Cupcake symphony

(THE DECORATOR'S DELIGHT)

By Sama & Sarah

Agenda

1. Main idea
2. Features
3. Motivations
4. Hardware Modules
5. Constraints
6. Future work

Main idea

The Cupcake Symphony is a cupcake decorating line that lets the customer easily personalise his cupcake by selecting his preferred whipped cream flavour and a certain topper, such chocolate or sprinkles.

Features

No box,
no service

Customized
cupcake

2 ways of selection
Keypad and mobile
application

Features

The LCD will display the customers selections and update them as each stage is completed.

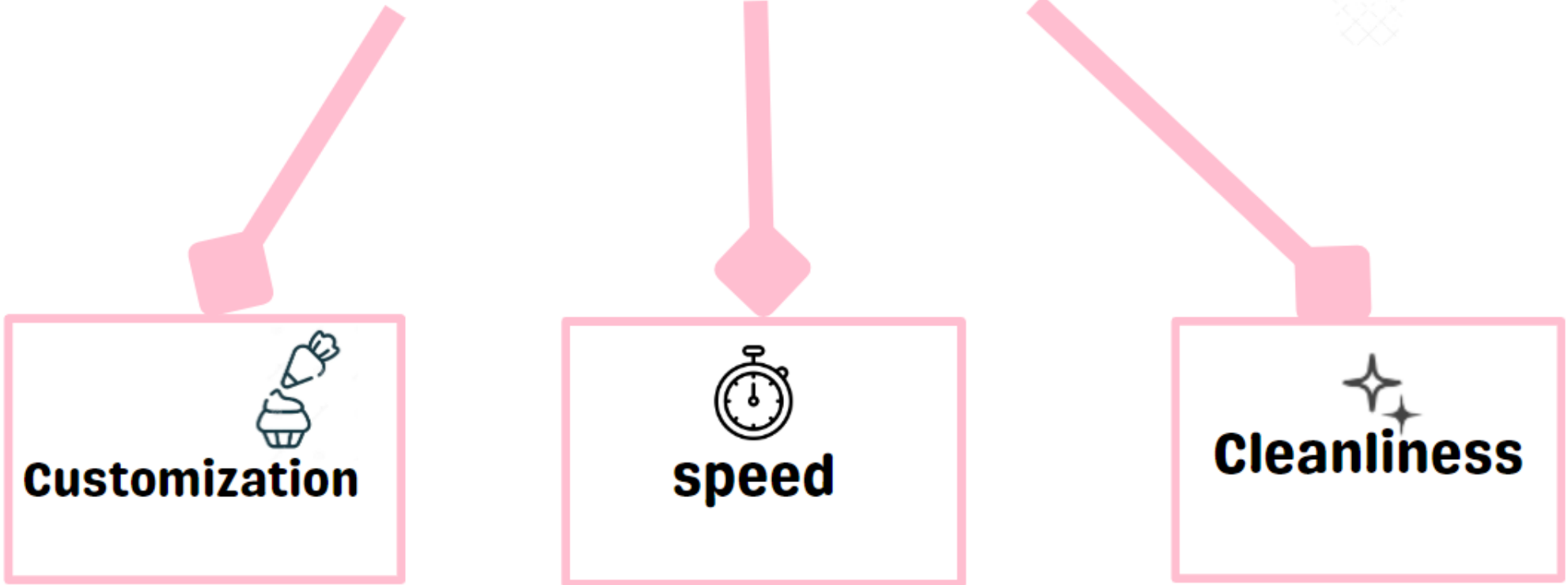
The quantities will be shown to the admin on the mobile application

An RGB Led turned on when the system is switched on

Features

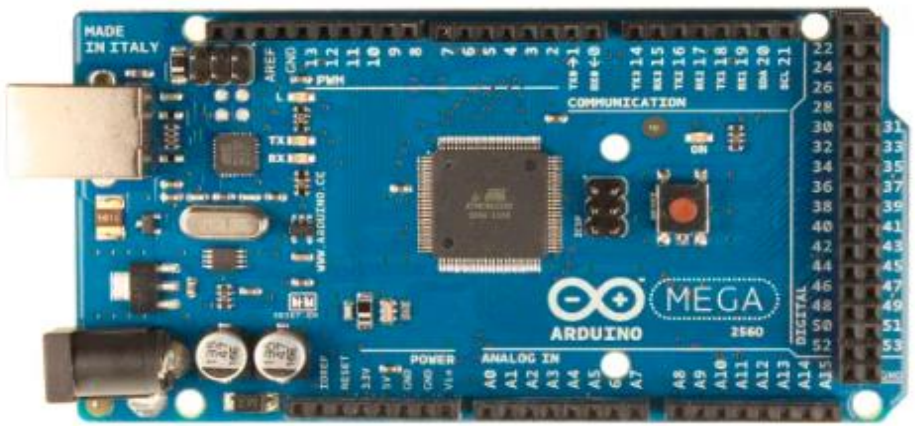
The lid will close after the procedure is finished, indicating that the customer's order is now ready.

