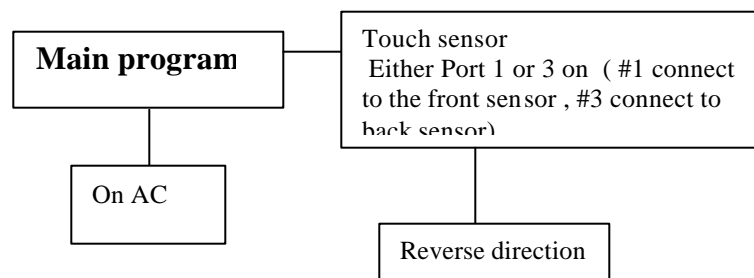# Design Specification (10%)

Please answer the following questions and return to your instructor on Monday week 10

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1. What is your group's ultimate goal for the project, is it getting the best grade or winning the competition?

2. What is the strategy for winning the competition? How do you go about getting the fastest time without getting stuck somewhere in the course? Do you have a weapon or plan for fighting off the unfriendly robots? Please provide text and drawings to illustrate the design.

3. What is/are the main sensor/sensors for guiding the robot around the course? How does each sensor assist the robot in going around the course? Please provide text and drawings to illustrate the design.

4. Provide an outline of the program for wheelchair, car, and defender robots

Example of a car program:

```
                    ┌──────────────────┐   ┌──────────────────────────────┐
                    │                  │   │ Touch sensor                 │
                    │  Main program    │───│  Either Port 1 or 3 on ( #1 connect │
                    │                  │   │ to the front sensor , #3 connect to │
                    └──────────────────┘   │ back sensor)                 │
                             │             └──────────────────────────────┘
                    ┌──────────────┐                  │
                    │   On AC      │           ┌──────────────────┐
                    │              │           │ Reverse direction │
                    └──────────────┘           └──────────────────┘
```

5. Provide a system layout:

Example of System Layout:

Light sensor at port 2– placed faced down in the front, detect reflected light intensity from the floor and halt car for 12 seconds at the crosswalk

Left tactile sensor at port 1– when touched steer car to right at 30 o

RCX – control center where programs are downloaded and stored via a IR transceiver. Where sensors and motors are attached.

Right tactile sensor at port 3– when touched steer car to left at 30 o

Weapon using DC motor at port B- Spin fishing hooks around to catch and dissemble other robots.

DC motors at port A and C – provide mechanical power to all wheels.