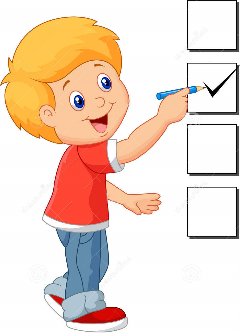
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| --- | --- |
| **Group** 27 | Item Tracker |
| **Major:** | **Team members:** |
| CS | Mohammad Aljagthmi |
| EE | Ryan Ly |
| CEG | Jake Manser |
| CS | Donald Taylor |

****Design Requirements**

**Objective 1**: Tracker syncs location with application.

**Objective 2**: Tracker can be reattached to a new object.

**Objective 3**: Tracker has configurable alerts from an application.

**Objective 4**: Tracker has LED light to display alerts.

**Objective 5**: Tracker has replaceable power source.

**Objective 6**: Tracker is resistant.

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| Req No. | Obj No. | Requirement |
| 1.0 | 1 | Device shall comply with IEEE 802.11 communication standard |
| 2.0 | 1 | Device shall use an open source positioning system over Wi-Fi |
| 3.0 | 1 | Device shall communicate with a mobile application |
| 4.0 | 2 | Device shall adhere to surfaces that meet SPI standards A-3, B-1, B-2, B-3, C-1, C-2, C-3 for molded plastic with Velcro© pads |
| 5.0 | 4 | Device shall contain an attached LED light that conforms to ANSI C82.16-2015 standard |
| 6.0 | 1 | Device shall include a mobile application |
| 7.0 | 3 | Mobile application shall be usable on at least mobile device running Android 4.4 or newer |
| 8.0 | 3 | Mobile application shall email the user provided email address when battery voltage drops below 80% of factory listed voltage |
| 9.0 | 3 | Mobile application shall allow the user to configure a visual alarm for an input date and time |
| 10.0 | 3 | Mobile application shall allow the user to configure an audible tone of at least 60dB for an input date and time |
| 11.0 | 3 | Mobile application shall allow the user to configure the LED light to turn on for an input date and time |
| 12.0 | 3 | Mobile application shall allow the user to see location information for the device |
| 13.0 | 3 | Mobile application shall allow the user to define a custom name for the device |
| 14.0 | 3 | Mobile application shall store user defined email |
| 15.0 | 3 | Mobile application shall store user defined wi-fi network credentials |
| 16.0 | 5 | Device shall provide the user access to the battery through a folding panel |
| 17.0 | 5 | Device shall accept a replacement battery of the same form factor |
| 18.0 | 6 | Device shall function in temperatures above 32­­­­0F |
| 19.0 | 6 | Device shall function in temperatures not exceeding 1500F |
| 20.0 | 6 | Device shall function if exposed to 8 fl oz of water |
| 21.0 | 6 | Device shall function following a 3 ft exposure to unaccelerated gravity |
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