**E11 Final Report**

Team Logo Here

**Team Name**

Section #(s)

Name 1 & Name 2

**1. ABSTRACT**

-1 paragraph long

-Describes goal of document

-Quick overview of technical component and results

# 2. introduction

-Provides big picture about competition and what makes your robot unique.

-Provide picture of your robot, highlighting/labeling unique hardware components.

-Provides a HIGH LEVEL description of your robot’s strategy.

-Provides a signpost the rest of the report

-Remember that the report should not exceed 5 pages, excluding the title page and appendix

# 3. Physical modification

-Describe all the physical modification(s) that you made.

-Give enough information that another member of the class could reproduce your work.

-If you modified your chassis, provide a revised SolidWorks diagram with critical dimensions indicated.

-If you added hardware, provide a bill of materials indicating what you added and where you obtained the parts.

-If you added new electronics, include a schematic of your circuit. If a photograph is helpful, include it (but remember that a photograph is not a substitute for a technical drawing). How much did your changes cost?

Table Sample Bill of Materials

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Component** | **Description** | **Supplier** | **Supplier Part #** | **Unit Price** | **Quantity** | **Total** |
| R1-R7 | 1 k resistor | DigiKey | 1.0KQBK-ND | $0.01 | 7 | $0.07 |
| C1 | 0.1 F capacitor | DigiKey | P4525-ND | $0.18 | 1 | $0.18 |
| U1 | Spartan XCS3400-4TQ144C FPGA | Nu Horizons | XCS400-4TQ144C | $19.10 | 1 | $19.10 |
| D1 | Common anode 7-segment display | Jameco | 24715 | $1.26 | 1 | $1.26 |
| … |  |  |  |  |  |  |

# 4. Algorithm

-Describe how your robot works.

-Use diagrams where appropriate.

-Explain at a level that another team could reproduce your work.

-Don’t get into the nitty-gritty of the source code unless there are routines that are especially tricky or critical (such as a particularly fast method of correlating for Gold codes).

# 5. Results

-How did the robot perform during testing, the scrimmage, and the final competition? Be specific

-Some topics to address include:

* discrepancies with the intended algorithm
* limitations of your robot
* how far did you advance in the scrimmage and the final competition? Why?

# 6. Lessons Learned

What did you learn from this project? Be concrete. Consider both what you would do to improve your robot if you had more time and what larger lessons you can draw from this experience to help in future design projects.

1. mudduino code

Provide complete source code. Use 9 point single-spaced Courier New (choose Code in the styles list). Your code should be neatly formatted, commented, and readable. Be sure you do your formatting in the original code and check that it still compiles correctly, rather than modifying the code in Word and risking introducing an error. If you have multiple files, clearly identify the name of each one.

void setup(void)

{

 // blah, blah, blah

}

…