UC Berkeley NanoLab Summer Internship 2013

Front and back-end development of a new website for one of the recharge centers



Nova Ng
Saratoga High School
July 25, 2013



Overview

- Machine Shop Website (Front-end)
 - Job ManagementSystem (Back-end)
- NanoLab Website (Front-end)
- Acknowledgements



Machine Shop - Home Page (Before)

Cory Hall Machine Shop

187 Cory Hall

<u>Home</u>

Personnel

<u>Awards</u>

Equipment

Job Request

Projects

Reports

Contact Us

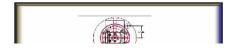
Hours of Operation: 7:30 - 4:00 Closed: 12:00 - 12:30

You are welcome to submit jobs to the Cory Hall Machine Shop. We have the ability to handle many different types of jobs, using metals and exotic materials to fabricate small and very precise instruments, in a timely manner. Our diverse backgrounds help us find solutions to any problem you might have.





With our range of equipment in the shop, we can handle just about any job that comes along. From our precision conventional machines to our CNC lathe and 4-Axis CNC mill, we can produce very precise parts with tolerances to 0.0001".



Hours of Operation: 7:30 - 4:00 Closed: 12:00 - 12:30

Nambh Job Request (To big in, please use sectionername and password)

Job Roquest Form [2]

Job Management System (To log in, please use encyunername and password)

Recharge Rate: \$87.00/hr (effective March 28, 2013)

19 The Narrollab Job Request in an online form that can be submitted by all customers provided Chart of Account information is included in the Comments section. Machine Shop will verify authorization with listed Court Administrator or (GID).

The lab Request Form must be printed, completed, signed and submitted by fax, real or in person to the Machine Shop.

Machine Shop – Pages (Before)









Hours of Operation: 7:30 - 4:00 Closed: 12:00 - 12:30

Mils	- Sarno (Alvas Chit. X-42", Y-10", Z-20") - Bidgenots (3), 9" x 30" with DRC0s - TRAK DRM 3, 1-AANS CNC, X-32", Y-47", Z-23-5
Lathes	15" Clausing with DRO 20" Mosech 5: 1 with DRO 15" Monacch (5: 1 with DRO TRAK 1849 SX
Drill Presses	- 15" Clausing - 14" Waker-Tuner
Pneumatic Tapping	Elex.Arm.A-32 0-80 to 9/16" tap capacity, 34" working range
Saws	DoAI 24" vertical bandsaw DoAI 10" horizonal bandsaw
Shear	Pesto, C electric, 16-gauge capacity
Grinders	Wildow Turner pedestral Galler sectoral Phosos of charmond wheel Created Rageths surface, 0" x 10"
Sanders	Witten betidisc combination CM Superbine Breat Blaster
Precision Measurement	Outside micrometer set, 0" - 12" I leade micrometer set, 1" - 12" Degith micrometer set, 1" - 12" Degith micrometer set, 0"

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Just a small sample of the type and quality of work we do here in the Cory Hall Machine Shop.

Three-Phase Free Piston Stirling Engine

A low cost solar thermal electric technology for distributed porgeneration (Prof. Sanders).



RTCVD System

Rapid Chemical Vapor Deposition (Microlab)



Upgrade to a 4" water etcher

Machine Shop - Objectives

- Default Layout
- Navigation Bar
- Less Scrolling
- Consolidate
 Information
- "Modern" Look

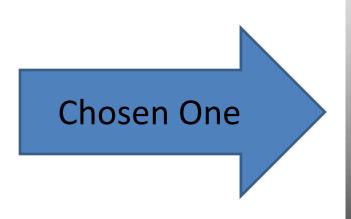


Machine Shop — Layout Mockups

Created 10 different sample layouts as a proposal for the new look of the Machine Shop website



