WISE

Midsemester Design Review
Fall 2014

1. SLHS-VID
2. SLAC
3. Dining Services
4. EPICS Explorer

SLHS-VID

Jimmy Dixon
Matthew Pace
Ze An

PROJECT PARTNER

Department of Speech Language and Hearing Sciences (SLHS)

<u>Contacts</u>

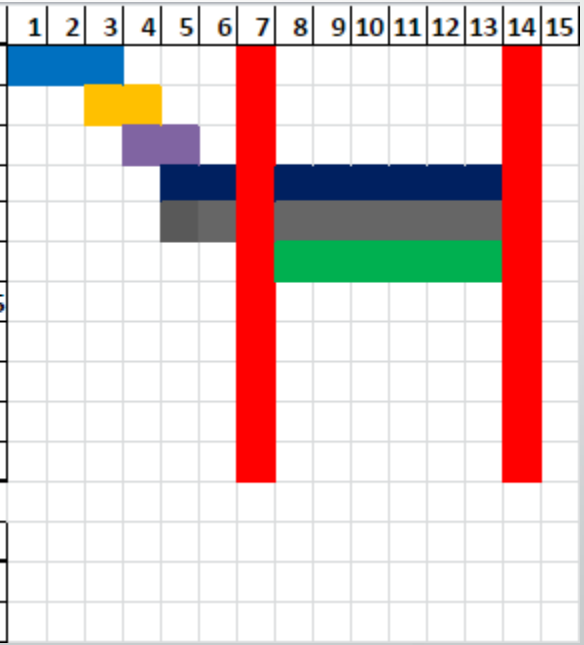
- Anu Subramanian
  - Clinical Associate Professor
- Barbara Cicholski
  - Clinical Assistant Professor

PROJECT OBJECTIVES

- To design a web application to allow students of SLHS to practice administering speech therapy examinations
  - Support a variety of subjects and examinations
  - Provide dynamic feedback on the student's administration of the exam, based on their choices

SEMESTER TIMELINE

Part	Task Name	Duration
1	**Orientation**	**Weeks 1-3**
2	**Meet With Project Partner/Clarify Project Goals**	**Weeks 3-4**
3	**Frontend Mockup**	**Weeks 4-5**
4	**Research/Learn Form Software**	**Weeks 5-13**
5	**Front-end Coding**	**Weeks 5-13**
6	**Timestamp Coordination/Set Progression**	**Weeks 8-13**
7	**Design Reviews & Semester Documation**	**Week 7, 14, 15**
a	Design Review #1	Week 7
b	Design Review #2	Week 14
c	Transition Documentation	Week 15
d	Project Documentation & Budget	Week 15
	On-going Tasks	
	Project Documentation	As Needed
	Project Partner Updates	As Needed

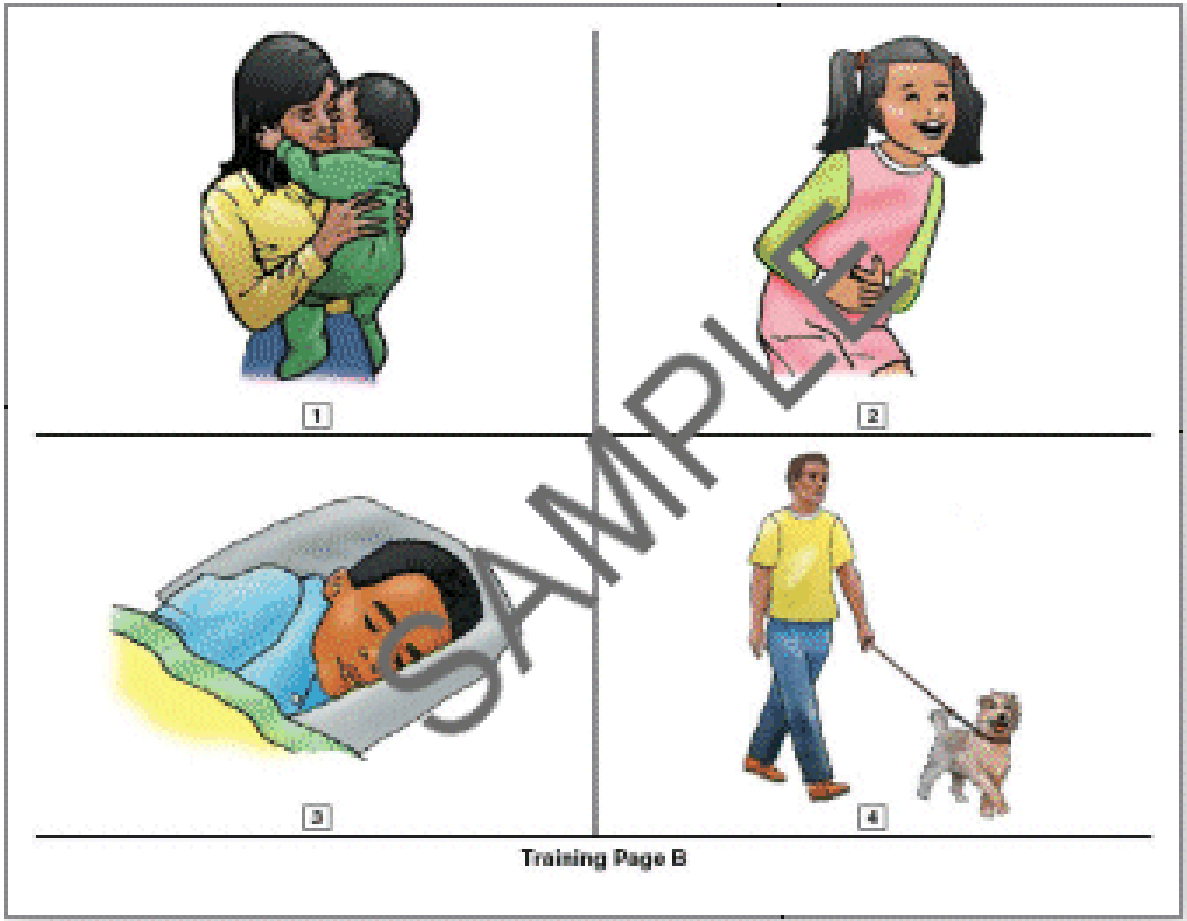


THIS SEMESTER

- Initial meeting with Project Partners
  - Obtained a clear picture of partner’s needs
  - Clarified the scope of the project and team abilities
- Developed mock-up and framework for website
  - Received approval of mock-up
- Developed a prototype website with basic functionality
  - Video selection
  - Form slideout

EXAMINATION BEING IMPLEMENTED

http://pearsonassess.ca/haiweb/Cultures/en-CA/Products/Product+Detail.htm?CS_ProductID=PPVT-4&CS_Category=educational-basic-skills&CS_Catalog=TPC-CACatalog



