Group Member Names: Cooper Ayers, Grace Jenkins Welsh, and Garret Wagner

Course and Quarter: ENGR114 Winter 2020

Date: 03//2020

Revision number: 1

**People Counter**

**Hardware Setup:**

Bill of Materials:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Part Name** | **Purpose** | **Item Name** | **URL** | **Price** |
| RedBoard | Logic Board | SparkFun RedBoard Qwiic DEV-15123 | <https://www.sparkfun.com/products/15123> | $19.95 |
| Vernier Interface Shield | Interfaces with Vernier Photogates | SparkFun Vernier Interface Shield DEV-12858 | <https://www.sparkfun.com/products/12858> | $24.95 |
| 2 Photogates | Relays information to be recorded | Vernier Photogate | <https://www.vernier.com/product/photogate/> | $49.00 |
| 2 Laser Pointers | Used with photogate | Vernier Laser Pointer | <https://www.vernier.com/product/laser-pointer/> | $19.00 |
| Breadboard | Connects LCD screen | Breadboard PRT-12002 | <https://www.sparkfun.com/products/12002> | $4.95 |
| LCD Screen | Display | Basic 16x2 Character LCD LCD-00709 | <https://www.sparkfun.com/products/709> | $18.95 |
| Boxes | Holds Photogates and Laser Pointers | Built by Cooper Ayers | NA |  |

Hardware Schematic:

Hookup Guide:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Part** | **Pin** | **Connector** | **Pin** | **Part** |
| RedBoard |  | Micro USB |  | Laptop |
| Vernier Interface Shield |  |  |  | RedBoard |
| Photogate 1 | 2 |  |  | Vernier Interface Shield |
| Photogate 2 | 6 |  |  | Vernier Interface Shield |

Images: