

# Design for Disability Hozhoni Art

## TEAM 17

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# Hozhoni Art Gallery

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- Client : Terri Engel
- Location : Flagstaff
- Non-profit Foundation
- Supported by: Flagstaff city and AZ tribes



Figure 1: Art Gallery Logo

# Project Description

- Purpose: Design an assistive device to help people with disabilities to do art.
- Provide a system to meet the needs of the artist at Hozhoni.
- Sponsored by: CEFNS NAU



# Design Description

What are we designing ?

An easel that:

- Adjusts height
- Adjusts angle
- Transports easily
- Provides water
- Holds supplies
- Provides a workspace
- Has many attachments

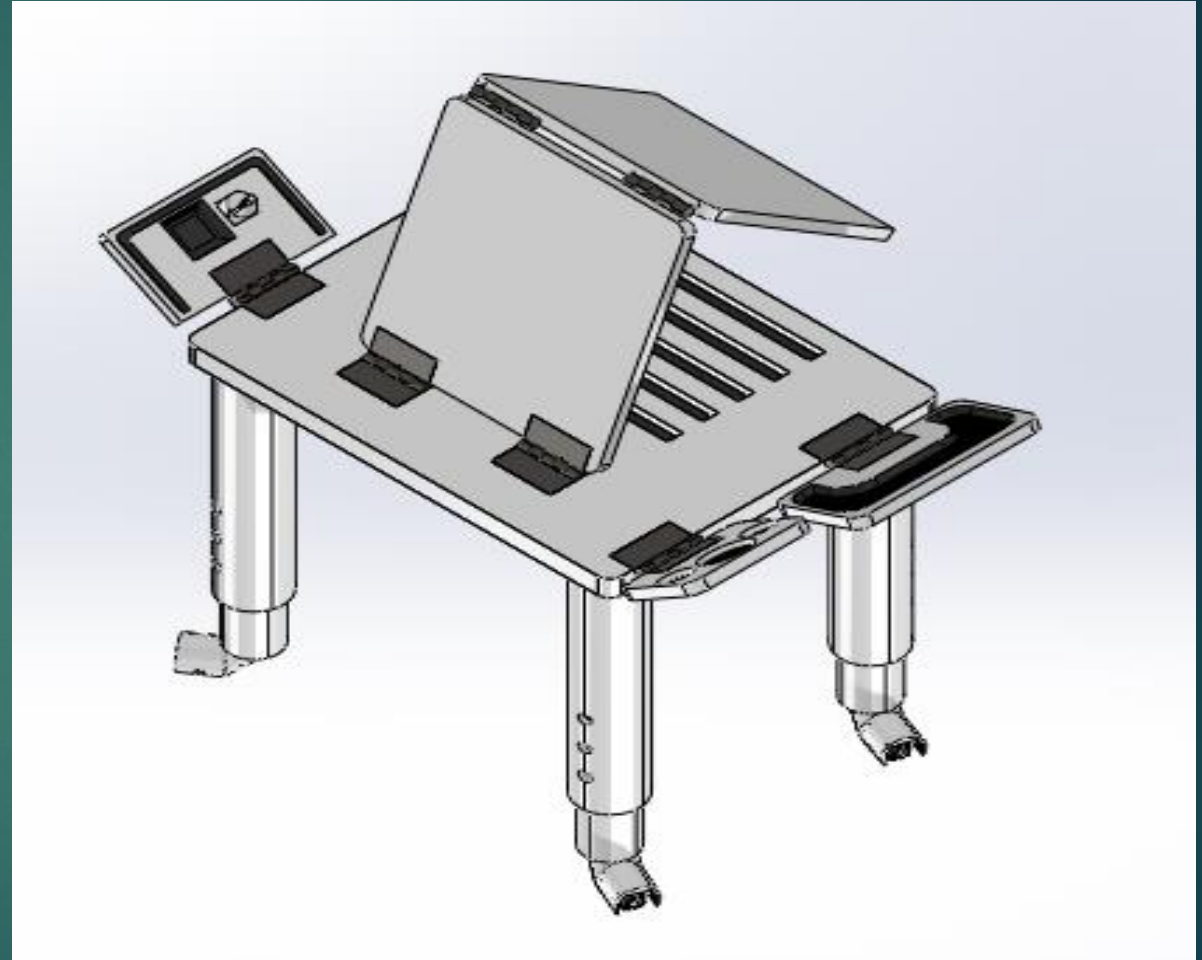


Figure 2: Final Design

# Cont. Design Description

## Installation:

- Attach wheels to legs.
- Attach the second leg part to the needed height .
- Attach the easel and easel support.
- Attach right and left attachments .

