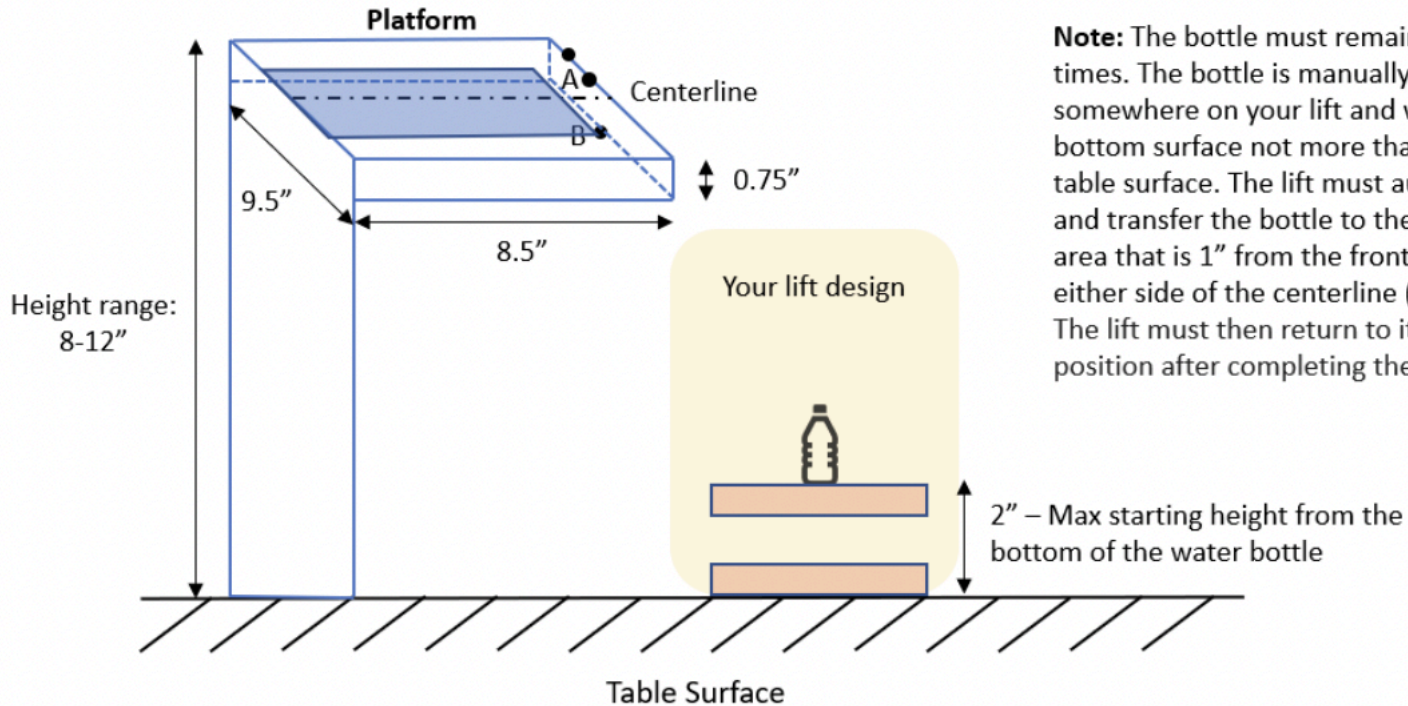


● A: two magnets  
● B: one IR light



Standard 16 oz new  
and full water bottle



**Note:** The bottle must remain upright at all times. The bottle is manually placed somewhere on your lift and with the bottle bottom surface not more than 2" above the table surface. The lift must automatically stop and transfer the bottle to the shaded blue area that is 1" from the front edge 3" to either side of the centerline (right-to-left). The lift must then return to its starting position after completing the unloading.

# Team 17d

## Bottle Lift and Transfer

Sponsor: Mohamed Shorbagy

January 16, 2024

# 1 Team Formation

## 1.1 Introduction

This document is to serve as the introduction to the Bottle Lift and Transfer project developed by team 17d. Here, you will find basic information about our team, every member's responsibilities and objectives, what we want to achieve, and how we are organized. The document includes a description of the initial stages of our team development, how we formed, our goals, team communication plan, team contract, and our contact information.

