

MICHIGAN STATE
UNIVERSITY

Alpha Presentation Pulse

The Capstone Experience

Team Michigan State University

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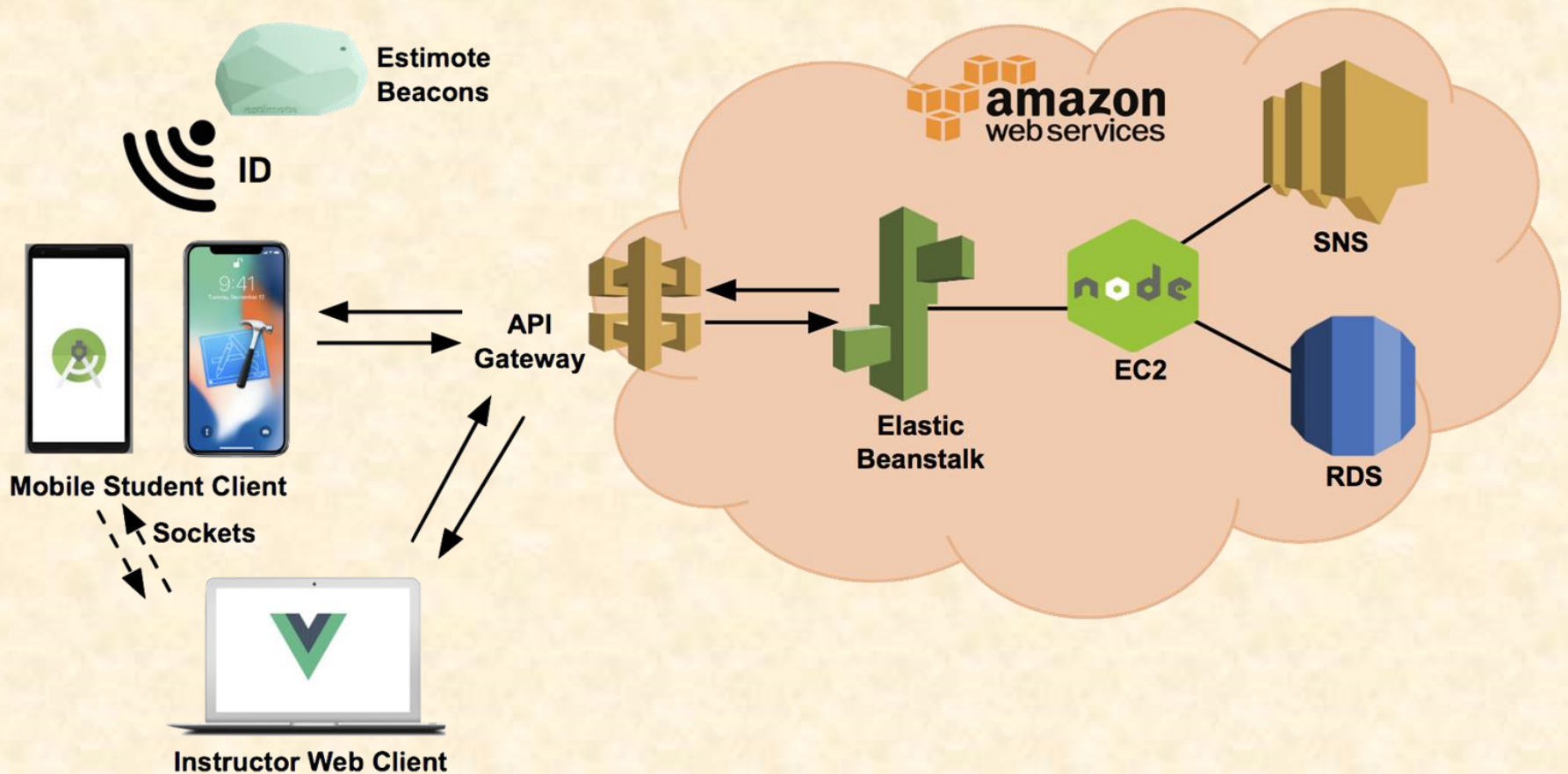
*From Students...
...to Professionals*