## Now we have a design that have:

- Easel angle that can be adjusted.
- Design is now portable.
- Legs height have been adjusted.

All that is left for our customers is to enjoy using this design to draw their paintings.

# Cont. Design Description

Assembly View:

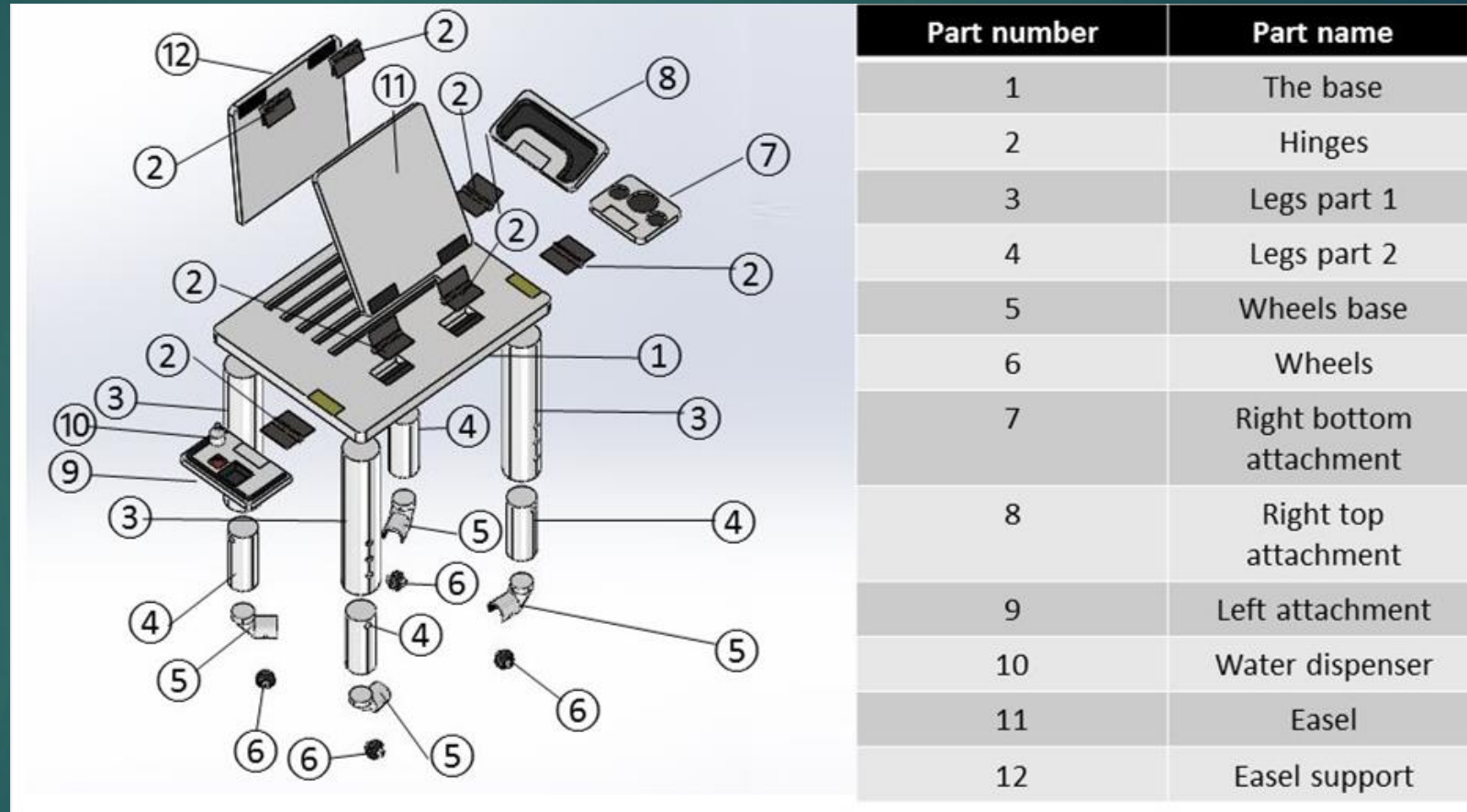


Figure 3: assembly view

# Design Requirements

Table 1: Customer Requirements

<b>Customer requirements</b>	<b>Weight</b>
Easy to use	4
Portable	4
Cost effective	1
Durable	5
safety	5
Adjustable	4
Aesthetically pleasing	2
Light weight	3
Multi-purpose	3
Enjoyable	3