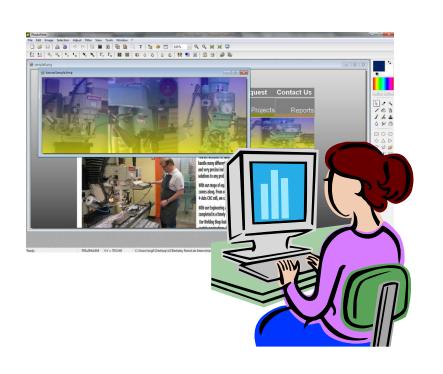




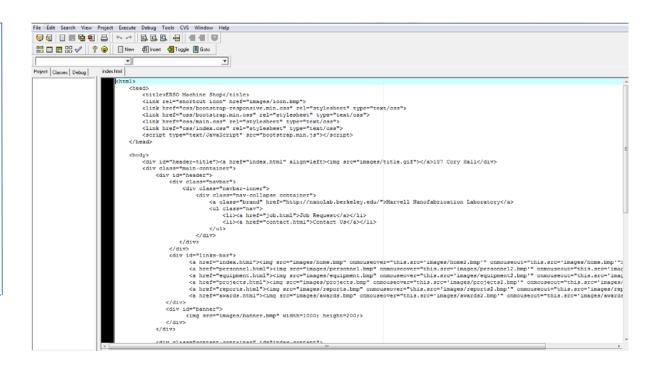


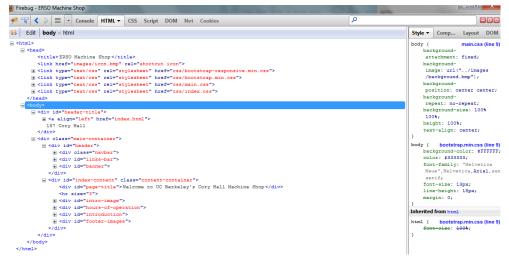
Machine Shop - Implementation

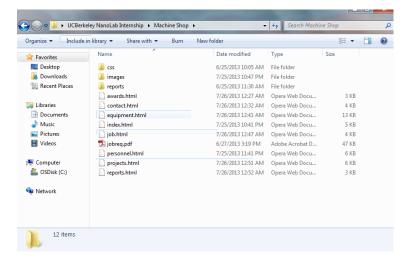
- Redesign all pages
- HTML and CSS
 - styling the pages
- Firebug add-on
- Twitter Bootstrap
 - navigation bar
- PhotoFiltre
 - banner, background, and link images
- PhotoScape



Machine Shop Coding







Machine Shop - Home Page (After)





Machine Shop – Pages (After)









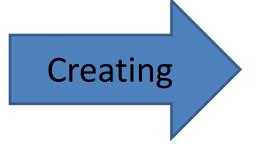




Machine Shop – Job Management System

- Created 8 JavaBeans (using Eclipse IDE)
 - mechanicians, jobs, and accounting
 - using SQL to access relational database management system tables
 - load and save methods
 - * insert and "delete"