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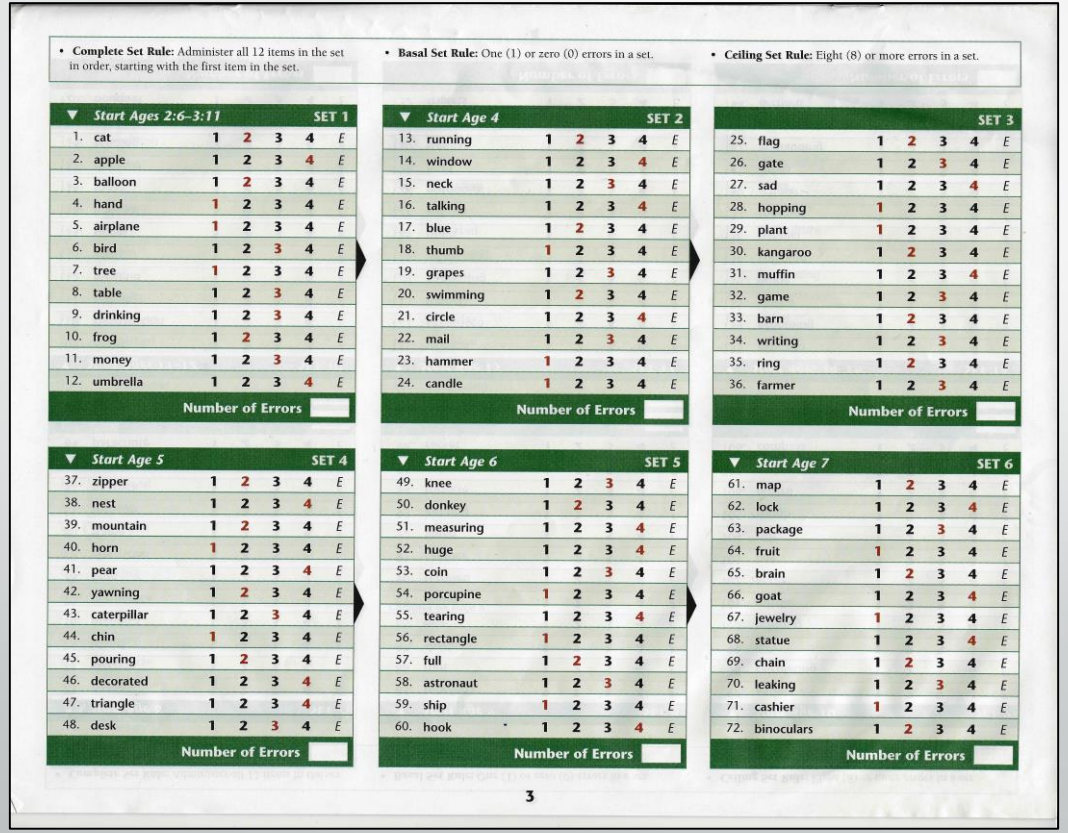
SETS FROM PPVT4



- **Complete Set Rule:** Administer all 12 items in the set in order, starting with the first item in the set.
- **Basal Set Rule:** One (1) or zero (0) errors in a set.
- **Ceiling Set Rule:** Eight (8) or more errors in a set.

▼ Start Ages 2:6–3:11					SET 1
1. cat	1	2	3	4	E
2. apple	1	2	3	4	E
3. balloon	1	2	3	4	E
4. hand	1	2	3	4	E
5. airplane	1	2	3	4	E
6. bird	1	2	3	4	E
7. tree	1	2	3	4	E
8. table	1	2	3	4	E
9. drinking	1	2	3	4	E
10. frog	1	2	3	4	E
11. money	1	2	3	4	E
12. umbrella	1	2	3	4	E
Number of Errors					

▼ Start Age 4					SET 2
13. running	1	2	3	4	E
14. window	1	2	3	4	E
15. neck	1	2	3	4	E
16. talking	1	2	3	4	E
17. blue	1	2	3	4	E
18. thumb	1	2	3	4	E
19. grapes	1	2	3	4	E
20. swimming	1	2	3	4	E
21. circle	1	2	3	4	E
22. mail	1	2	3	4	E
23. hammer	1	2	3	4	E
24. candle	1	2	3	4	E
Number of Errors					

					SET 3
25. flag	1	2	3	4	E
26. gate	1	2	3	4	E
27. sad	1	2	3	4	E
28. hopping	1	2	3	4	E
29. plant	1	2	3	4	E
30. kangaroo	1	2	3	4	E
31. muffin	1	2	3	4	E
32. game	1	2	3	4	E
33. barn	1	2	3	4	E
34. writing	1	2	3	4	E
35. ring	1	2	3	4	E
36. farmer	1	2	3	4	E
Number of Errors					

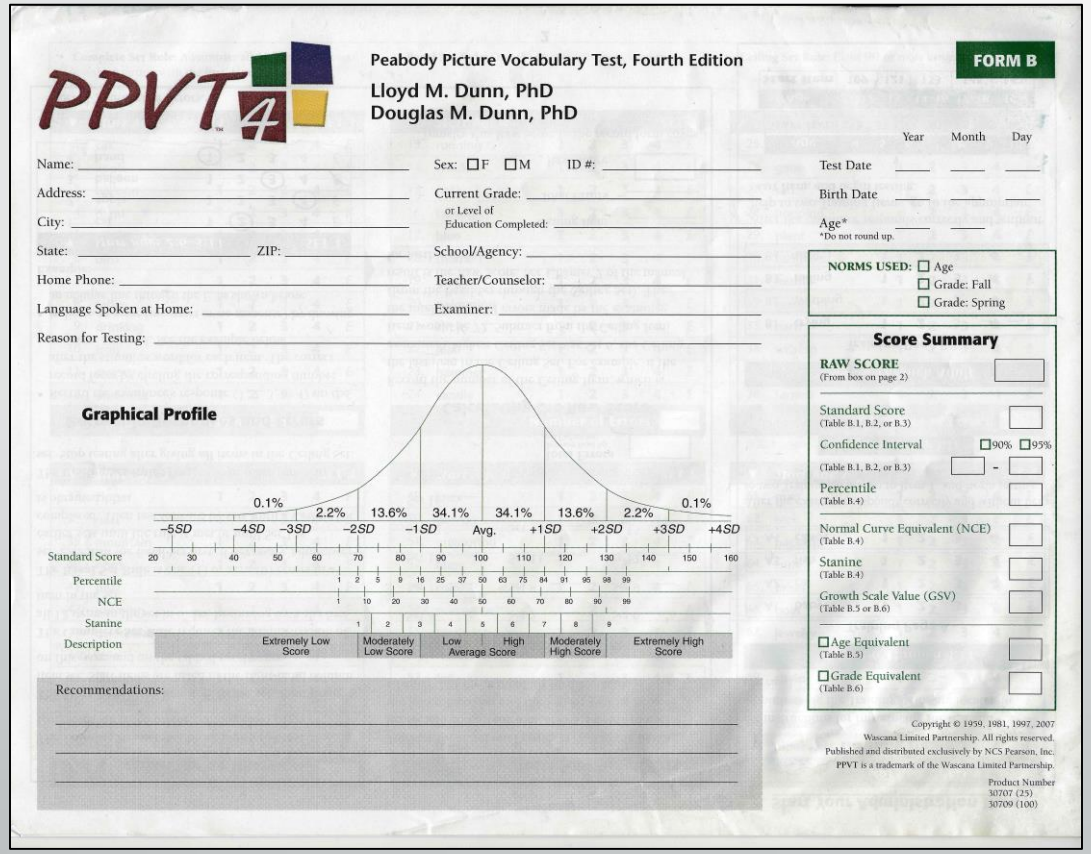
▼ Start Age 5					SET 4
37. zipper	1	2	3	4	E
38. nest	1	2	3	4	E
39. mountain	1	2	3	4	E
40. horn	1	2	3	4	E
41. pear	1	2	3	4	E
42. yawning	1	2	3	4	E
43. caterpillar	1	2	3	4	E
44. chin	1	2	3	4	E
45. pouring	1	2	3	4	E
46. decorated	1	2	3	4	E
47. triangle	1	2	3	4	E
48. desk	1	2	3	4	E
Number of Errors					