# Cont. Design Requirement

Table 2: Customer Requirements

Customer requirements	Weight
Easy to use	4
Portable	4
Cost effective	1
Durable	5

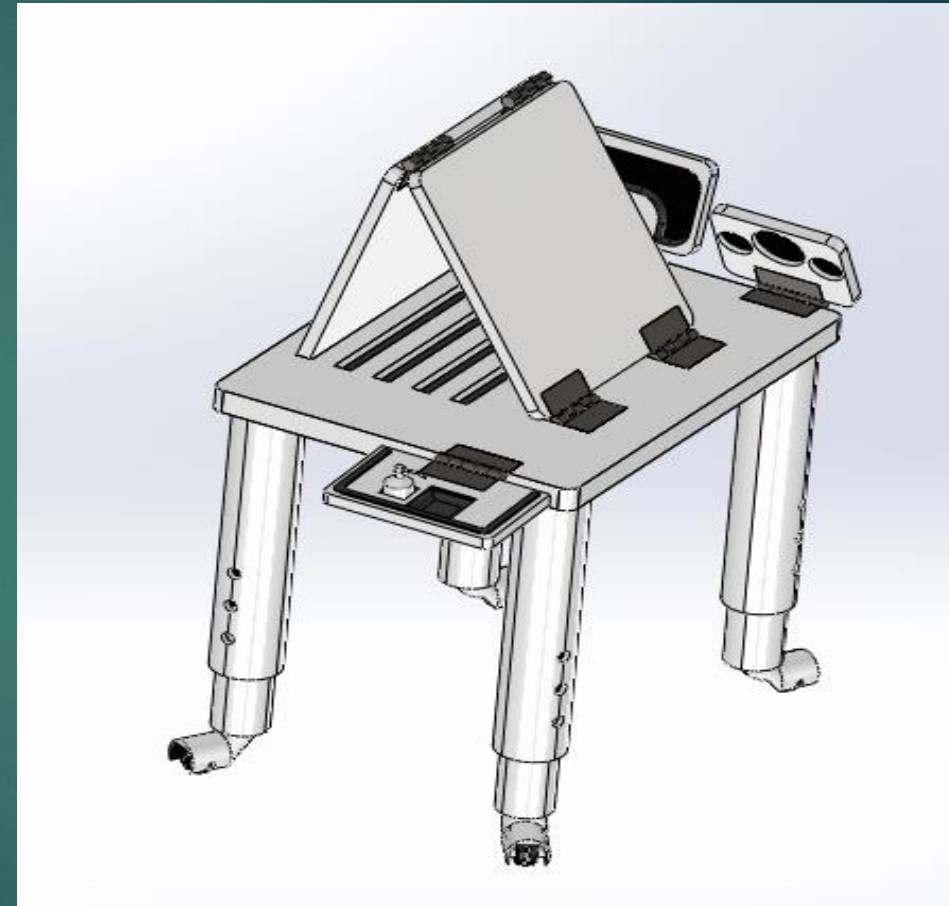


Figure 4: Final Design



# Cont. Design Requirement

Table 3: Customer Requirements

Customer requirements	Weight
safety	5
Adjustable	4
Aesthetically pleasing	2
Light weight	3