Department of Computer Science and Engineering
Michigan State University
Spring 2018

Project Overview

- In-class Questions and Results
- Capture Student Response Information
- Forum for Discussions
- Automatic Attendance

System Architecture



Web Home

The screenshot shows a web browser window with a single tab titled 'web-client'. The address bar displays the URL 'default-environment.sryhjpnmx.us-east-1.elasticbeanstalk.com/#/Home'. The application has a green header bar with the Michigan State University logo and a navigation menu with links to 'Home', 'Assignments', 'Sessions', 'Forum', and 'Instructor Tools'. The main content area is titled 'CSE 100: Computer Science as a Profession'. It is divided into three columns. The left column contains a sidebar with links to 'CSE 100', 'CSE 231', and 'HST 101'. The middle column contains 'Course Information' (Instructor: Mark McCullen, Meeting Time: MWF 10:20-11:10, Class Location: 1345 EB, a 'Links' button), 'Class Resources' (links to 'Lectures', 'Grades', and 'Assignments'), and a large empty space. The right column contains 'Important Dates' (Next lecture: 2/10/18 10:20-11:10, Next lab: 2/12/18 3:00-4:20, Project 2 Due: 2/15/18) and a 'Forum' section with several posts, including an example post and a discussion about a seg-faulting program.

web-client

default-environment.sryhjpnmx.us-east-1.elasticbeanstalk.com/#/Home

Michigan State University

CSE 100

CSE 231

HST 101

Home

Assignments

Sessions

Forum

Instructor Tools

CSE 100: Computer Science as a Profession

Course Information

Instructor: Mark McCullen

Meeting Time: MWF 10:20-11:10

Class Location: 1345 EB

Links

Class Resources

Lectures

Grades

Assignments

Important Dates

Next lecture: 2/10/18 10:20-11:10

Next lab: 2/12/18 3:00-4:20

Project 2 Due: 2/15/18

Forum

Hi 🤖: This is an example post.

Maybe?: He my polite be object oh change. Consider no mr am overcame yourself throwing sociable children. Hastily her totally conduct may. My solid by stuff first smile fanny. Humoured how advanced mrs thirty length afford.

Woking?: Is this working, that is the question?

Vector vs Linked List: What are the main differences between these two? And what are the pros and cons of each. For project 3, would it be more efficient to just use a vector or go with a linked list instead?

Exam 3: Are there any study materials that are going to be made available for Exam 3? Such as a study guide, old exams, or any other practice materials? This would be much appreciated!

Specific topics for final: Although I'm aware of the final being cumulative, are there any topics that will carry more weightage than the previous ones? Perhaps, the topics that were done after the 2nd mid-term?

Pointers: Is anyone else having a very difficult time understanding pointers? I have been trying to wrap my head around them for a while now and just can't seem to figure them out.

Seg Fault Issue: I am having a difficult time finding where up program is seg-faulting. Can anyone give me some guidance as to where to start looking?

Copy Constructor How-To: My copy constructor will not work at all. I've tried multiple solutions and so far I can't get it. My program is failing to compile as a result. Does anyone have any idea where to start with this program?