▼ Start Age 6					SET 5
49. knee	1	2	3	4	E
50. donkey	1	2	3	4	E
51. measuring	1	2	3	4	E
52. huge	1	2	3	4	E
53. coin	1	2	3	4	E
54. porcupine	1	2	3	4	E
55. tearing	1	2	3	4	E
56. rectangle	1	2	3	4	E
57. full	1	2	3	4	E
58. astronaut	1	2	3	4	E
59. ship	1	2	3	4	E
60. hook	1	2	3	4	E
Number of Errors					

▼ Start Age 7					SET 6
61. map	1	2	3	4	E
62. lock	1	2	3	4	E
63. package	1	2	3	4	E
64. fruit	1	2	3	4	E
65. brain	1	2	3	4	E
66. goat	1	2	3	4	E
67. jewelry	1	2	3	4	E
68. statue	1	2	3	4	E
69. chain	1	2	3	4	E
70. leaking	1	2	3	4	E
71. cashier	1	2	3	4	E
72. binoculars	1	2	3	4	E
Number of Errors					

3

RESULTS PAGE



PPVT 4

Peabody Picture Vocabulary Test, Fourth Edition

Lloyd M. Dunn, PhD
Douglas M. Dunn, PhD

FORM B

Name: _____ Sex: ☐F ☐M ID #: _____

Address: _____ Current Grade: _____

City: _____ or Level of Education Completed: _____

State: _____ ZIP: _____ School/Agency: _____

Home Phone: _____ Teacher/Counselor: _____

Language Spoken at Home: _____ Examiner: _____

Reason for Testing: _____

	Year	Month	Day
Test Date			
Birth Date			
Age* *Do not round up.			

NORMS USED: ☐ Age ☐ Grade: Fall ☐ Grade: Spring

Graphical Profile

0.1% 2.2% 13.6% 34.1% 34.1% 13.6% 2.2% 0.1%

−5SD −4SD −3SD −2SD −1SD Avg. +1SD +2SD +3SD +4SD

Standard Score: 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

Percentile: 1 2 5 9 16 25 37 50 63 75 84 91 95 98 99

NCE: 1 10 20 30 40 50 60 70 80 90 99

Stanine: 1 2 3 4 5 6 7 8 9

Description: Extremely Low Score | Moderately Low Score | Low Average | High Average Score | Moderately High Score | Extremely High Score

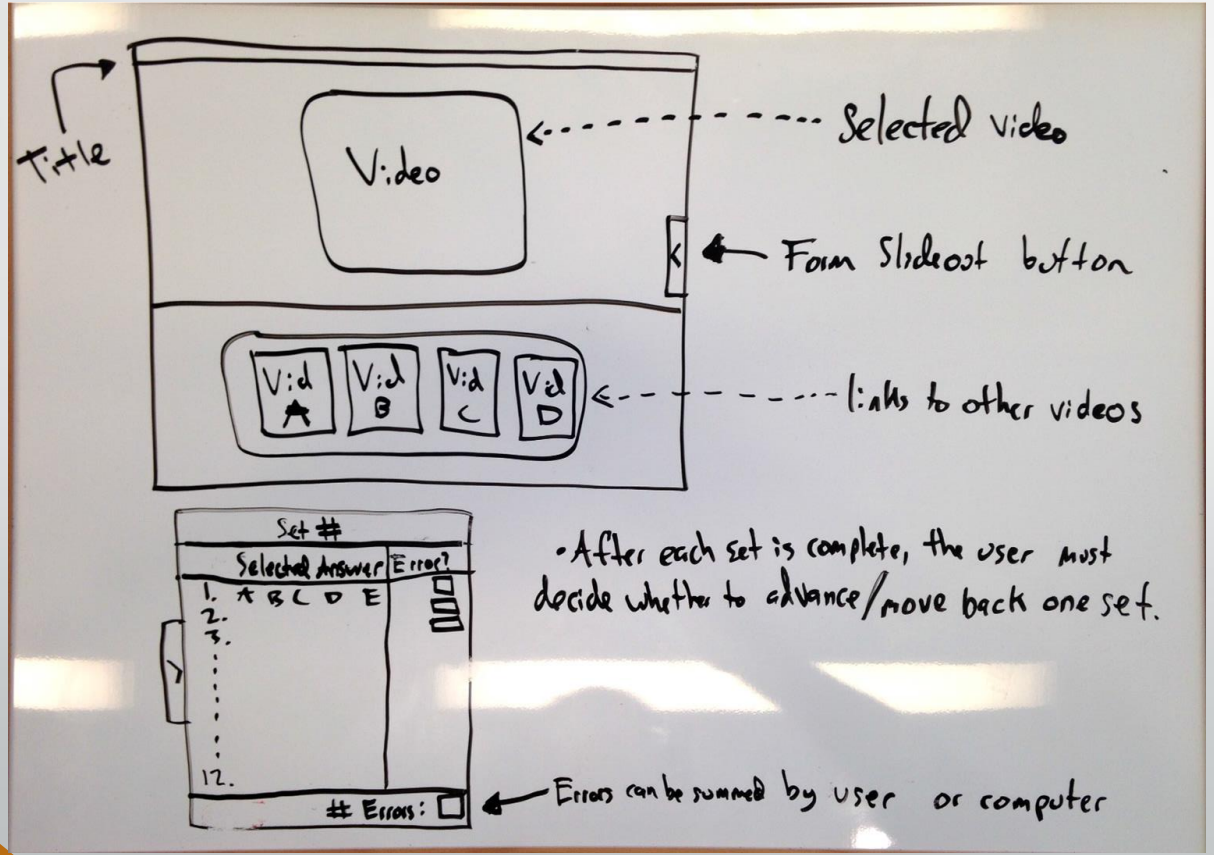
Score Summary

RAW SCORE (From box on page 2)	
Standard Score (Table B.1, B.2, or B.3)	
Confidence Interval (Table B.1, B.2, or B.3)	☐90% ☐95% ___ - ___
Percentile (Table B.4)	
Normal Curve Equivalent (NCE) (Table B.4)	
Stanine (Table B.4)	
Growth Scale Value (GSV) (Table B.5 or B.6)	
☐ Age Equivalent (Table B.5)	
☐ Grade Equivalent (Table B.6)	

Recommendations:

Product Number 30707 (25) 30709 (100)

FRONT-END MOCKUP



Get Watching

Select any of the videos below to begin watching the simulation and taking notes.