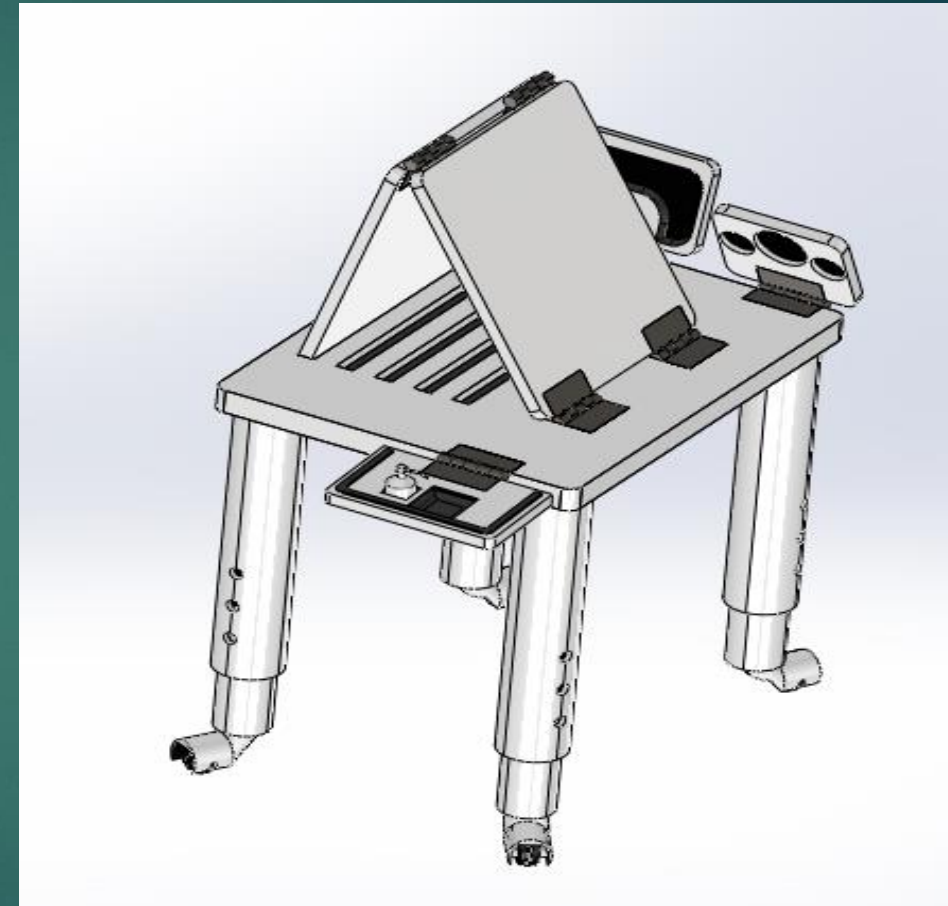


Figure 4: Final Design

# Cont. Design Requirement

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Table 4: Customer Requirements

Customer requirements	Weight
Multi-purpose	3
Enjoyable	3

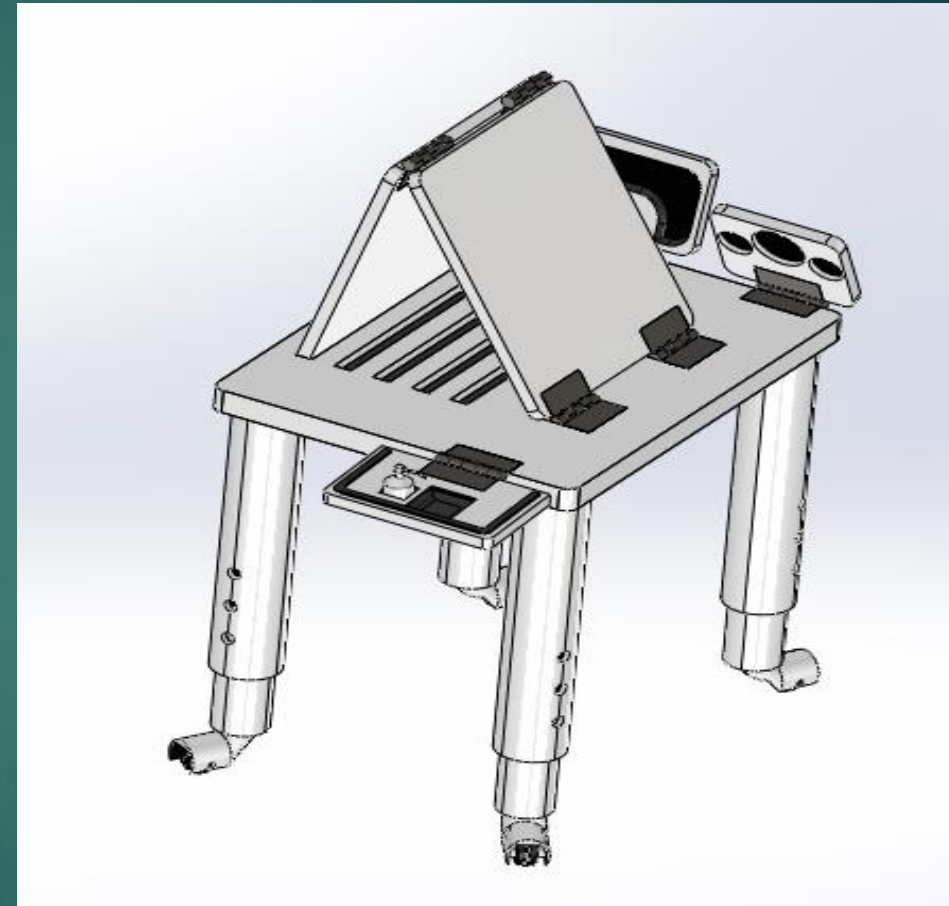


Figure 4: Final Design

# Schedule

## Gantt Chart

- The team is ahead of our schedule.
- Future deliverables have been assigned.
- Deadlines are at least two days ahead of the actual deadlines .

