



Prop. Pres.

D.J. Broderick

Intro

Block  
Diagrams

Hardware

Software

Project

Final  
Thoughts

# Design Presentations

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# Proposal Presentations

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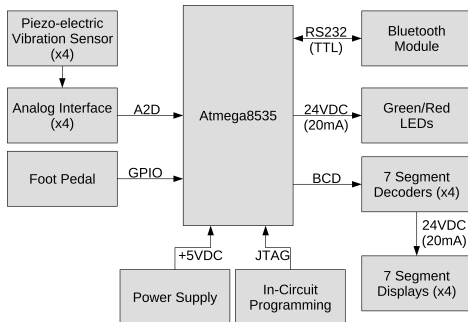
- Serves as an explanation of how you will solve the proposed problem with a technical design.
- Use what you have learned in other classes.
- Consider the use of the following:
  - Block Diagrams (Hardware & Software)
  - Schematics
  - Parts List
  - Flow Charts
  - Pseudo-Code
  - State Diagrams
- The audience should be instilled with the sense that you have a clear understanding of the technical issues you will face in implementing the design.



# Block Diagrams

Appropriate for all audiences:

- **Non-technical:** May be the one slide/figure they understand
- **Technical:** Gives an overview of how you will break the problem up into manageable parts





# Schematics

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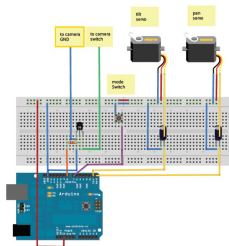
Software

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- This should be a technical document and should be prepared as such.
- This is **NOT** a picture of hardware with lines drawn between things.

**NOT A SCHEMATIC!**



http:

[//d2lg1iac45z1vf.cloudfront.net/wp-content/uploads/2010/10/pan\\_tilt\\_arduino\\_schematic.jpg](http://d2lg1iac45z1vf.cloudfront.net/wp-content/uploads/2010/10/pan_tilt_arduino_schematic.jpg)





# Parts List

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- Only if short.
- If long, provide as handout to audience and included in written design document
- Break out unit cost and development cost, Make total(s) clear

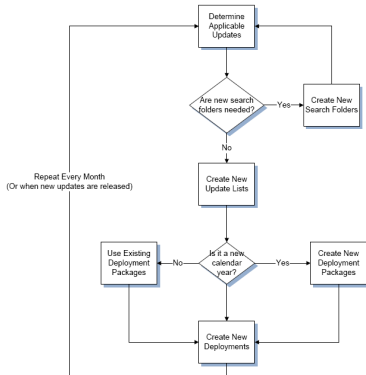
An abbreviated example:

<u>Description</u>	<u>Vendor</u>	<u>Vendor Part #</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Line Price</u>
Bluetooth module	Amazon	HC-06	1	\$7.69	\$7.69
6" LED Display	Sparkfun	COM-08530	4	\$14.95	\$59.80
Load Sensor 50kg	Sparkfun	SEN-10245	3	\$9.95	\$29.85
LED Matrix - Dual Color - Medium	Sparkfun	COM-00682	1	\$6.95	\$6.95
Atmel AVR Dragon	Digikey	ATAVRDRAGON-ND	1	\$49.00	\$49.00
Atmel ATMEGA8515-16PU Microcontroller	Digikey	ATMEGA8515-16PU-ND	3	\$4.58	\$13.74
Total					\$167.03



# Flow Charts

- Use to describe software algorithms
- Clear, understandable flow
- All decisions covered





# State Diagrams

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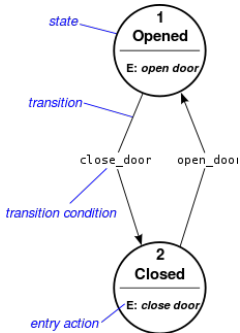
Hardware

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- From your digital courses
- A clearer description of software behavior



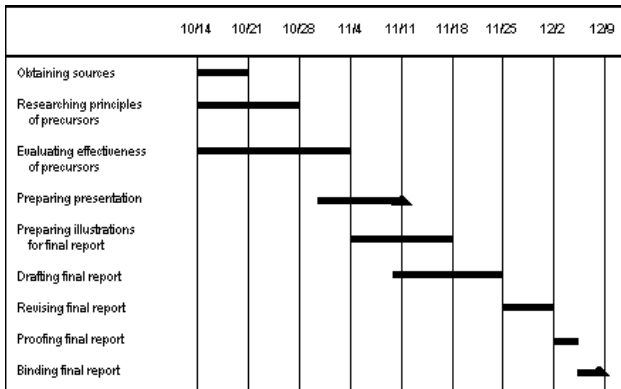
[http://upload.wikimedia.org/wikipedia/commons/thumb/c/cf/Finite\\_state\\_machine\\_example\\_with\\_comments.svg/225px-Finite\\_state\\_machine\\_example\\_with\\_comments.svg.png](http://upload.wikimedia.org/wikipedia/commons/thumb/c/cf/Finite_state_machine_example_with_comments.svg/225px-Finite_state_machine_example_with_comments.svg.png)





# Schedule

You will be able to update your schedule with greater detail than in your proposal. You're further into the design so you know more about what you need to do.





# Suggested Outline

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Consider the following outline for your presentation and design document:

- 1 Introduction to your problem
  - 1 Abstract
  - 2 Relevance of Project
- 2 Block Diagram
- 3 Description of Hardware (in no particular order)
  - 1 Schematic
  - 2 Parts List
- 4 Description of Software (in no particular order)
  - 1 Flow-charts
  - 2 Pseudo-code
  - 3 State diagram
- 5 Schedule & Overview of Cost



# Final Thoughts

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The day of the presentation:

- 1 Bring electronic backup of slides (USB drive or similar)
- 2 Prepare printout of slides for audience
- 3 Prepare printout of any figures that warrant closer inspection by the audience

For your written design document:

- 1 Prepare document covering the same material
- 2 Should be stand-alone document that can be understood without additional presentation/information