ENGI 301

Candy Game Box Proposal

10/14/21

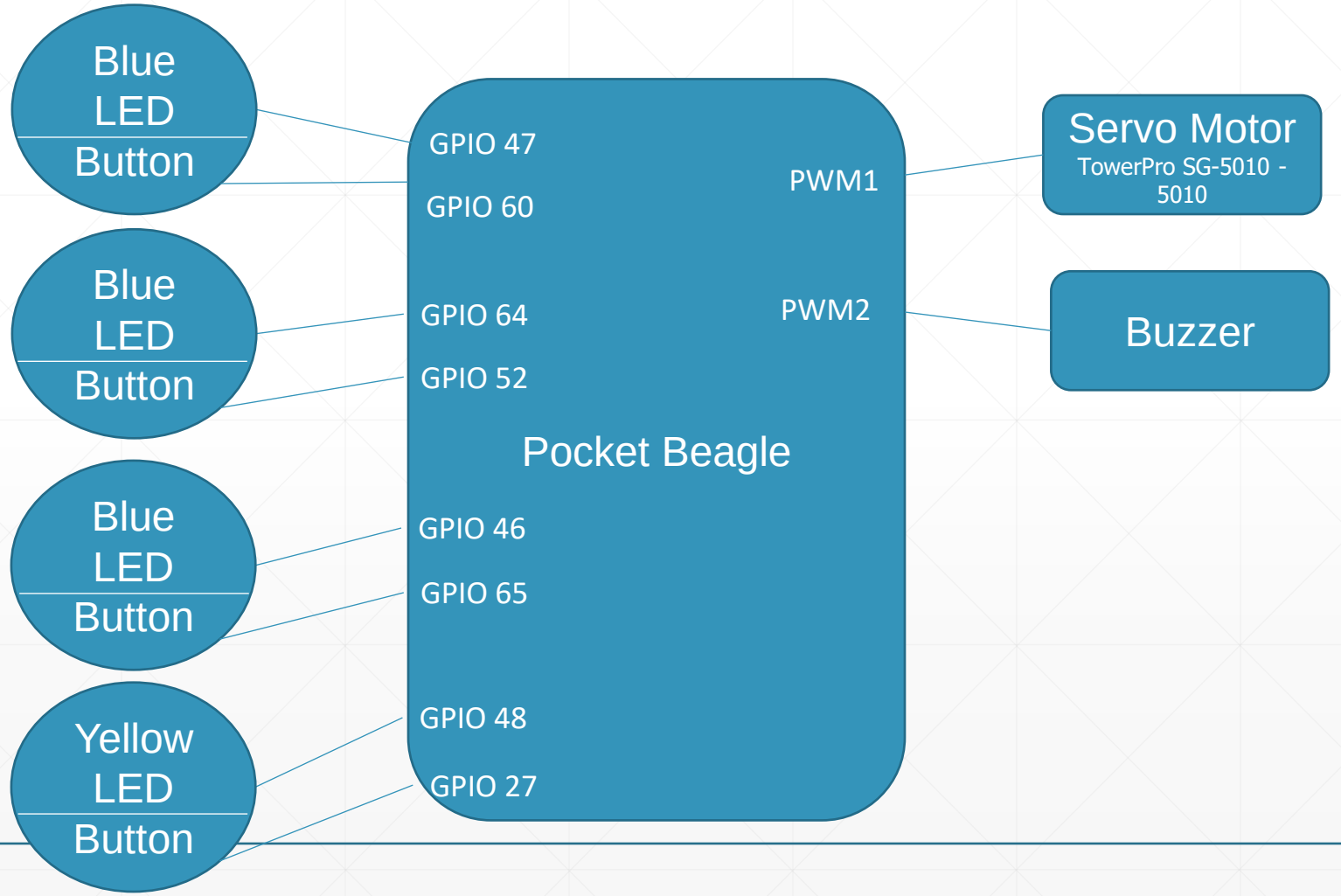
Jessica Kies

Background Information

- When candy is within easy reach, it is easy to just grab and eat without thinking if you really want it. To prevent this, I propose creating a box that stores the candy and releases it when a pattern is correctly repeated. This will add extra time and energy to the process of eating candy.
- I found inspiration from two previous projects, the arcade machine and golf ball dispenser. For the game, four LED buttons will light up in a random pattern. This pattern will need to be repeated by pressing the buttons in the correct order. When the game is won the box will use a servo motor to release a piece of candy, like was done with golf balls. Directly after winning, the pattern greatly increases in difficulty. The difficulty level will then gradually decrease over time. An hour after the last win, the difficulty will be at the standard level. If the pattern is not correctly reproduced, then a buzzer sounds, and the game cannot be played for the next 15 minutes.
- Links to previous projects:
  - PocketBeagle Arcade Machine - Hackster.io
  - Golf Ball Dispenser! - Hackster.io

