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 Management System (Back-end)
• NanoLab Website (Front-end)
• Acknowledgements
Machine Shop - Home Page (Before)

Cory Hall Machine Shop
187 Cory Hall

Home
Personnel
Awards
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".
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.

Chosen One
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
Welcome to UC Berkeley's Cory Hall Machine Shop

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

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".

With our Engineering and Design services, we can help you get your experiment or project completed in a timely fashion, saving you money and frustration.

Our Welding Shop features capabilities to weld both ferrous and non-ferrous metals ranging from 0.016" thin stainless steel to 3" thick aluminum. We specialize in ultrasonic vacuum
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

![Whiteboard Diagram]

- MECHANICIAN
  - ID
  - MECH_ID
  - TYPE
  - MECH_TYPE
  - SUPER
  - DATE

- ACCOUNTING
  - ID
  - JOB_ID
  - ACCT_TYPE
  - MECHANICIAN
  - AMOUNT
  - PRICE

- JOBS
  - ID
  - TYPE
  - MECH_ID
  - MECH_TYPE
  - SUPER
  - DATE
  - REQUESTOR
  - REQUESTOR_ID
  - DATE
  - PL
  - GA
  - Resources
  - CVA
  - ASSIGN
  - ASSIGNMENTS
  - Scanned approval

- NEW
  - approved
  - assigned
  - in-progress
  - waiting
  - completed

- CVA
  - approved
  - assigned
  - in-progress
  - waiting
  - completed
  - cancelled

- EXducted
  - approved
  - assigned
  - in-progress
  - waiting
  - completed
  - cancelled
Machine Shop –
Job Management System: Coding

mshop.beans
NanoLab – Member Portal, Staff Menu (Before)
NanoLab - Objectives

- Visuals
- Easy Access to Links
- Dynamic Donations/Supporters Box
NanoLab – Layout Mockups

Created 10 different sample layouts as a proposal for the new look of the NanoLab website.
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 – 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!