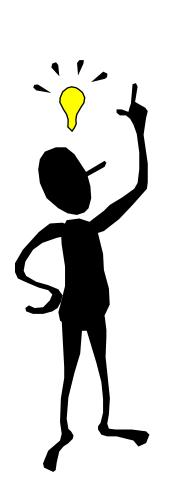


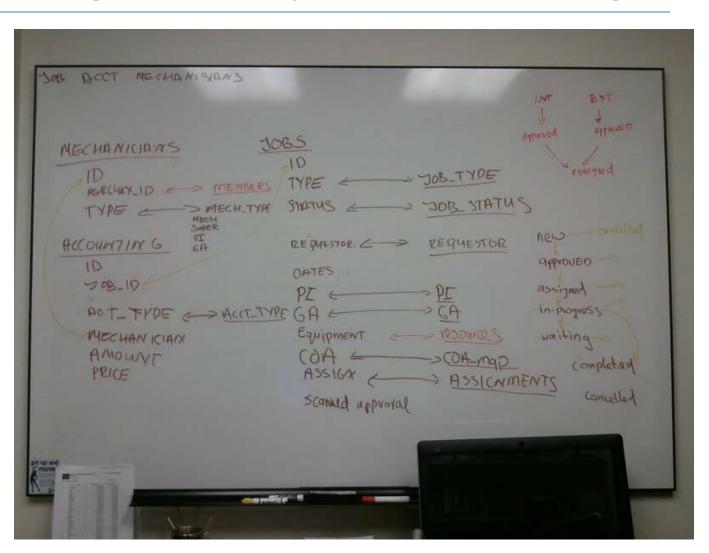




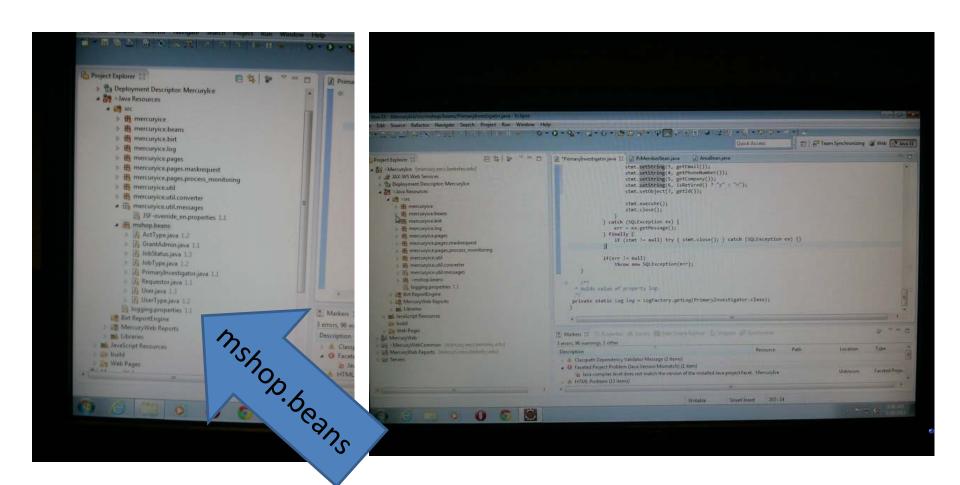
Machine Shop –

Job Management System: Planning

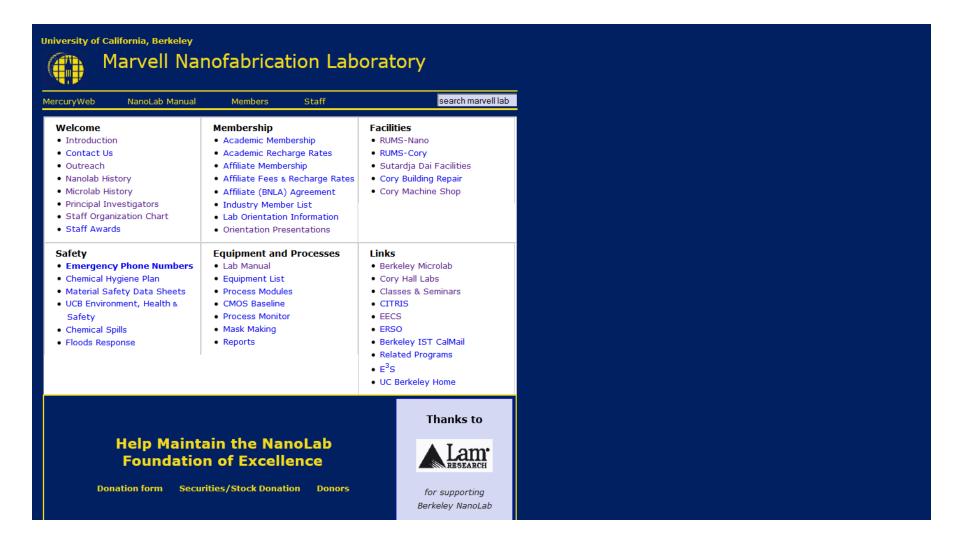




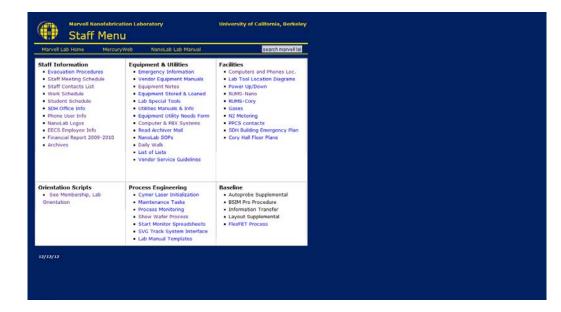
Machine Shop – Job Management System: Coding



NanoLab - Home Page (Before)







NanoLab – Member Portal, Staff Menu (Before)

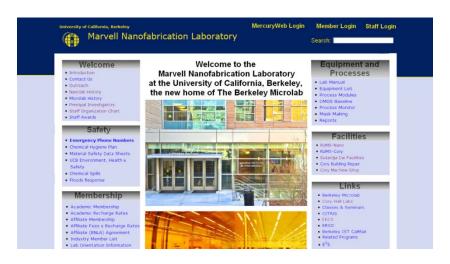
NanoLab - Objectives

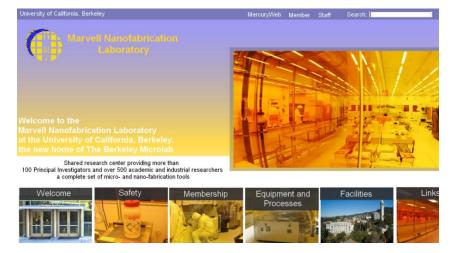
- Visuals
- Easy Access to Links
- DynamicDonations/Supporters Box

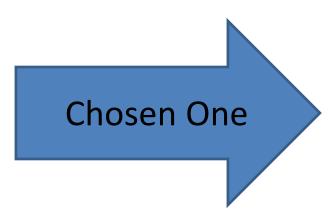


NanoLab – Layout Mockups

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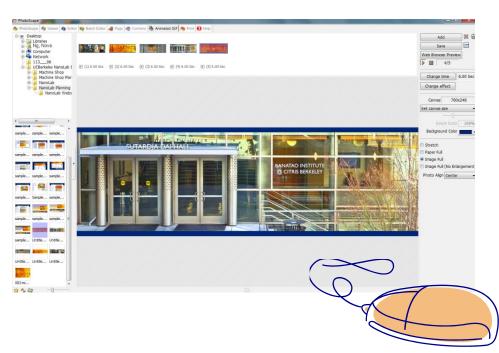




