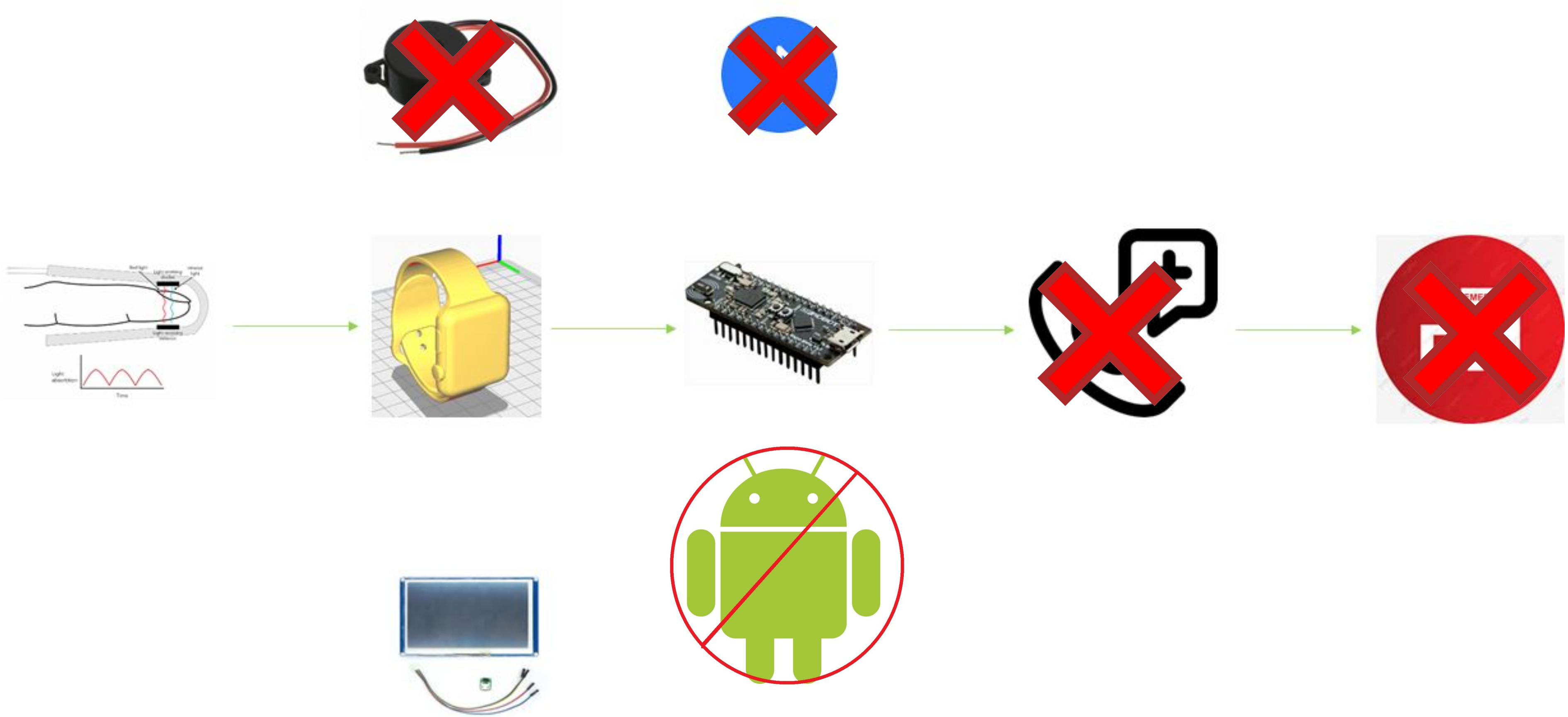
Ideal Design (Physical)



Ideal Design (Flow Chart)