Simulation 1

Simulation of a misbehaving child.

Speech Therapy Simulation

Get Watching

Select any of the videos below to begin watching the simulation and taking notes.

Simulation 1

Simulation of a misbehaving child.

Speech Therapy Simulation

List 1

List 2

List 3

TECHNOLOGY

- JavaScript/HTML/CSS
- HTML5 Boilerplate
- Bootstrap
- jQuery
- Sidr

SEMESTER GOALS

- Fully implement the multiple choice and summary sections of the form
- Implement timestamp/set progression functionality with YouTube player
- Incorporate an examination video from the partner

NEXT SEMESTER GOALS

	Task Name	Duration
1	**Orientation**	**Week 1-3**
2	**Meet with Project Partner/Clarify Project Goals**	**Week 3-4**
3	**Modularization**	**2 Weeks**
a	Creating interface for front-end code	Week 5
b	Modify current code to implement the interface	Week 6
4	**Admin UI**	**8 Weeks**
a	Administration Page mockup	Week 5
b	Code Database Interface	Week 5 - 7
c	Code for "Adding New Test" Module	Week 7 - 9
d	Code for "Adding New Video" and “Add timestamp” Modules	Week 9 -12
5	**Testing Case**	**Week 12 - 13**
6	**Design Reviews & Semester Documation**	**4 Weeks**
a	Design Review #1	Week ?
b	Design Review #2	Week ?
c	Transition Documentation	Week 15
d	Project Documentation & Budget	Week 16

Thank You!

Any Questions?

EPICS-SLAC

Henry Heim

Zhaowei Liang

Deep Randhawa

EPICS Explorer

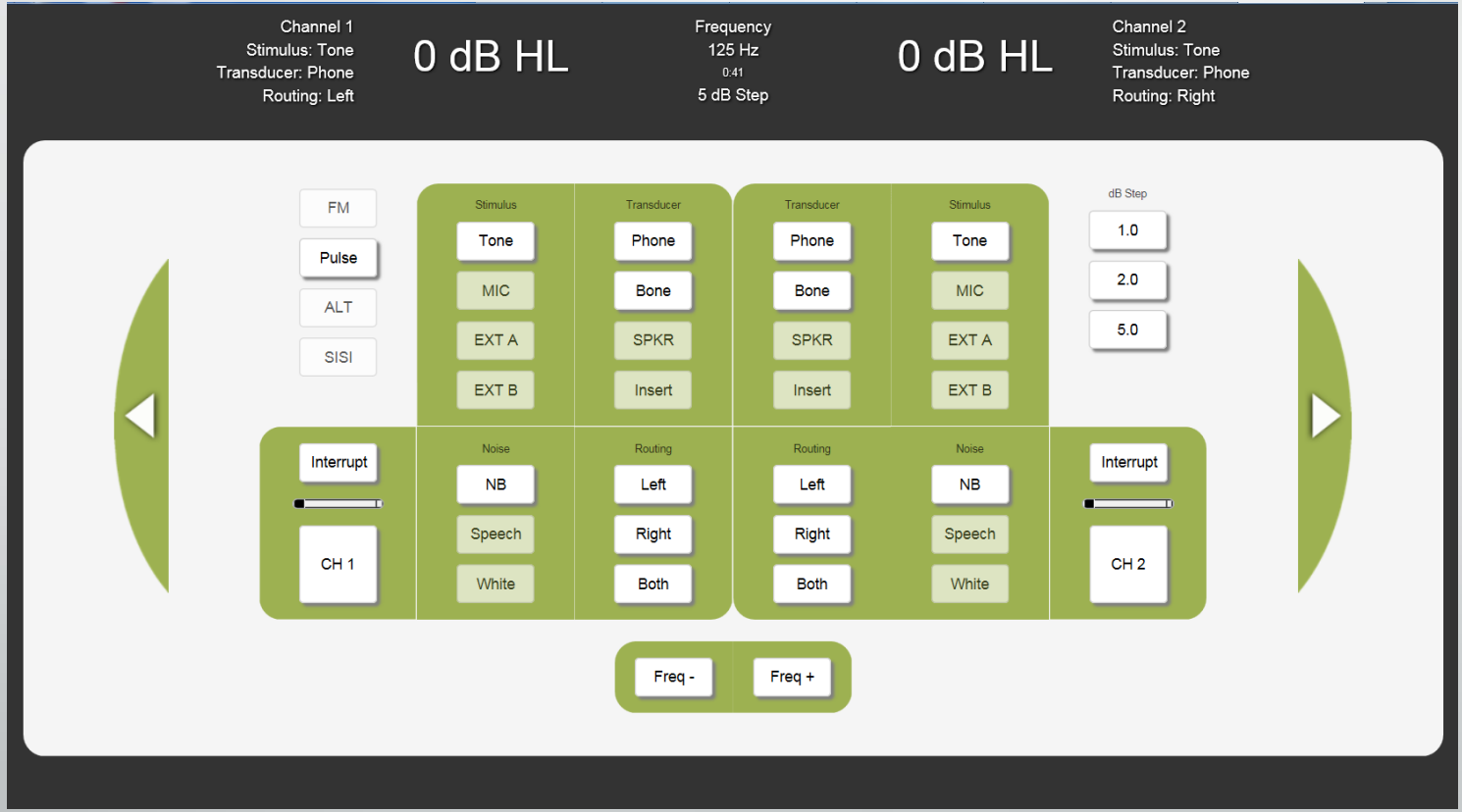
Project Partner

Roberta Williams

GOAL

To provide a visual simulation for audiology students to practice testing different types of hearing loss.

What we inherited



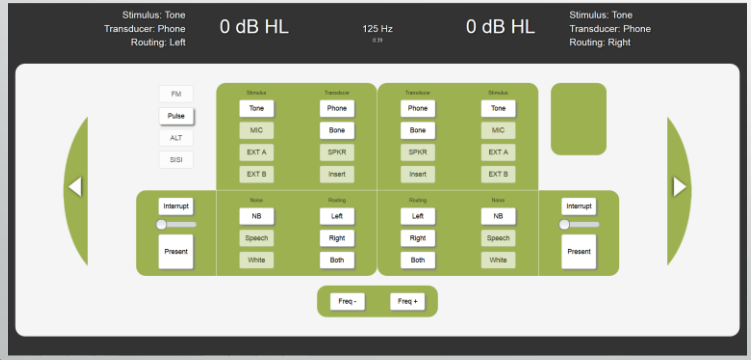
What we inherited

- Unnecessary buttons
- Small text in header
- Channels are confusing
- Not everything is functional

What we’re focusing on

- Minor layout tweaks
- Adding necessary functionality
- Small user-friendly tweaks
- Making code programmer-friendly