Motivations



Hardware modules

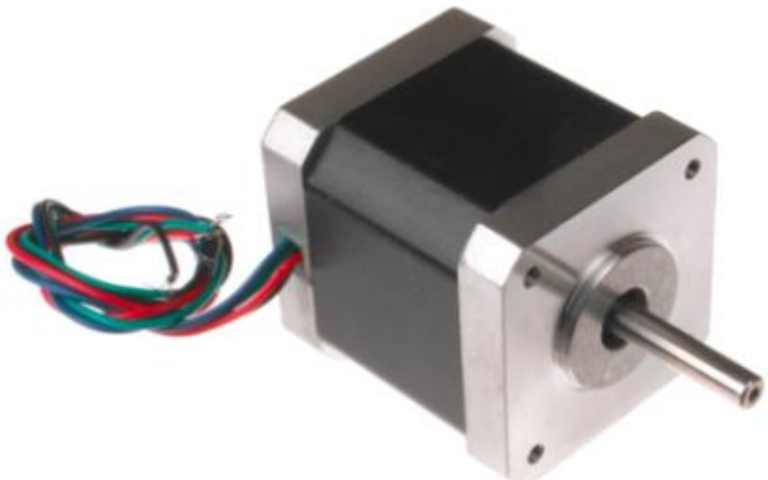
Control Unit



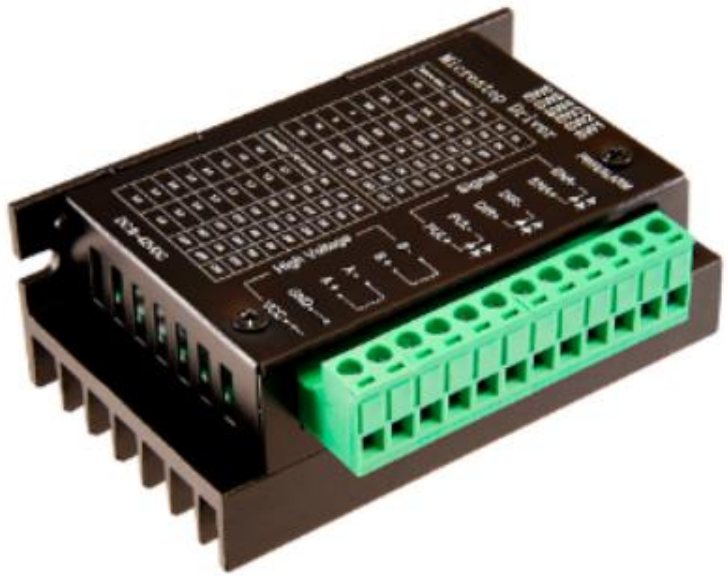
Arduino Mega 2560

ESP32

Input/output unit



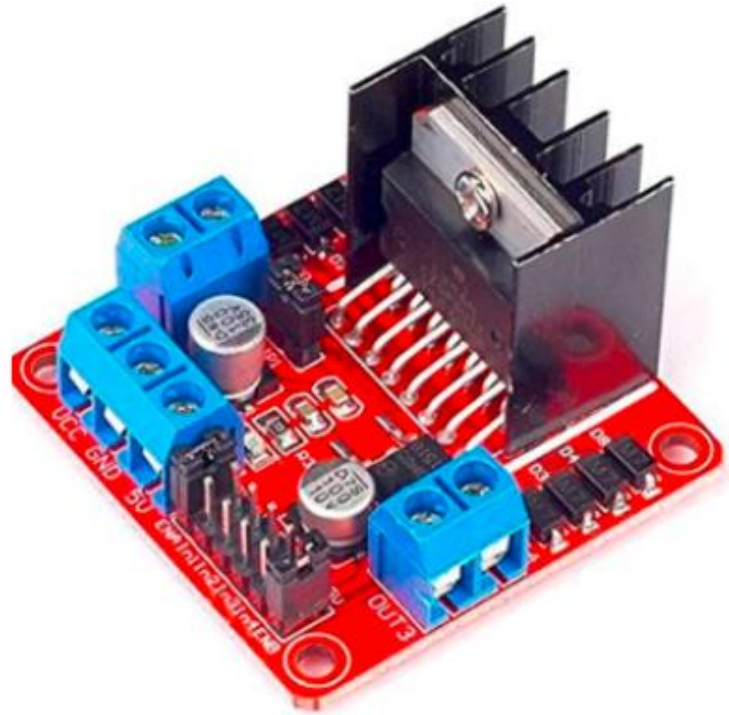
Stepper motor



stepper motor driver

Input/output unit

DC motor



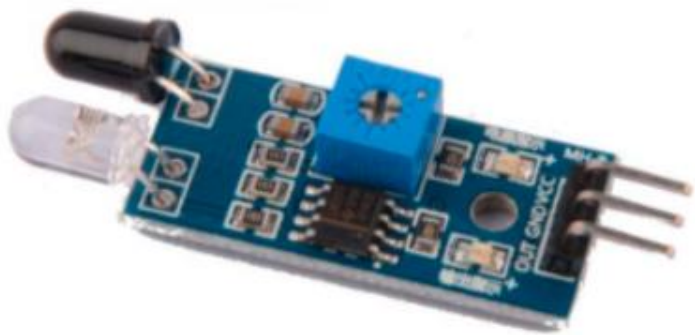
H-Bridge

Input/output unit

Servo motor SG90

Servo motor MG996

Input/output unit



