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| **Group** 27 | Item Tracker |
| **Major:** | **Team members:** |
| CS | Mohammad Aljagthmi |
| EE | Ryan Ly |
| CEG | Jake Manser |
| CS | Donald Taylor |

**Design Constraints**

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| Const No. | Constraints |
| 10 | Device height shall not exceed 45 cm |
| 20 | Device depth shall not exceed 45 cm |
| 30 | Device width shall not exceed 60 cm |
| 40 | Device weight shall not exceed 20 kg |
| 50 | Device power supply shall not exceed 10 Ah |
| 60 | Device shall comply with UL60335 |
| 70 | Device shall comply with one or more of the standards under IEEE 802.11 |
| 80 | Mobile application shall be compatible with Android 4.4 or newer |
| 90 | Mobile application audible tone shall not exceed 80dB |
| 100 | Device LED shall not exceed 60 lumens in brightness |
| 110 | Device LED shall have a minimum brightness of 15 lumens |
| 120 | Mobile application shall comply with ISO/IEC 29179:2012 standard |
| 130 | Mobile application shall comply with ISO 9241 standard |
| 140 | Mobile application shall comply with ISO 25062 standard |
| 150 | Device user input stored data shall be encrypted by a means which complies with FIPS 180-4 standard for secure hash algorithms |
| 160 | Device wiring shall comply with ANSI/NEMA WD 6-2016 |
| 170 | Device Wi-Fi antenna shall be FCC certified |
| 180 | Device data transmission shall meet RFC 1042 standard for IP datagrams |
| 190 | Device total cost shall not exceed $250.00 |

Definitions:

Width: The longest dimension of the device. The x dimension of the x, y, z plane

Height: The dimension perpendicular to the surface which the device is placed relative to the width. The y dimension of the x, y, z plane.

Depth: The dimension perpendicular to both height and width. The z dimension of the x, y, z plane.