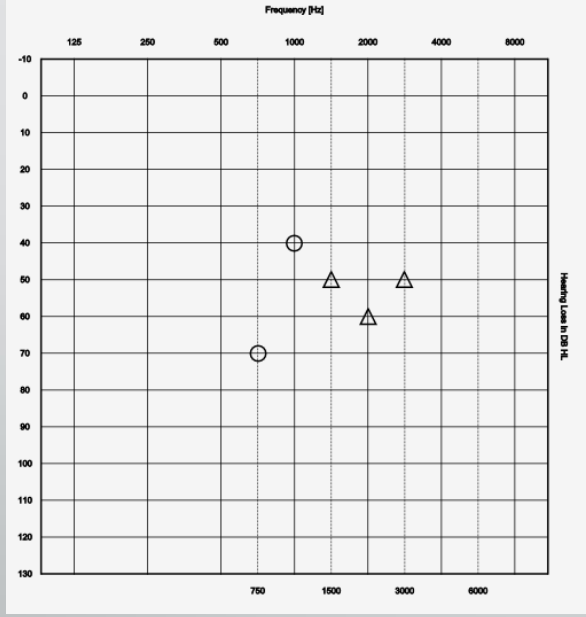
Layout changes



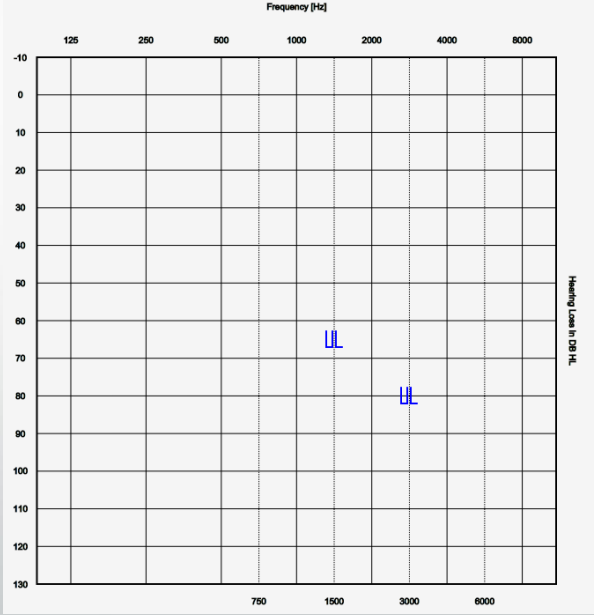
- Removed unnecessary decibel buttons
- Renamed channels
- Increased header text size
- Removed some header information

Remodel Audiogram

Original



Remodeled



Currently working on:

- Audiogram symbol selection
- Indicator light
- Button highlights

Tech we're using:

- HTML5
- Responsive HTML
- Python
- CSS
- JavaScript

Semester Plan

Project Advisor: Roberta Williams																		
All semester goal																		
	Learn JavaScript																	
	Keep update with project partner																	
	Task Name	Duration	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Stage 1	Orientation																	
	Meet team	Week 1																
	Team roles assignment	Week 2																
	Review code and interface from last semester	Week 2-3																
	Contact project partner	Week 1-4																
	Get access to all code document (SVN)	Week 3-4																
Stage 2	Interaction with project partner and review collection																	
	Present SLAC project to project partner	Week 4-5																
	Collect opinion from project parter	Week 4-5																
	Make task list	Week 6																
	Design documentation	Week 6																
	Design Review	Week 7																
Stage 5	Software development																	
	Software Layout change (Font, button, etc)	Week 6-7																
	Remodel audiogram (Symbols, Y-axis segments, etc)	Week 6-9																
	User-friendly function	Week 6-9																
	Pathology generation	Week 10-13																
	patient feedback	Week 11-13																
	report generation	Week 12-14																
	Design Review	Week 14																
Stage 6	Documentation																	
	Transition document	week 15																
	Project Documentation	week 15																
	Projected tasks list																	

Gantt Chart

Task list

		Task Description	Progress	Issue	Detail	Category	Initial
2		Allow points to be plotted on 5 dB steps	Completed				HH
3		Add response indicator	Completed				ZL
4		Remove 'dB Step' buttons	Completed				ZL
5		Make information (top left/top right) font bigger	Completed				HH
6		Use radio buttons to select symbol to plot	In progress				
7		Allow "mic" as a user input					
8		Add +/- to dB slider					
9		Add tick marks to dB sliders	In progress				
10		Change 'CH 1' and 'CH 2' buttons to 'Present'	Completed				HH
11		Make 'Present' buttons smaller					
12		Highlight buttons when selected					
13		Allow multiple buttons to be selected at the same time					
14		Routing red right/blue left.					
15		Remove 'Both' button					
16		Resize graph so you can plot and test at the same time	Scrapped				
17		Add right ear/left ear differentiation to graph	In Progress				
18		Light up response indicator when virtual patient has a response					
19		Generate a formal report to file					
20		When NB is selected, NB for both ear should stimulus.					
21		Generate different pathologies for each ear of a virtual patient					
22		Left tab should have a list of patients to choose from					
23		Left tab should have a list of pathologies to choose from					
24		Left tab should have a button to randomly generate a patient					
25							
26							

Future plans

- Complete current tasks
- Testing/Bugfixing
- Virtual patient creation
- Responsive design fixes

Questions and comments?

Dining Services

Purdue Online Dining Guide (PODG)

Cameron Young

Gregory Macon

Jimmy Zhang

Project Partners

Dining Services, University Residences, Purdue University

Contacts:

- Greg Minner
  - Director of Dining Services
  - gminner@purdue.edu
- Kari Glebe
  - Director of Residential Dining
  - klglebe@purdue.edu

The Idea

- Track the availability of spots inside the dining courts on Purdue's campus and the length of the lines outside them at any given time.
- Make it easy for the student community to figure out the fastest and most convenient place to eat
- Give our project partners insight on how the dining courts are being used

Previous Semesters

- We had a functional system using infrared sensors

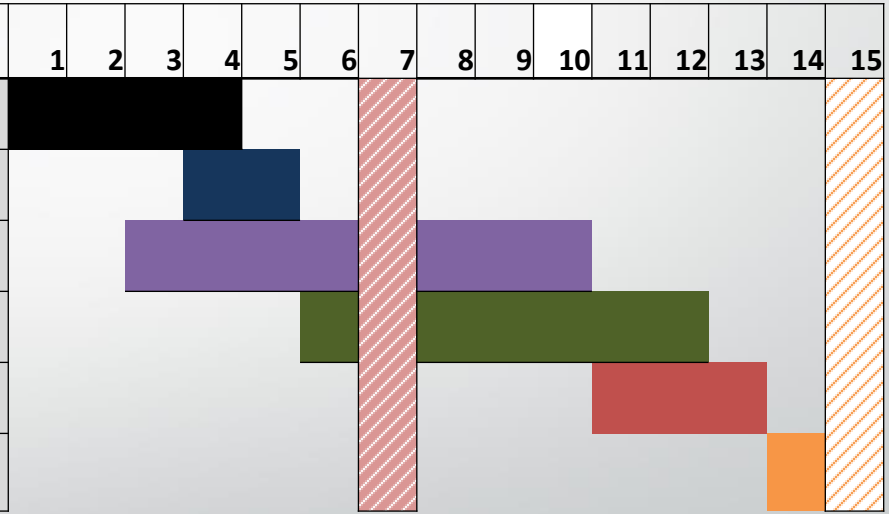
- For higher accuracy we switched to cameras (2 have been built)

This Semester

- New Director of Residential Dining
  - Blurred photo of the line
- Installing the cameras (rescheduling)
- Creating an API for Purdue’s app to use our data
- Administrative page

Semester Timeline

	Task Name	Duration
Part 1	Orientation	4 Weeks
Part 2	Installation	2 Weeks
Part 3	Coding Phase	8 Weeks
Part 4	Data Collection & Verification	7 Weeks
Part 5	Monitoring / Minor Tweaks	3 Weeks
Part 6	Design Reviews & Semester Documation	Week 7, 14 - 16



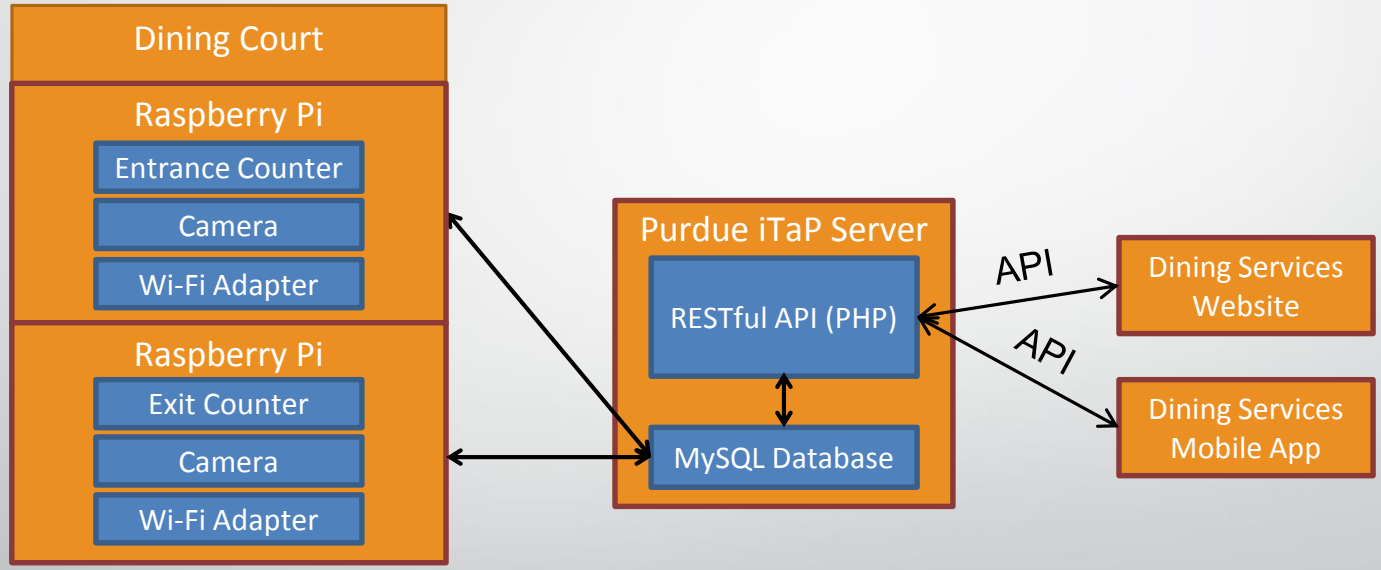
How it Works

- Each dining court will have two cameras
  - Entrance and Exit
- Track entry/exit using our camera system
  - Sends data to the MySQL database
- Current Count
  - (Entrances counted) – (Exits counted)
- Will be able to show a plot of count over current meal

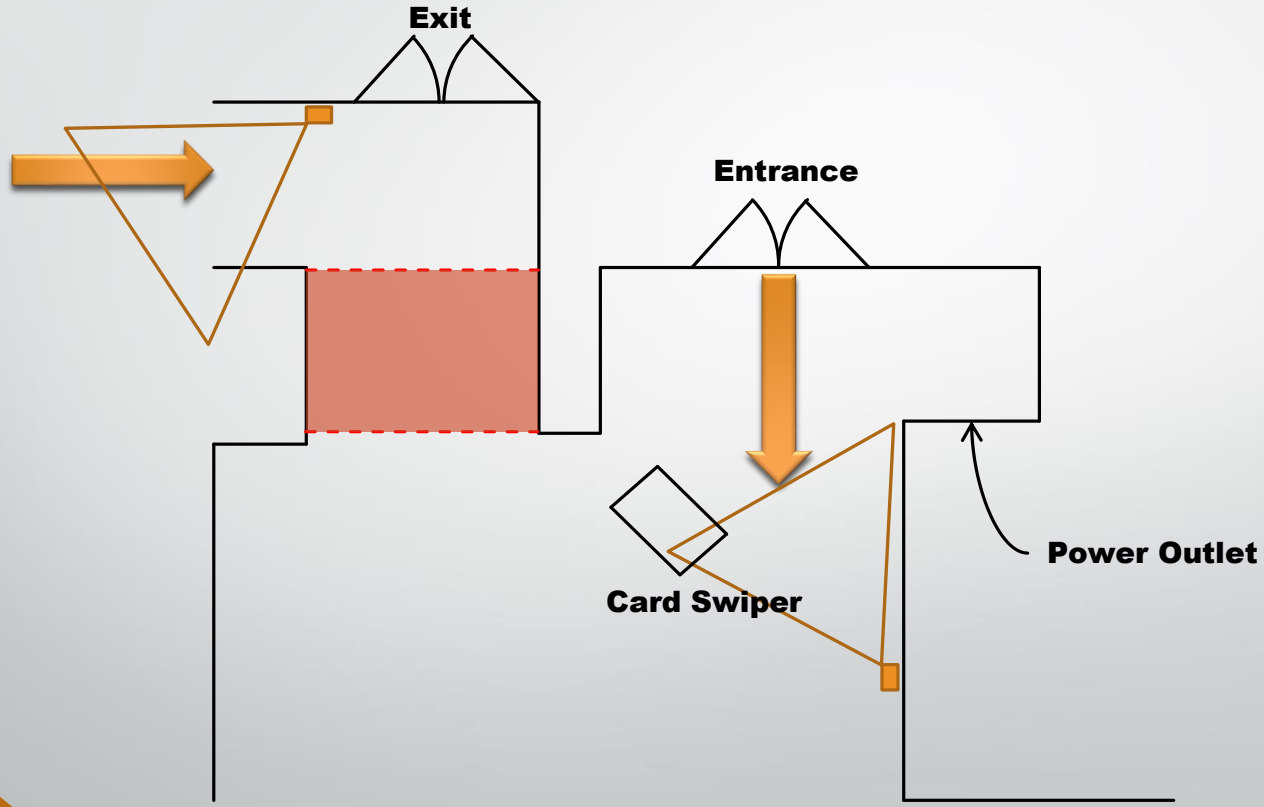
System Details

- Each box has a Raspberry Pi computer with a small camera and a Wi-Fi adapter
- The only external wire is for power
- The processing (counting) occurs on each Raspberry Pi and only the results are sent to the server