## 1.2 Team Name

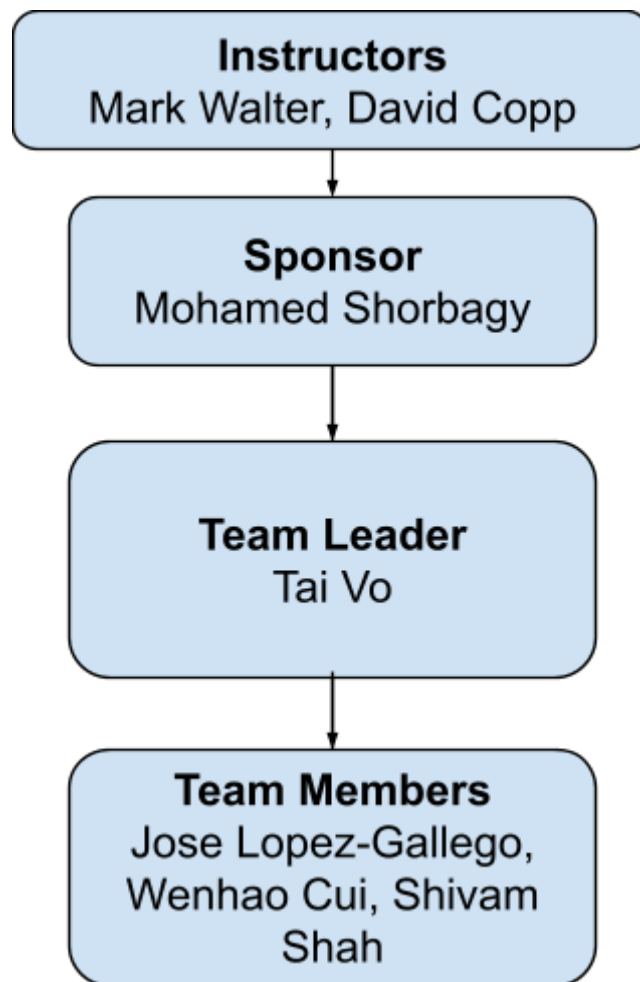
The team name is the group name given by our professor. We could not come up with a better name than choosing our group name because it is the best one to represent and identify our group.

## 1.3 Team Goal

The overarching goal of the project is to create a functional autonomous device to lift and transfer a 16oz water bottle from a low-standing platform to a high-standing platform. We plan to track milestones as follows to make sure we are making progress toward our goal:

- Week 4 - finalize problem definitions
- Week 6 - complete conceptual design + bill of materials
- Week 8 - manufacturing finished
- Week 10 - testing finished

## 1.4 Organizational (Org) Chart



## 1.5 Identify Support Structure and Available Resources

If we have difficulties figuring out the problem within our group, we will go to the lab technicians or our project sponsor for support. If that is not enough, then we can go to some graduate students that we know who have experience with these types of projects. As for resources, we have a budget for the materials purchase or rental. Some of us have access to other materials and resources since we are a part of other projects where we do similar work.

## 1.6 Team Communication Plan

Our team has so far communicated through emails and discord channels. We plan on keeping communicating within the group using Discord and communicating with external support or personnel like sponsors and professors via emails.



Meetings: Monday at 4pm with our sponsor, Tuesday-Thursday 9:30-10:50 am Lab section, additional meetings as needed

## 1.7 Team Rules

- *Honesty:*
  - No team member shall hide or hinder their feelings; ex, a member is not participating enough, it is important to express these feelings with the group.
  - No team member will take advantage of other group members who are nice or willing to work by making them do much of the work of the project.
  - No team member shall lie or hide their intentions in working on an assignment. If you cannot have an assignment due before a certain deadline, it is important to communicate so you don't jeopardize your fellow team members' grades.
  
- *Appropriate behavior:*
  - We will act professionally as a group, attempt to stay on task, and not stray off in our meetings.
  - No member will conflict verbally with another group member over a disagreement.
  - No member will talk over other group members often or devalue another group member's voice/opinions.
  - Everyone's efforts will be considered and always commended to make sure we establish a positive environment where all group members are motivated to share their ideas and converse.
  - If you cannot make certain meetings, please let the group know beforehand unless it is an emergency; flaking on the group is not cool.
  - If you disagree with anyone's opinion, instead of tearing someone down, attempt to point out the good they had in their opinion and continue to expand upon that.
  
- *Budget:*
  - Get an agreement with all team members before making a purchase or spending money on any manufacturer.
  - If additional resources must be used for the purchase for the proper attainment of our goal, use the budget wisely and make clear documentation.
  - All team members must discuss the usage of any resources or materials
  - We must not waste/toss materials without discussing with other members

- *Decision making:*
  - No group member will make decisions for other group members in their projects
  - group members can make suggestions for other group members or explain of another group member that can better their part of the project
  - Decisions will be reached in conversation and be COMPLETELY agreed on by all group members before they go into effect
  - When making a decision, we should have someone take notes on the possible effects of the decision, weighing the pros and cons to ensure we are making the correct decision.
  
- *Team coordination:*
  - No team member shall take unhealthy complete charge/dictatorship over the group
  - This team shall be a safe zone for expressing ideas and opinions without causing conflict or anyone shaming, putting down others' ideas, or refusing to at least acknowledge others' perspectives and opinions
  - It is important for every team member to stick up for themselves and their ideas and always clearly communicate them.
  - All team members will be open to criticism and change of initial plans at any time
  - We will all work to a goal or establish goals early on for the day that consists of doing, so to ensure we can get past the storming phase.
  - It is important to finish your work on time, the group decides. For example, work may be divided so one student cannot finish their part until the previous student has done their part.

## 1.8 Roster and Signatures

Name	Phone	UCInetID	Lab Section	Signature
Wenhao Cui	949 665 9305	wenhac4	Lab 2	
Shivam Shah	2138440390	shivamns	Lab 2	SS
Tai Vo	949 299 9871	taiv1	Lab 2	
Jose Lopez-Gallego	714 710 0030	jllopezg	Lab 2	JLG

Sponsor/Advisor Approval: \_\_\_\_\_ Mohamed Shorbagy \_\_\_\_\_ 1/17/2024

Signature Date