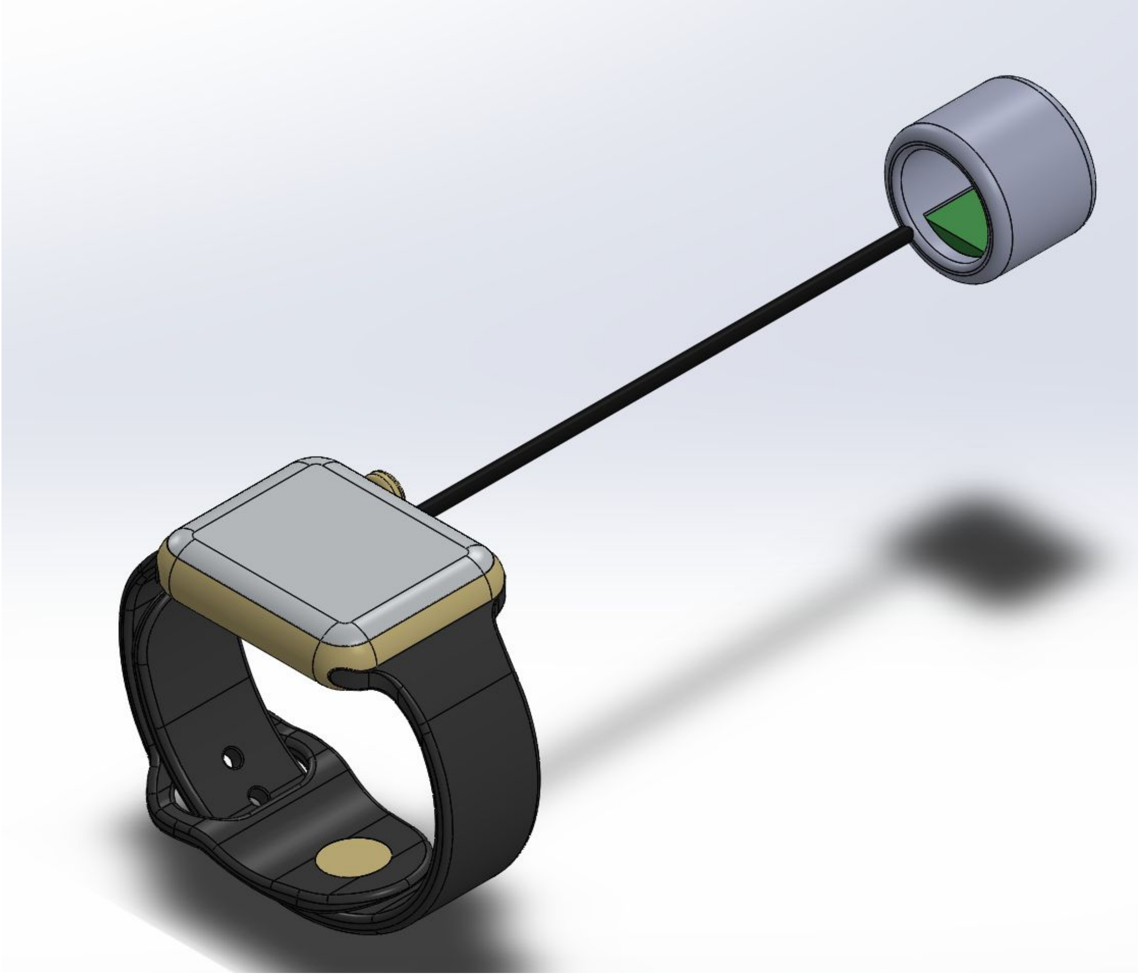
Actual Design (Flow Chart)