IR sensor

Ultrasonic sensor

Input/output unit

LCD16x2 with I2c

Keypad4x4

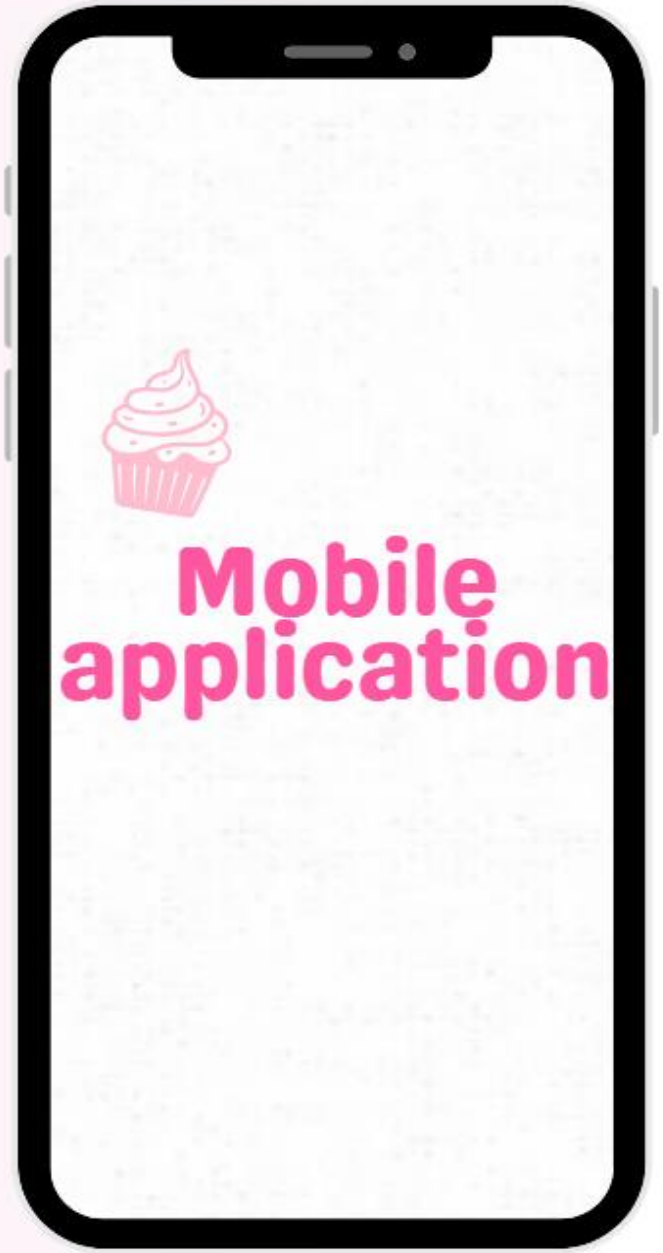
Input/output unit

Limit switch

RGB LED strip

Powering device

Power supply


Mobile
application

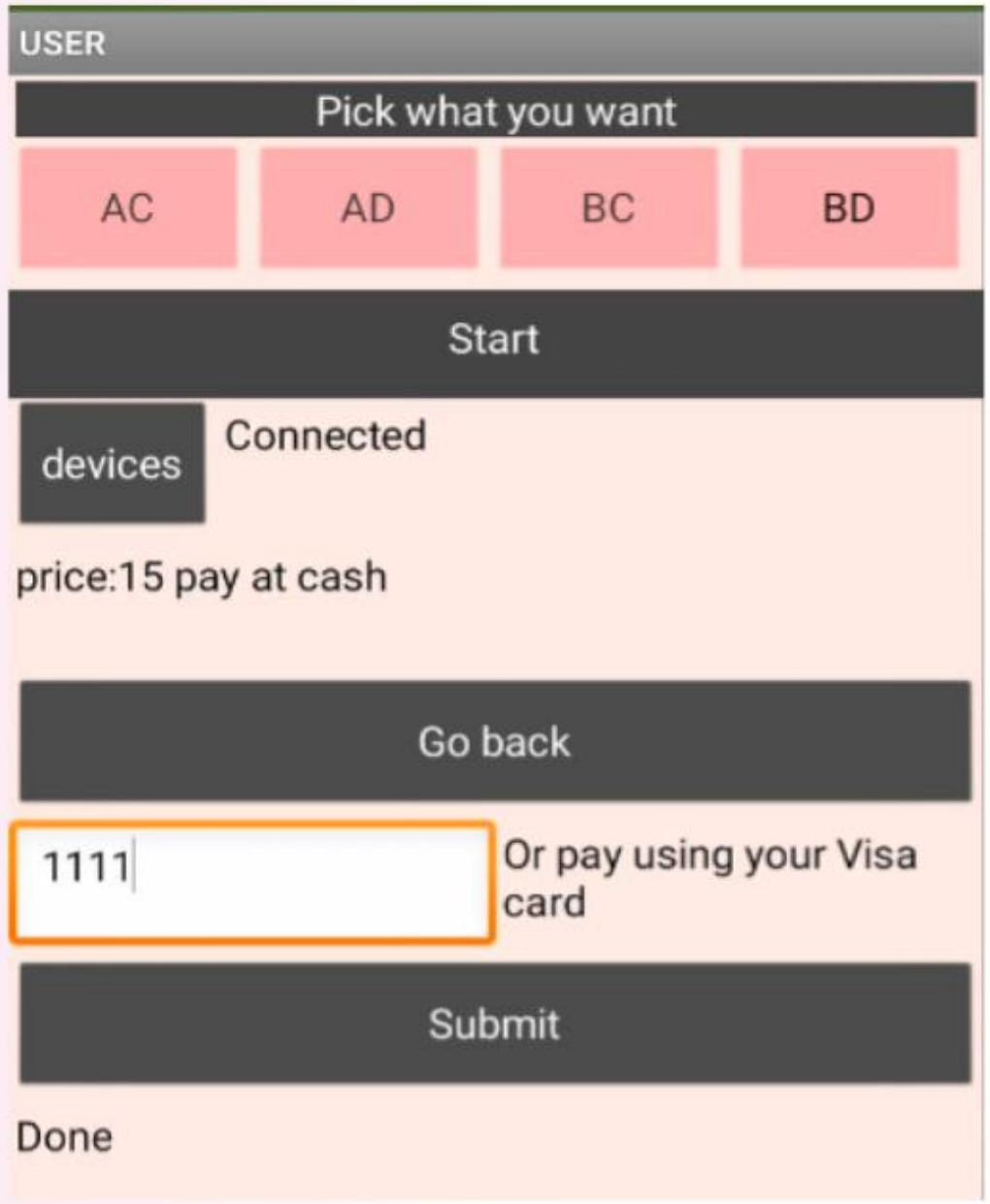
Admin

Admin1

Sprinkles full,can use it. Chocolate full, can use it

Go back

User


USER
Pick what you want
AC
AD
BC
BD
Start
devices
Connected
price:15 pay at cash
Go back
1111
Or pay using your Visa card
Submit
Done

Constraints

whipped cream dispenser

IR sensors

200rpm DC motor availability

Constraints

time and transportation, because of the current situation.

Availability of electronic parts.

Future work

- Auto Refilling
- Provide payment methods
- Adding GSM to allow the machine to send notifications to the admin.

Thank You