STEPHANOTRON

Midterm Project Plan

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# Project Concept

Industrial Concept

Robot is a "full" replacement for a server. It can pick up drinks, serve many customers to many tables, serve many drinks at a time, serve "fragile" drinks like cocktails, etc. The customers would have a touch screen with a easily expandable app that shows the options.

Prototype Concept

TIAGo Robot delivers **canned** drinks handed by the bartender from the bar (A) to point the customers (B). The customer picks it up and sends the robot back to the bar.
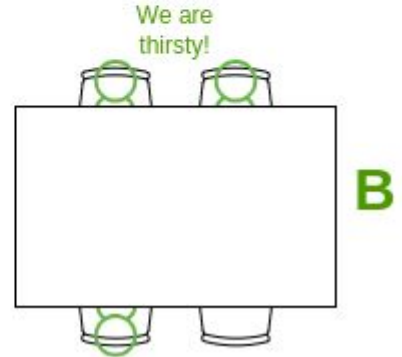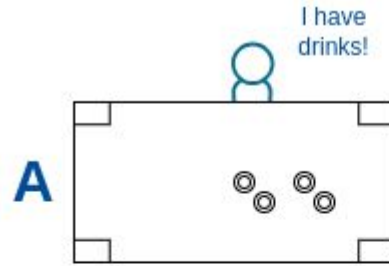
Action Sequence
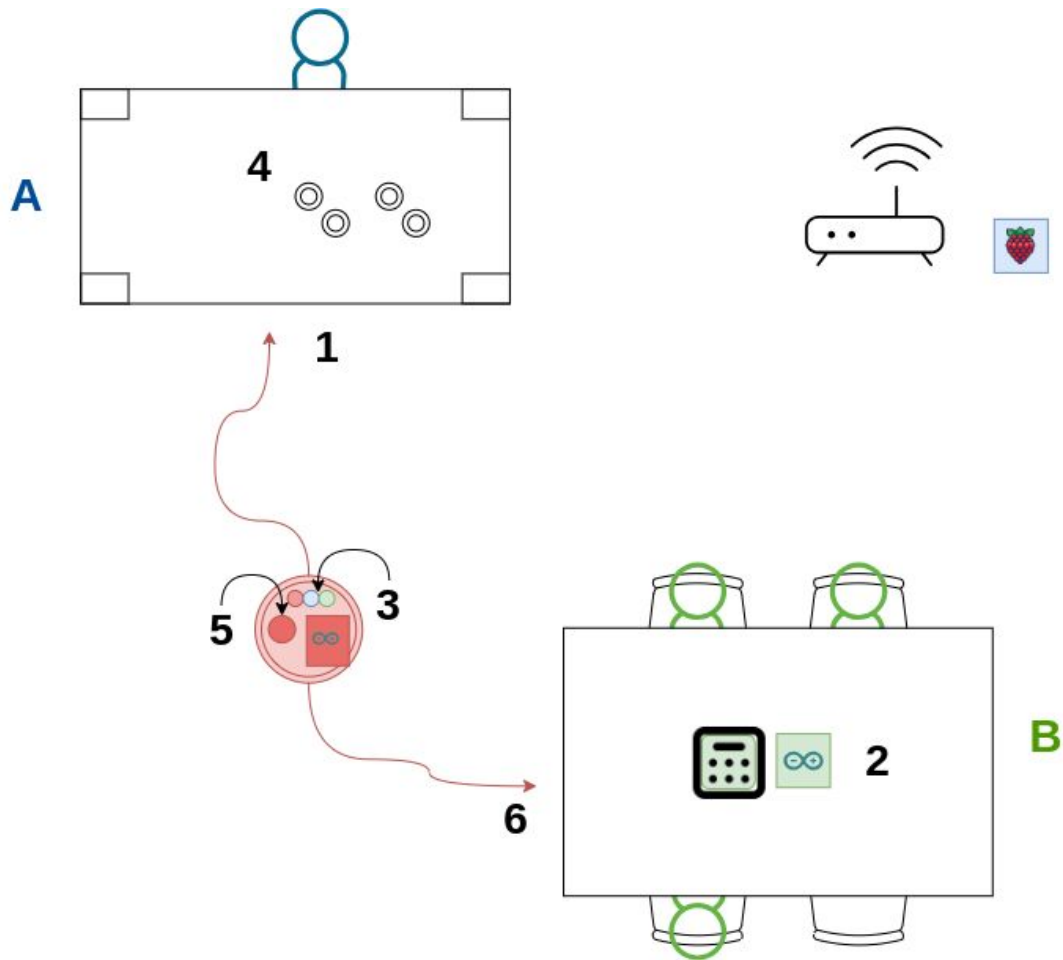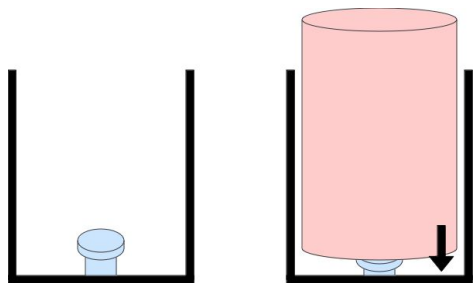
Communication