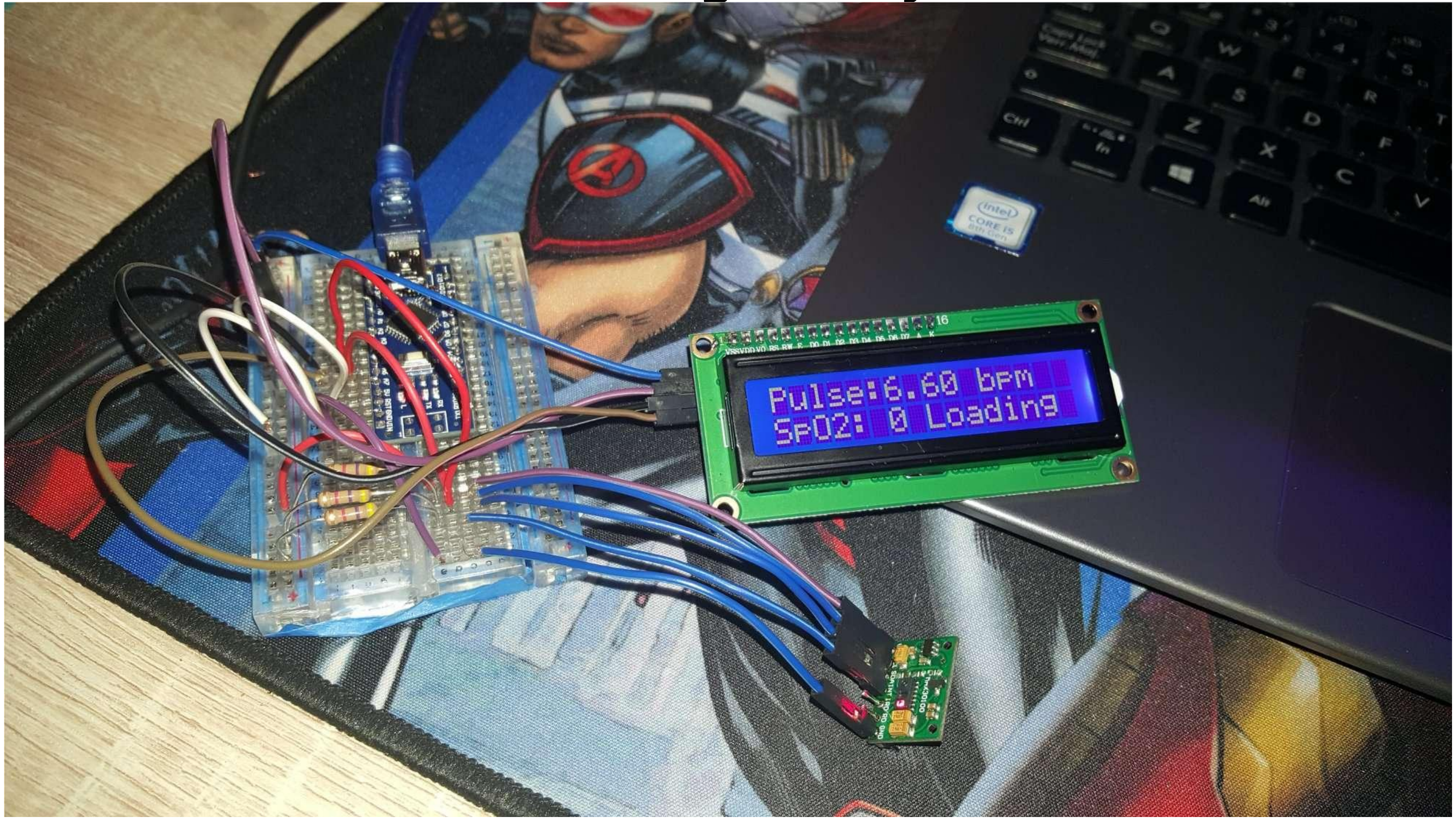
Received Feedback and Solutions

Presentation Attendee	Their Question/Feedback	Reflection
Tali Cahil	“How much do you think this will be? It seems like it will be expensive since you have 2 components.”	At the moment, our project is cost effective because there is still 40% of our budget left.
Dr. Knox - course instructor	“So what if you don’t have a smartphone?”	It may be a constraint but we believe that the majority of our users do own a smartphone due to their working requirement.
Classmate	“Have you tested the wires going from the ring to the watch itself and how mobile you can be with it on?”	In prototype II, we printed an improvised model for both the watch display and the ring that allows us to test out the functionality when a wire is connected between the ring and the watch display.

