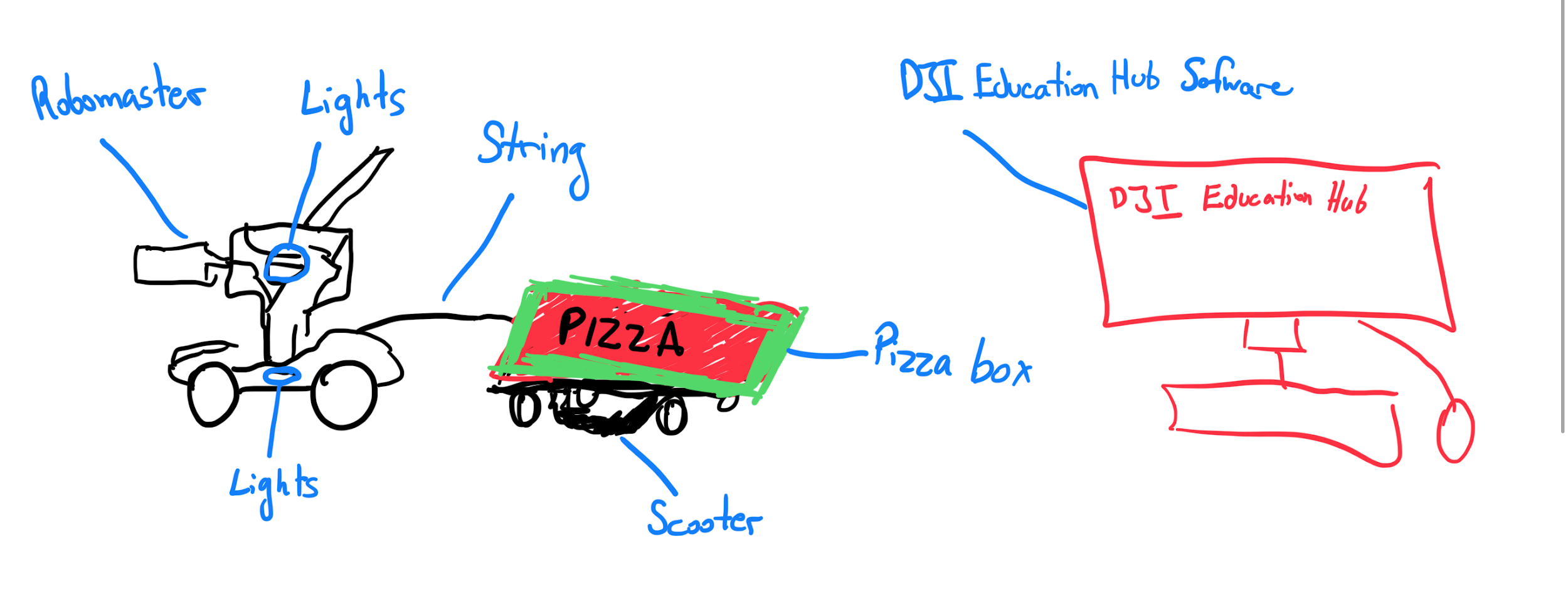
1 Design Drawing



2 Prototyping Schedule/Plan

| **Task** | **Duration** | **Risks** | **Mitigate Risk** | **Person** |
| --- | --- | --- | --- | --- |
| Purchasing of hardware. | 1 hour / March 1st. | Not acquiring the receipts for reimbursement. | Take pictures of the physical receipts. | Liam |
| Attaching the wagon. | 30 minutes / March 8th. | Too heavy for robot | Use a smaller wagon | Whole team |
| Programming of the computer **vision** | 5 hours / March 8th | The vision does not work and does not accurately detect colors. | Consult TA / PM for technical errors. Read the docs as well. | Farooq |
| Programming the **movem**  **ent .** | 5 hours / March 8th | The movement of the robot does not work as expected. | Consult TA / PM for technical errors. Read the docs as well. | Krystian |
| Programming the **lights.** | 5 hours / March 8th. | The light display of the robot does not work as expected. | Consult TA / PM for technical errors. Read the docs as well. | Emilia |
| Programming the **audio.** | 5 hours / March 8th | The audio display of the robot does not work as expected. | Consult TA / PM for technical errors. Read the docs as well. | Cassidie |

*Table 1: Schedule of deadlines and planning for the robot.*

3 Table of Required Materials

| **Number** | **Item** | **Type** |
| --- | --- | --- |
| 1 | Pizza | Hardware |
| 2 | Diji for Robomaster 1 | Software |
| 3 | Wagon (board with wheels) | Hardware |
| 4 | String | Hardware |
| 5 | Tape | Hardware |

*Table 2: Table of required materials.*

4 Prototyping and Test Plan Table

| Number | Objective | Test Method | Usage of Results | Test Duration  (date) |
| --- | --- | --- | --- | --- |
| 1 | Conveyance of message. | Survey before and after client meeting. | To iterate the message of the video. | 10 minutes / March 1st. |
| 2 | Length of travel of delivery. | Can the robot travel 10m without the pizza falling off. | To determine whether this section of our user needs is met. | 10 minutes / March 1st. |
| 3 | Handling the weight of the pizza. | A repeat of test 2, as well as whether the robot can still travel 10m with it. | To determine whether the food delivery objective of our project is met. | 10 minutes / March 1st. |
| 4 | Audio output from the robot. | Can the robot output custom audio. | To be used for interaction in all objectives for the robot. | 10 minutes / March 1st. |
| 5 | Setting the speed of the robot. | Can the robot travel at 28 km/h. | To be used when delivering food to the customer. | 10 minutes / March 1st. |
| 6 | Turning on/off of the lights. | Can the robots light’s be programmed in a way that they turn on and off/ | To be used to add a level of interactivity to the robot. | 10 minutes / March 1st. |
| 7 | Detecting people / objects. | Can the robot successfully detect a given colour. | To make sure the robot does not run into objects. | 10 minutes / March 1st. |

*Table 3: Table of prototyping and test planning.*

5 Prototyping Expansion Table

| Number | Type (what) | Objective (why) | Fidelity | When To realise |
| --- | --- | --- | --- | --- |
| 1 | Comprehensive | Overall message | High | March 1st. |
| 2 | Focus | Movement of Wheels | Low | March 1st. |
| 3 | Comprehensive | Weight Bearing | Medium | March 1st. |
| 4 | Focus | Audio Sound | Low | March 1st. |
| 5 | Focus | Movement of Wheels (engine) | Low | March 1st. |
| 6 | Focus | Light brightness | Low | March 1st. |
| 7 | Focus | Video detection | Low | March 1st. |

*Table 4: Further expansion of prototyping tasks.*

6 Appendix

[Appendix | Item I | Bill of Materials](https://docs.google.com/spreadsheets/d/1I16uC1glDsEYupONQSyeow3vCE0Ox0kJY3adp4cYT5c/edit?usp=sharing)