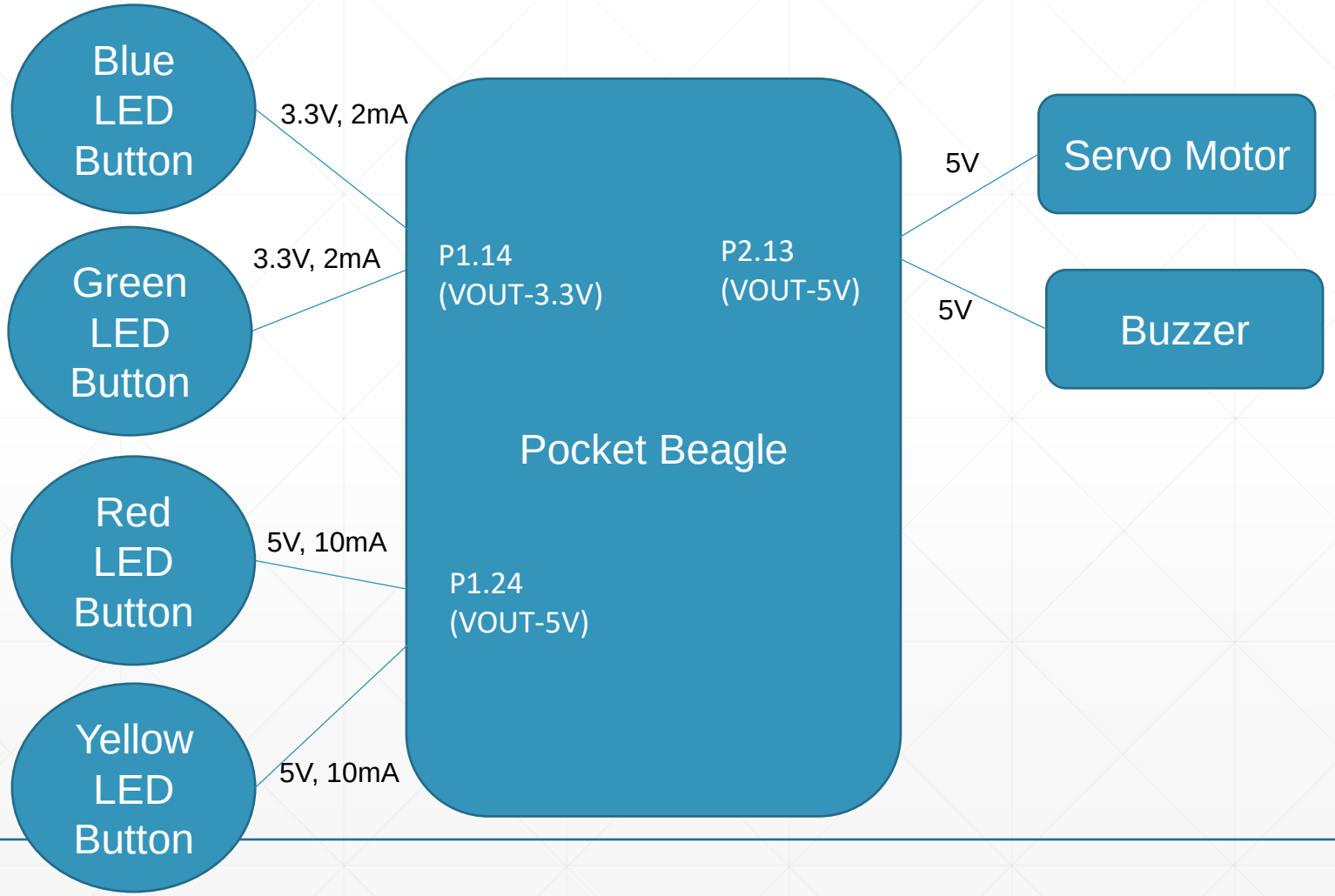
Previous Arcade Game

System Block Diagram



Need All Power Inputs and Outputs

Power Block Diagram



Components / Budget

Component	Need to Buy	Cost
LED Tactile Button (red, yellow, blue, green)	4	$2.50
Servo Motor	1	$12.00
Buzzer	1	$0.95

Need all components to be purchased by instructor listed; additional components may be purchased by student