Improved Final Product

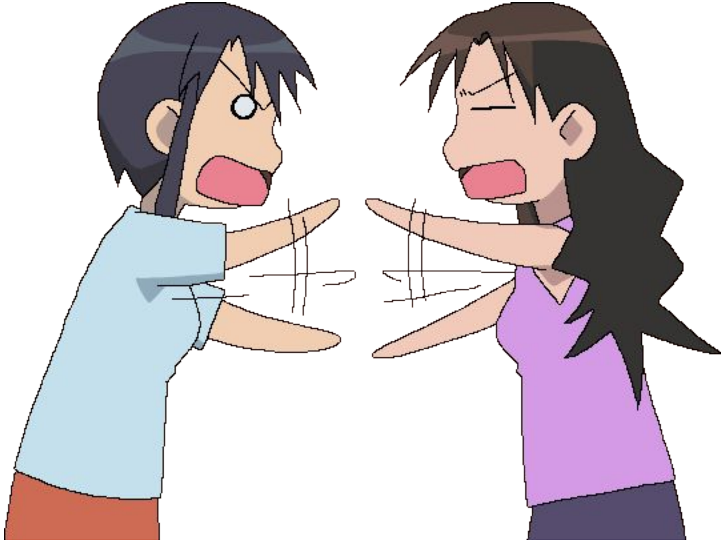


Actual Design(Physical)



Hardware Issues

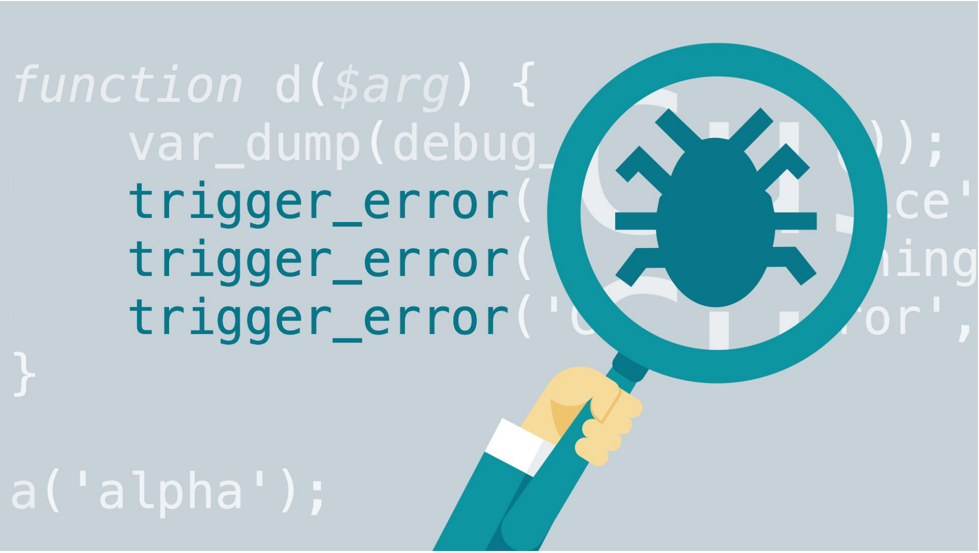
Issues



Prototyping Tools

SOLIDWORKS

Software



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function d($arg) {
    var_dump(debug_          ));
    trigger_error(          ce'
    trigger_error(          ing
    trigger_error('U        or',
}