System Diagram



Trial Deployment Location: Earhart



Progress

- This Semester
  - Have cameras updating their information in the database
  - Installation being rescheduled
  - Setup an administration page to display the IP addresses of the cameras

Problems we faced

- Installation
  - Minimal number of wires
  - Had to wait for two outlets to be added in Earhart
- Counting
  - People pacing back and forth by the exit may be counted repeatedly
- Coding
  - The tests we have done have been in the EPICS lab and not Earhart
  - No storing images
  - No face recognition (only detection is allowed)

Budget

Camera System – roughly $250 per dining court (includes 2 cameras)

Each box needs:

- Raspberry Pi Model B - $40
- 4GB SD Card - $8
- Raspberry Pi Camera - $30
- Raspberry Pi Camera Box w/ Wall Mount - $22
- Mini USB Wi-Fi - $12
- Power Adapter - $7

API

- Will provide:
  - The number of people currently inside each dining court
  - (Possibly) a blurred image of the line
  - An estimate of the current wait time

Administration Page

- Allows for updates to the dining court structure by dining services after project delivery
- Includes adding new dining courts, changing hours, etc.

Remaining this Semester

- Collect data from Earhart and tweak the software for better results
  - OpenCV has lots of parameters that can be tweaked
- Complete the API for accessing the data
- Update the Administration page to demo the API

Thank You

Questions?

Comments?

EPICS Explorer

Yoselyn Walsh

Naveen Ganessin

Zach Simpson

Logan Fuller

EPICS Explorer

Project Partner

Pam Brown
EPICS Program
Coordinator

Goal

To provide a portal for incoming EPICS students to choose the EPICS team that is best suited for their major/interest.

Project Specification Development

Previous Website

- Design is old, too much text
- Major specific, not very detailed
- Hundreds of HTML files

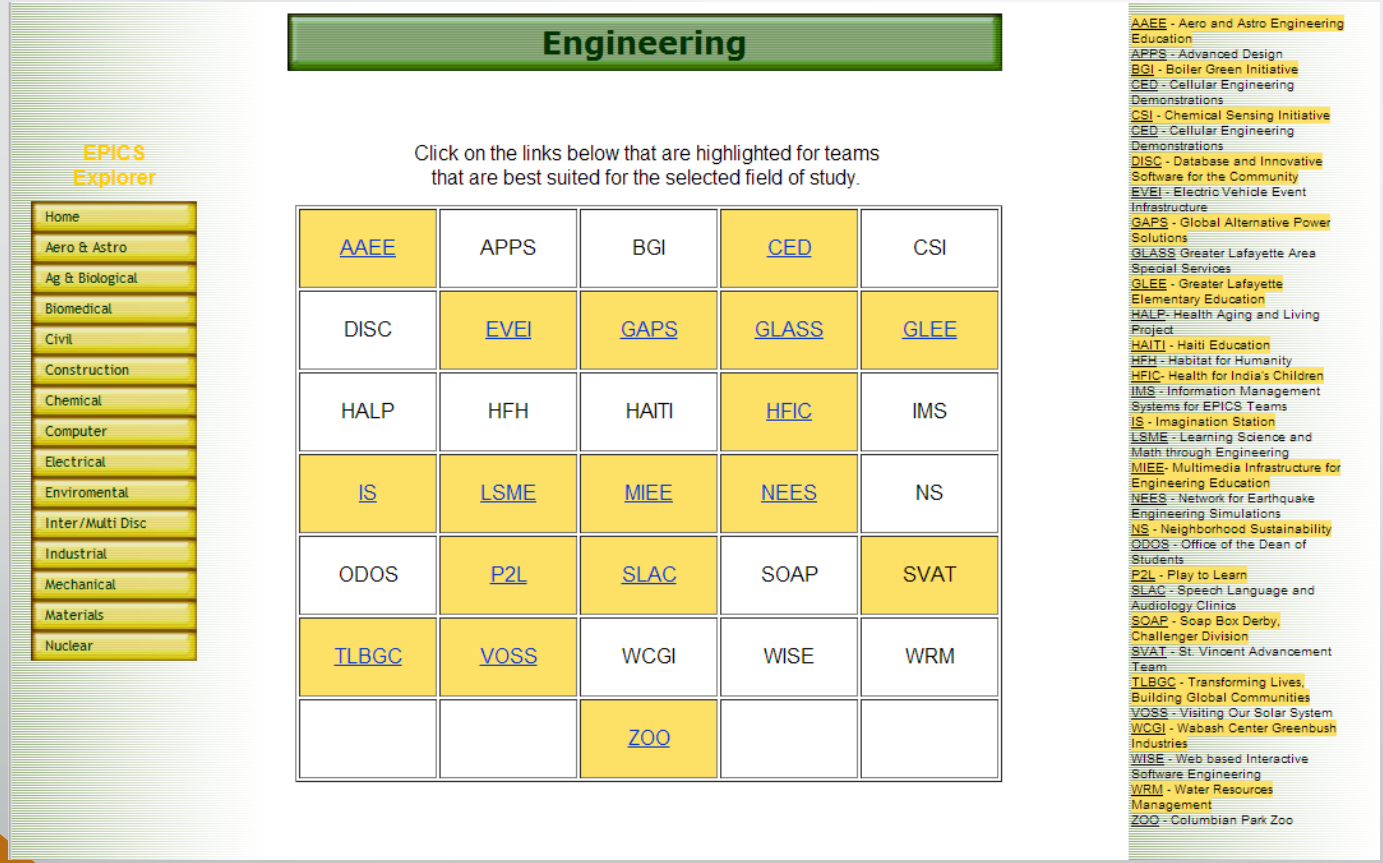
Proposed Website

- Better UI, redesign of the old website
- Minimize HTML file
- Creation of an Admin module for simple updating.

Considerations

- Visually appealing to incoming student
- Easy to use (incoming students)
- Easy to update (project partner)
- Reports data most efficiently

Previous Website



EPICS Explorer

- Home
- Aero & Astro
- Ag & Biological
- Biomedical
- Civil
- Construction
- Chemical
- Computer
- Electrical
- Enviromental
- Inter/Multi Disc
- Industrial
- Mechanical
- Materials
- Nuclear

Engineering

Click on the links below that are highlighted for teams that are best suited for the selected field of study.