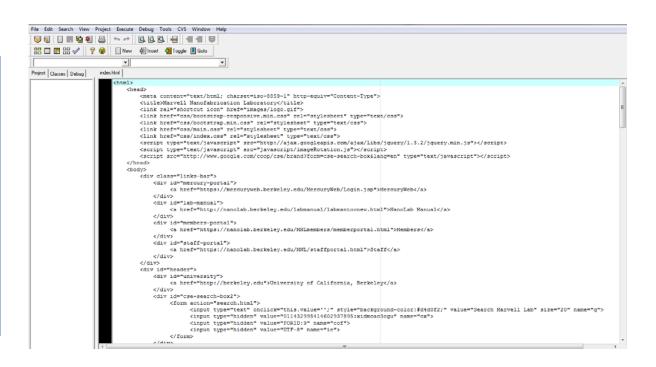


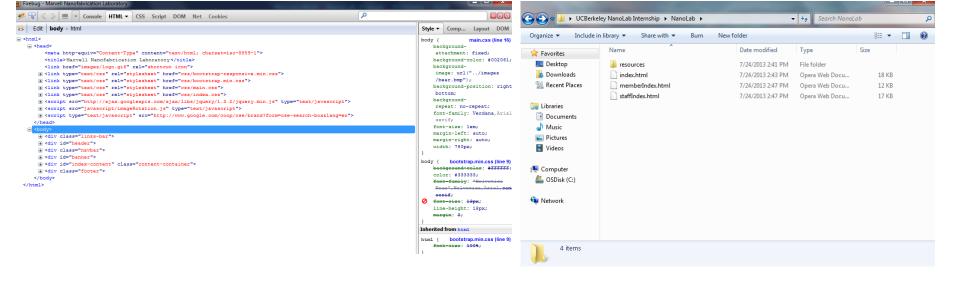
NanoLab - Implementation

- Redesign home page, staff menu, and member portal
- HTML, CSS, and JavaScript
 - styling the page, rotating images
- jQuery
- Firebug add-on
- Twitter Bootstrap
 - navigation bar
- PhotoFiltre
 - photo editing
- PhotoScape
 - .gif banner

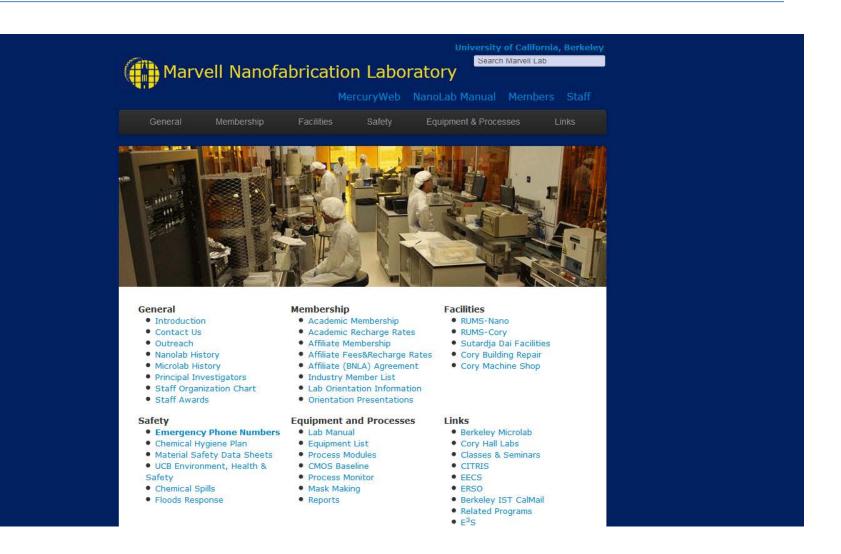


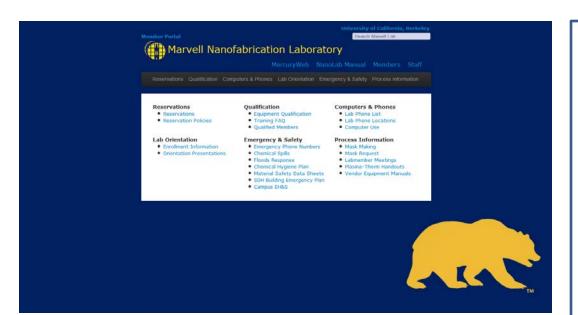
NanoLab-Coding





NanoLab - Home Page (After)







NanoLab – Member Portal, Staff Menu (After)

Acknowledgements

- Olek Proskurowski for being a wonderful mentor and teaching me so much
- Hussain Alseddiq, Rosemary Spivey, and Eric
 Chu for helping me throughout these 6 weeks
- Katalin Voros & Bill Flounders for providing this enriching opportunity

Thank you to all NanoLab staff for creating such a comfortable and encouraging learning environment and for inspiring young students like me!