TIAGo → Arduino :

- Position reached
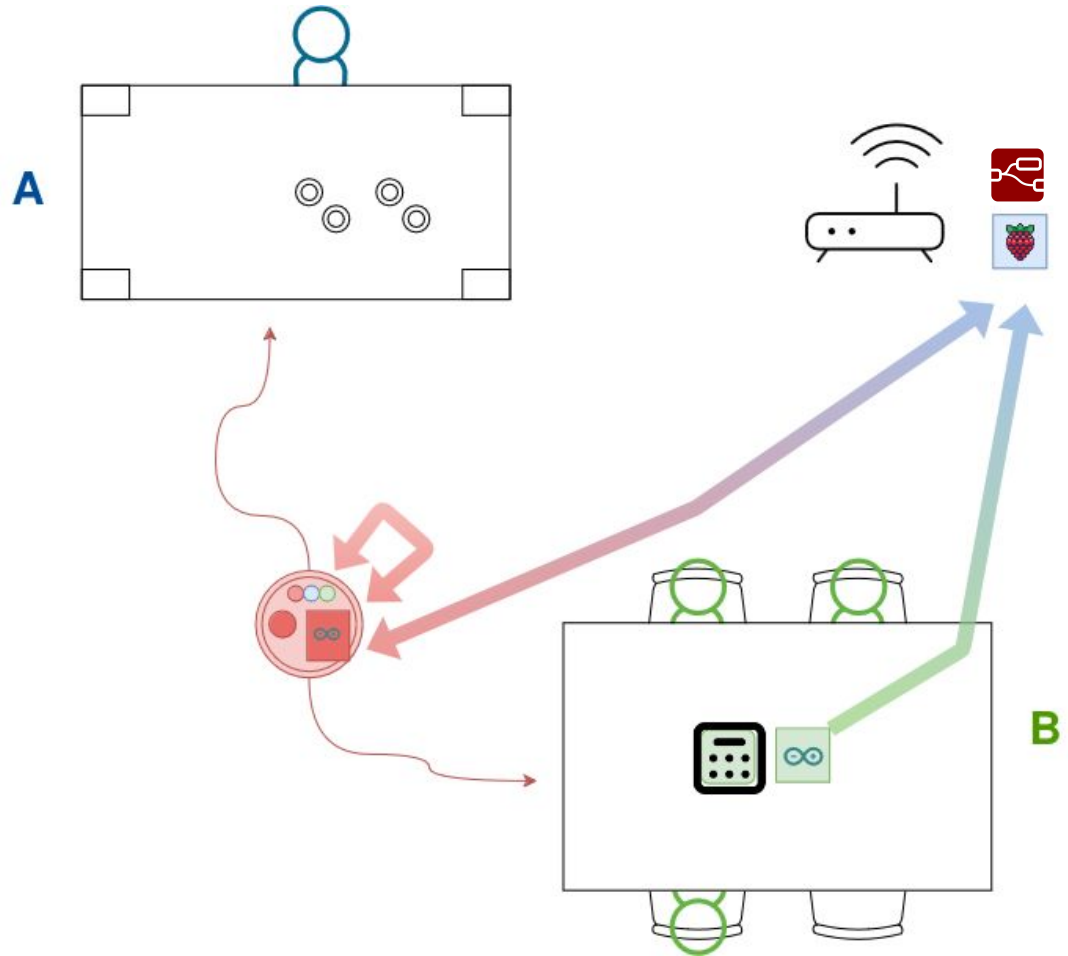
Arduino → TIAGo :

- When + where to go

Arduino → Pi :

- Availability
- Order in progress
- Order completed

Pi → Arduino :

- Order + position

Arduino → Pi :

- Order

Development Stages

v1 :

- **Robot :** Arduino, LEDs for orders, 3D-printed can holder, button for can weight, 3D-printed case
- **Customer :** Arduino, numpad, printed menu
- **Bartender :** cans
- **Server :** Raspberry Pi

v2 :

- Consider many customer tables and many robots

v3 :

- **Robot :** Screen instead of LEDs for orders, 3D-printed case