a('alpha');
```

Planning

Limitations

Opiod Overdose module

Gantt Chart Template *© 2006-2018 by Vertex42.com.*

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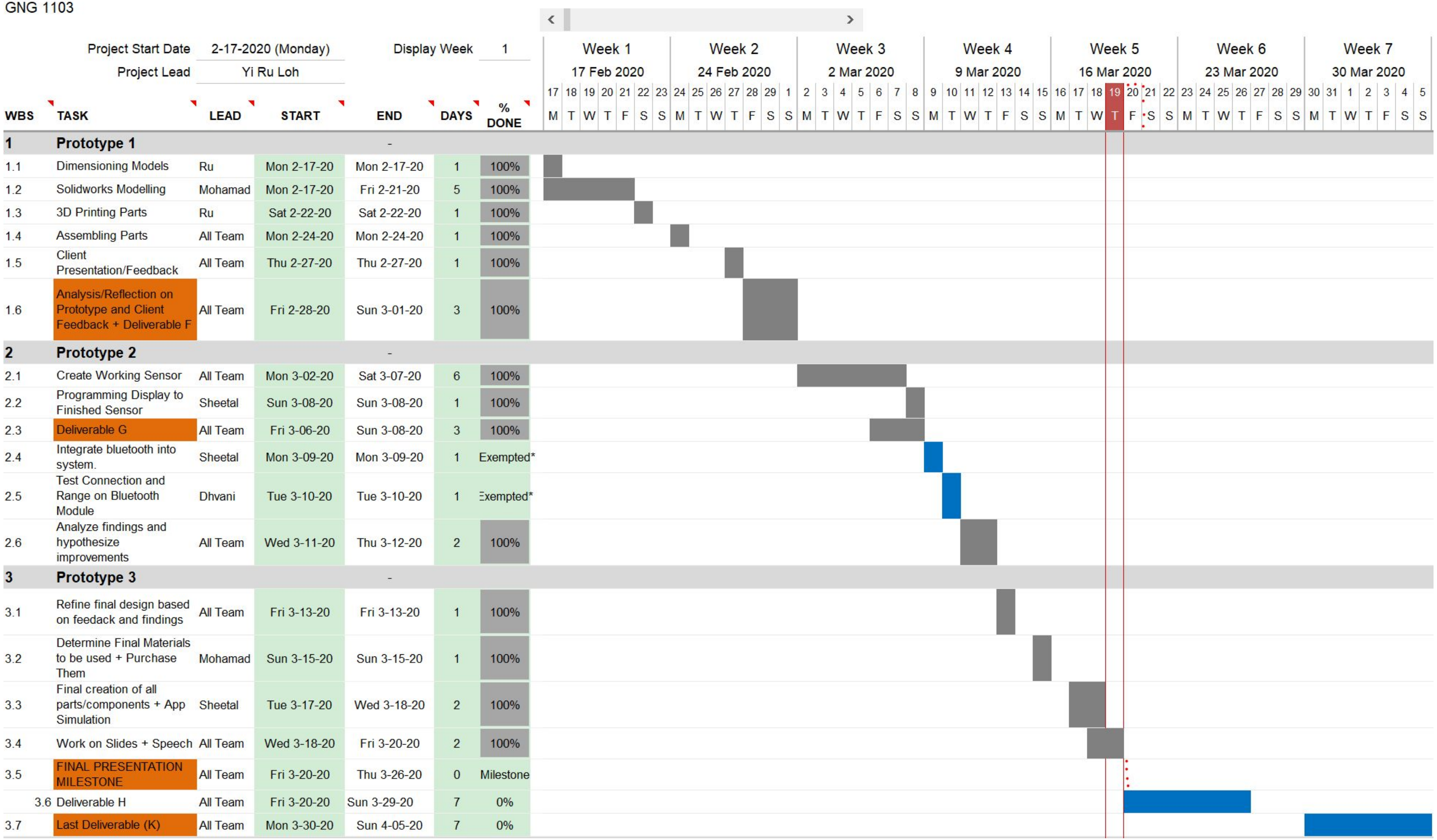


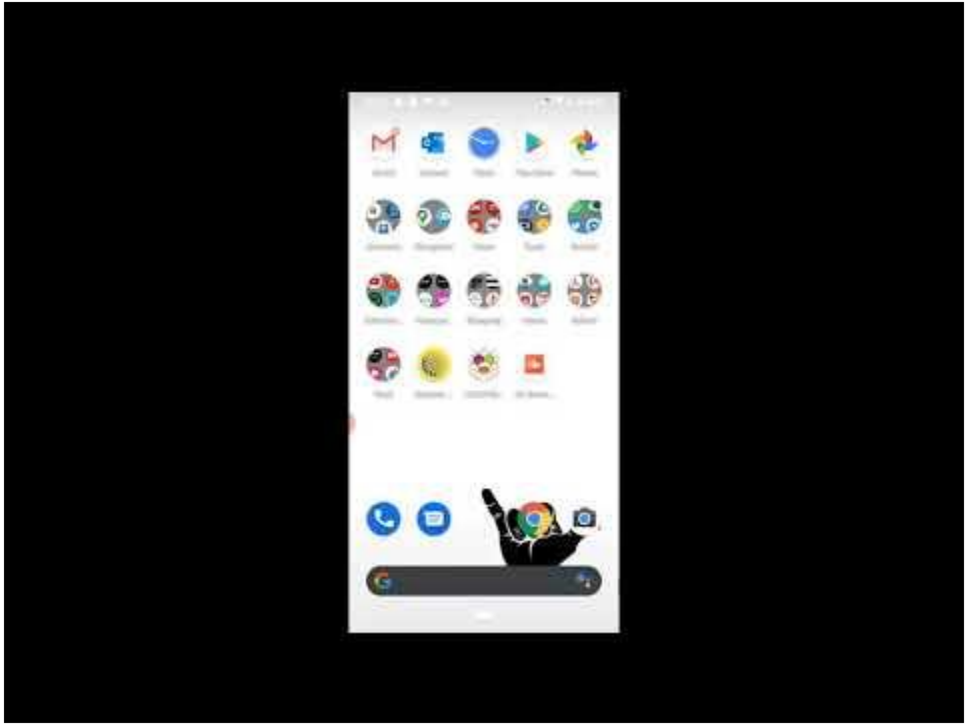
Project Start Date 2-17-2020 (Monday)

Project Lead Yi Ru Loh

Display Week 1

WBS	TASK	LEAD	START	END	DAYS	% DONE
1	**Prototype 1**			-		
1.1	Dimensioning Models	Ru	Mon 2-17-20	Mon 2-17-20	1	100%
1.2	Solidworks Modelling	Mohamad	Mon 2-17-20	Fri 2-21-20	5	100%
1.3	3D Printing Parts	Ru	Sat 2-22-20	Sat 2-22-20	1	100%
1.4	Assembling Parts	All Team	Mon 2-24-20	Mon 2-24-20	1	100%
1.5	Client Presentation/Feedback	All Team	Thu 2-27-20	Thu 2-27-20	1	100%
1.6	Analysis/Reflection on Prototype and Client Feedback + Deliverable F	All Team	Fri 2-28-20	Sun 3-01-20	3	100%
2	**Prototype 2**			-		
2.1	Create Working Sensor	All Team	Mon 3-02-20	Sat 3-07-20	6	100%
2.2	Programming Display to Finished Sensor	Sheetal	Sun 3-08-20	Sun 3-08-20	1	100%