11/29/16 12/5/16 12/11/16 12/17/16 12/23/16 12/29/16 1/4/17 1/10/17 1/16/17 1/22/17 1/28/17 2/3/17 2/9/17 2/15/17 2/21/17 2/27/17 3/5/17 3/11/17 3/17/17 3/23/17 3/29/17 4/4/17 4/10/17 4/16/17 4/22/17

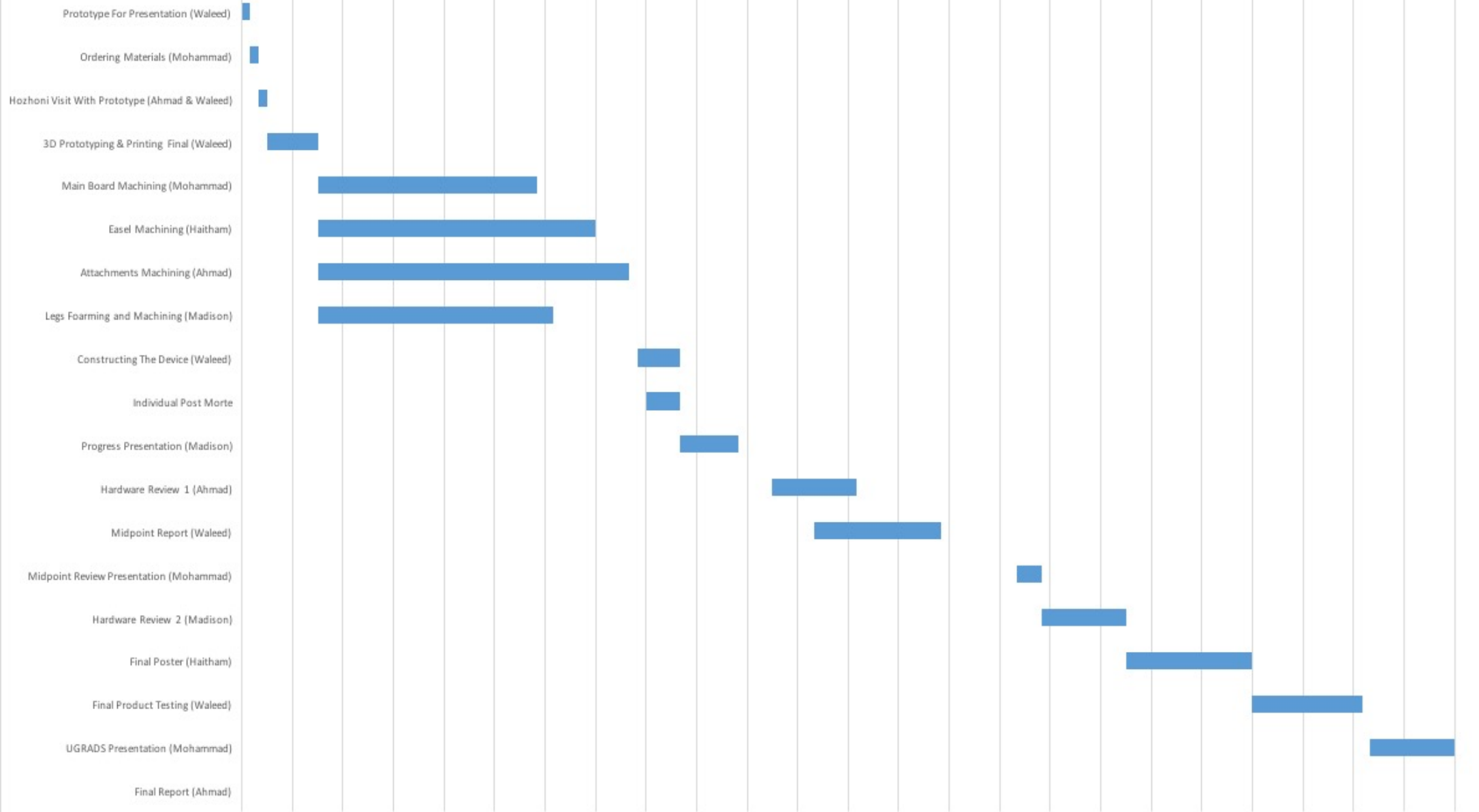


Figure 5: Gantt Chart

# Budget

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- Available budget is : \$1,500
- Anticipated expenses: approximately \$900

