**Alarm Clock Robot**

Have you ever find yourself waking up 4 hours after your alarm clock and wondering if it ever went off? We all have, and that's because conventional alarm clocks are just too easy to turn off. This is why we propose wheelie, an alarm clock on wheels! You can plug wheelie in at night to charge him up, and in the morning he will rip himself away from the outlet and race around the floor screaming until you catch him and turn him off. This is a great way to wake people up in the morning, because they are not only forced to get out of bed to turn off wheelie, but they must also focus to catch him. Catching wheelie forces the person’s brain to leave the groggy state and become more active, making it easier for the person to wake up.

**Design Requirements**

* Can survive falls from a nightstand
* Alarm clock should have ability to remove the charger and run away
* Drive at least as fast as the average human walking pace
* Drive around at top speed with max audio output for at least long enough to wake up the heaviest of sleepers (this is only applicable to people who will actually wake up from generic alarm clocks)
* Time keeping should be accurate to minimize user having to set current time often
* Audio output decibels should be comparable to normal alarm clocks
* Battery changing should not happen so often that it’s annoying

**Group Agreement**

* Hours per week per person: 15-20 hours.
* When during the week each person is free/not free:
  + **Joe:** All of Friday, Saturday and Sunday. Almost all Wednesday and Thursday nights. NOT FREE on Mondays/Tuesdays.
  + **Akshay:** All Tuesday, Friday and Sunday. Almost all Monday, Wednesday and Thursday nights.
* Spread evenly throughout the week.
* Individual work will be done Monday, Tuesday and Wednesday. We will work as a group Thursday nights, and throughout the weekend. We’ll do work in groups of 2, both when working on hardware and software. When we work as individuals we will work on PCB layout and software. The schematic will be worked on in pairs, and the PCB/schematic will be verified by the entire group in one of the weekly meetings.
* **General Work Breakdown**

**Akshay:** In charge of software and scheduling meetings. During research phase, in charge of researching LCD display, external sensors to keep car from crashing into walls, requirements gathering, and doing power budget for all of our parts.

**Joe:** In charge of taking notes at meetings, PCB design, general hardware issues (supplying power, noise reduction in circuits, ect.), audio output, and motor control.

**Both:** Checking over each other’s work, and working in pairs on difficult parts of each project. Keeping track of schedule and making sure everybody is getting their parts done on time.

* **Known Conflicts:**
  + **Joe:** Out of town for fall break(Friday-Sunday).
* Thursday night around 6 will be meeting time for a general non-technical meeting. We will discuss work we’ve done as individuals on Monday, Tuesday and Wednesday and talk about how we will split up work as a group throughout the weekend