2.3	Deliverable G	All Team	Fri 3-06-20	Sun 3-08-20	3	100%
2.4	Integrate bluetooth into system.	Sheetal	Mon 3-09-20	Mon 3-09-20	1	Exempted*
2.5	Test Connection and Range on Bluetooth Module	Dhvani	Tue 3-10-20	Tue 3-10-20	1	Exempted*
2.6	Analyze findings and hypothesize improvements	All Team	Wed 3-11-20	Thu 3-12-20	2	100%
3	**Prototype 3**			-		
3.1	Refine final design based on feedack and findings	All Team	Fri 3-13-20	Fri 3-13-20	1	100%
3.2	Determine Final Materials to be used + Purchase Them	Mohamad	Sun 3-15-20	Sun 3-15-20	1	100%
3.3	Final creation of all parts/components + App Simulation	Sheetal	Tue 3-17-20	Wed 3-18-20	2	100%
3.4	Work on Slides + Speech	All Team	Wed 3-18-20	Fri 3-20-20	2	100%
3.5	FINAL PRESENTATION MILESTONE	All Team	Fri 3-20-20	Thu 3-26-20	0	Milestone
3.6	Deliverable H	All Team	Fri 3-20-20	Sun 3-29-20	7	0%
3.7	Last Deliverable (K)	All Team	Mon 3-30-20	Sun 4-05-20	7	0%

Video Demonstration



Conclusion & Reflection