AAEE	APPS	BGI	CED	CSI
DISC	EVEI	GAPS	GLASS	GLEE
HALP	HFH	HAITI	HFIC	IMS
IS	LSME	MIEE	NEES	NS
ODOS	P2L	SLAC	SOAP	SVAT
TLBGC	VOSS	WCGI	WISE	WRM
		ZOO		

AAEE - Aero and Astro Engineering Education
APPS - Advanced Design
BGI - Boiler Green Initiative
CED - Cellular Engineering Demonstrations
CSI - Chemical Sensing Initiative
CED - Cellular Engineering Demonstrations
DISC - Database and Innovative Software for the Community
EVEI - Electric Vehicle Event Infrastructure
GAPS - Global Alternative Power Solutions
GLASS Greater Lafayette Area Special Services
GLEE - Greater Lafayette Elementary Education
HALP- Health Aging and Living Project
HAITI - Haiti Education
HFH - Habitat for Humanity
HFIC- Health for India's Children
IMS - Information Management Systems for EPICS Teams
IS - Imagination Station
LSME - Learning Science and Math through Engineering
MIEE- Multimedia Infrastructure for Engineering Education
NEES - Network for Earthquake Engineering Simulations
NS - Neighborhood Sustainability
ODOS - Office of the Dean of Students
P2L - Play to Learn
SLAC - Speech Language and Audiology Clinics
SOAP - Soap Box Derby, Challenger Division
SVAT - St. Vincent Advancement Team
TLBGC - Transforming Lives, Building Global Communities
VOSS - Visiting Our Solar System
WCGI - Wabash Center Greenbush Industries
WISE - Web based Interactive Software Engineering
WRM - Water Resources Management
ZOO - Columbian Park Zoo

Previous Semester

Progress made

- Researched about the background of each team.
- Initial web page design done.
- Initial database design completed

Challenges

- Research data did not include many of the Epics teams
- Web page design conflicts with information received from Project Partner.
- Database design included detailed search criteria but would be tedious to update
- No returning members of project for current semester

Current Semester

Progress made

- Researched about the background of each team.
- Got a clear overview of the goals of the project from our project partner.
- Initial Admin module design done.
- Initial database design completed.

Challenges

- Need to analyze the research data.
- Re-evaluate design of database and user interaction
- Misunderstood the intended method of searching for a team

Database Design

- Database link

Proposed Design

- Design link

Technical Implementation

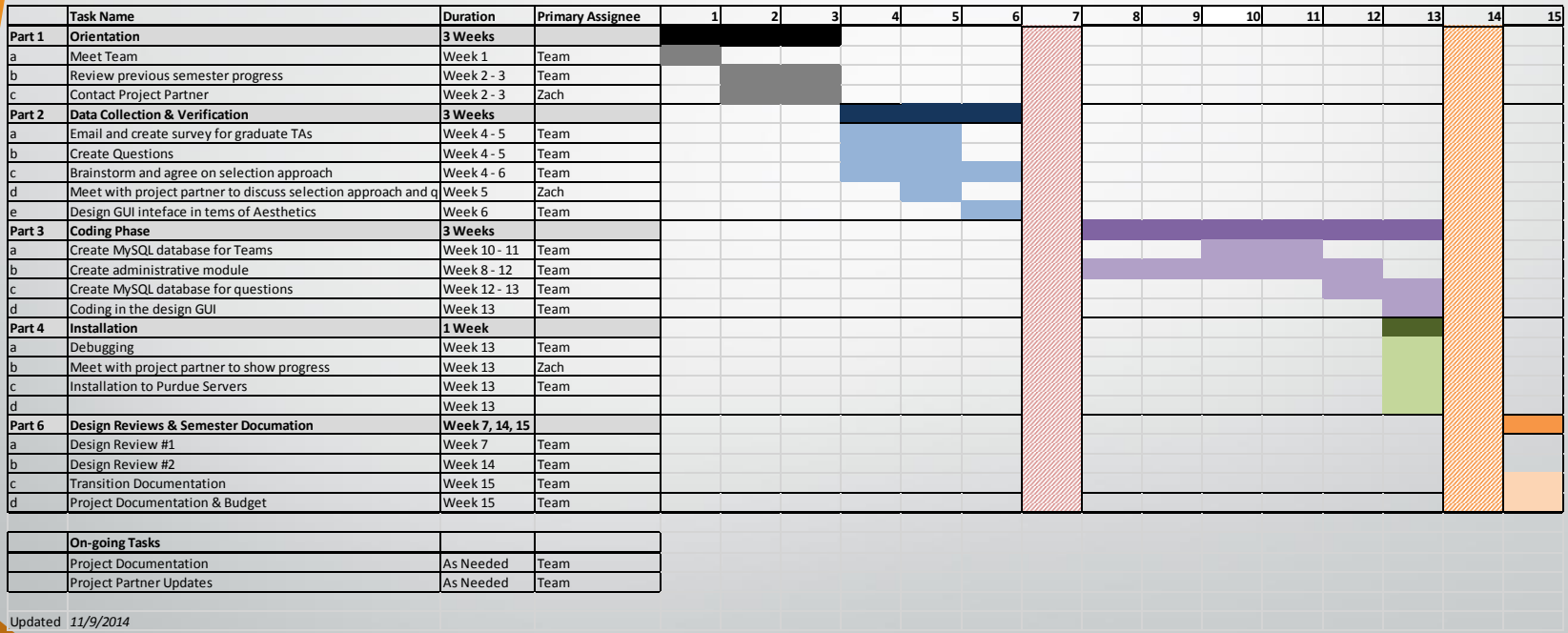
Apache web-server with PHP for server backend

- Open source and easy to maintain
- JavaScript and Ajax/JQuery for dynamic scripting

Twitter Bootstrap

- Popular HTML framework for front-end design
- Wide variety of premade CSS classes

Semester Plan



	Task Name	Duration	Primary Assignee
Part 1	**Orientation**	**3 Weeks**	
a	Meet Team	Week 1	Team
b	Review previous semester progress	Week 2 - 3	Team
c	Contact Project Partner	Week 2 - 3	Zach
Part 2	**Data Collection & Verification**	**3 Weeks**	
a	Email and create survey for graduate TAs	Week 4 - 5	Team
b	Create Questions	Week 4 - 5	Team
c	Brainstorm and agree on selection approach	Week 4 - 6	Team
d	Meet with project partner to discuss selection approach and q	Week 5	Zach
e	Design GUI inteface in tems of Aesthetics	Week 6	Team
Part 3	**Coding Phase**	**3 Weeks**	
a	Create MySQL database for Teams	Week 10 - 11	Team
b	Create administrative module	Week 8 - 12	Team
c	Create MySQL database for questions	Week 12 - 13	Team
d	Coding in the design GUI	Week 13	Team
Part 4	**Installation**	**1 Week**	
a	Debugging	Week 13	Team
b	Meet with project partner to show progress	Week 13	Zach
c	Installation to Purdue Servers	Week 13	Team
d		Week 13	
Part 6	**Design Reviews & Semester Documation**	**Week 7, 14, 15**	
a	Design Review #1	Week 7	Team
b	Design Review #2	Week 14	Team
c	Transition Documentation	Week 15	Team
d	Project Documentation & Budget	Week 15	Team

	On-going Tasks		
	Project Documentation	As Needed	Team
	Project Partner Updates	As Needed	Team

Updated *11/9/2014*

The Next Step…

- Determine any changes the Project Partner would like with the mock up
- Update the database and mockup
- Begin coding the Admin module

Thank You!

Questions and Comments?