Table 5: Bill of Material

Item No.	Description	Material	Quantity	\$ Price	source
1	Casters	Rubber	4	33.88	Home Depot [2]
2	Plastic Sheet	Polypropylene	3	165.63	US Plastic [3]
3	PVC Pipe	PVC	7	121.60	Home Depot [4]
4	Cup Holder	Plastic	1	7.95	Walmart [5]
5	Screw	Zink	36	14.96	Home Depot [6]
6	Hinge	Nickel	7	19.46	Home Depot [7]
7	Water Dispenser	Glass	2	15.98	Target [8]
8	Universal Ball	Stainless Steel	4	24.00	Omnitrack [9]
Total Price				\$403.46	
Budget	\$1500	Available Budget		\$1096.54	

# Budget

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- Actual expenses is \$10 (Spent on the first prototype)
- Resultant Balance is \$1,490

# References

[1]"Hozhoni foundation - dignity through opportunity,". [Online]. Available: <http://www.hozhoni.com>. Accessed: Sep. 28, 2016.

[2]"Everbilt 4 in. Swivel Non-Marking Rubber Caster-4033445EB - The Home Depot", *The Home Depot*, 2016. [Online]. Available: <http://www.homedepot.com/p/Everbilt-4-in-Swivel-Non-Marking-Rubber-Caster-4033445EB/203672420>. [Accessed: 23- Nov- 2016].

[3]"Polypropylene Stress Relieved Sheeting | U.S. Plastic Corp.", *Usplastic.com*, 2016. [Online]. Available: <http://www.usplastic.com/catalog/item.aspx?itemid=23329&catid=711>. [Accessed: 23- Nov- 2016].

[4]"Formufit 2 in. x 5 ft. Furniture Grade Sch. 40 PVC Pipe in White-P002FGP-WH-5 - The Home Depot", *The Home Depot*, 2016. [Online]. Available: <http://www.homedepot.com/p/Formufit-2-in-x-5-ft-Furniture-Grade-Sch-40-PVC-Pipe-in-White-P002FGP-WH-5/205171547>. [Accessed: 23- Nov- 2016].

[5]"Car Home Portable Black Plastic Self-adhesive Extended Cup Frame Holder - Walmart.com", *Walmart.com*, 2016. [Online]. Available: <https://www.walmart.com/ip/Car-Home-Portable-Black-Plastic-Self-adhesive-Extended-Cup-Frame-Holder/46547882>. [Accessed: 23- Nov- 2016].

[6]"Richelieu Hardware Zinc Wood Screw Kit-AK03R - The Home Depot", *The Home Depot*, 2016. [Online]. Available: <http://www.homedepot.com/p/Richelieu-Hardware-Zinc-Wood-Screw-Kit-AK03R/202205573>. [Accessed: 23- Nov- 2016].

[7]"Search Results for hings at The Home Depot", *Homedepot.com*, 2016. [Online]. Available: <http://www.homedepot.com/s/hings?NCNI-5>. [Accessed: 23- Nov- 2016].

# Cont. References

[8]"Target : Expect More. Pay Less.", *Target.com*, 2016. [Online]. Available: [http://www.target.com/p/threshold-oil-can-soap-pump-clear/-/A-14991838?ref=tgt\\_adv\\_XS000000&AFID=google\\_pla\\_df&CPNG=PLA\\_Bath+Shopping&adgroup=SC\\_Bath&LID=700000001170770pgs&network=g&device=c&location=9030289&gclid=CMqAj9LeuNACFQ6TaQod-sYMdg&gclsrc=aw.ds](http://www.target.com/p/threshold-oil-can-soap-pump-clear/-/A-14991838?ref=tgt_adv_XS000000&AFID=google_pla_df&CPNG=PLA_Bath+Shopping&adgroup=SC_Bath&LID=700000001170770pgs&network=g&device=c&location=9030289&gclid=CMqAj9LeuNACFQ6TaQod-sYMdg&gclsrc=aw.ds). [Accessed: 23- Nov- 2016].

[9]"L15 - Standard Materials | Omnitrack USA", *Omnitrack.com*, 2016. [Online]. Available: <https://www.omnitrack.com/us/115-standard-materials.html>. [Accessed: 23- Nov- 2016].



# Questions?