Classroom Engagement App ALPHA



Web Forum

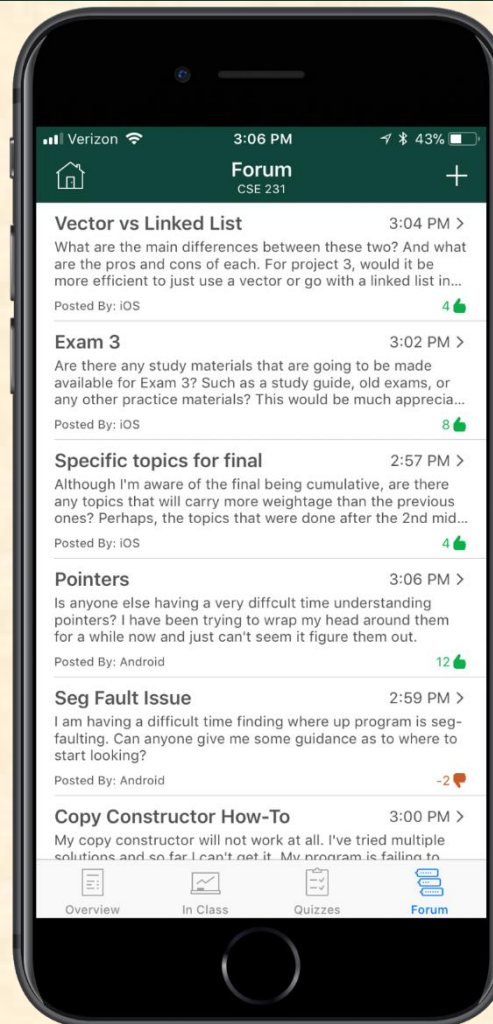
The screenshot shows a web browser window with the URL `default-environment.sryhjpnmx-us-east-1-elasticbeanstalk.com/#/Forum`. The forum is titled "Michigan State University" and has a green header bar. On the left, there is a sidebar with a list of courses: CSE 100, CSE 231, and HST 101. The main content area has a navigation bar with links: Home, Assignments, Sessions, Forum (highlighted), and Instructor Tools. Below the navigation bar, there is a form for creating a new post with fields for "Post Title" and "Post Body", and a "Submit Post" button. The forum displays a list of posts, each with a title, a brief description, a "Pinned Post" icon, and a timestamp. The posts are:

- Copy Constructor How-To**: My copy constructor will not work at all. I've tried multiple solutions and so far I can't get it. My program is failing to compile as a result. Does anyone have any idea where to start with this program? Posted at 02/19/2018 03:00 PM
- Seg Fault Issue**: I am having a difficult time finding where up program is seg-faulting. Can anyone give me some guidance as to where to start looking? Posted at 02/19/2018 02:59 PM
- Pointers**: Is anyone else having a very difficult time understanding pointers? I have been trying to wrap my head around them for a while now and just can't seem to figure them out. Posted at 02/19/2018 03:06 PM
- Specific topics for final**: Although I'm aware of the final being cumulative, are there any topics that will carry more weightage than the previous ones? Perhaps, the topics that were done after the 2nd mid-term? Posted at 02/19/2018 02:57 PM
- Exam 3**: Are there any study materials that are going to be made available for Exam 3? Such as a study guide, old exams, or any other practice materials? This would be much appreciated! Posted at 02/19/2018 03:02 PM
- Vector vs Linked List**: What are the main differences between these two? And what are the pros and cons of each. For project 3, would it be more efficient to just use a vector or go with a linked list instead? Posted at 02/19/2018 03:04 PM
- Working?**: Is this working, that is the question? Posted at 02/19/2018 07:48 PM
- Maybe?**: He my polite be object oh change. Consider no mr am overcame yourself throwing sociable children. Hastily her totally conduct may. My solid by stuff first smile fanny. Humoured how advanced mrs thirty length afford. Posted at 02/19/2018 07:52 PM
- Hi**: This is an example post. Posted at 02/19/2018 08:06 PM

At the bottom of the page, it says "Classroom Engagement App ALPHA".



iOS Forum



Web Session List

The screenshot displays a web application interface for Michigan State University. The browser address bar shows the URL: `default-environment.sryhjpnm.us-east-1.elasticbeanstalk.com/#/Sessions`. The application has a green header bar with the university name and a navigation menu with links to Home, Assignments, Sessions (active), Forum, and Instructor Tools. A left sidebar lists course codes: CSE 100, CSE 231, and HST 101. The main content area, titled 'Sessions', contains a search bar and a list of five session entries. Each entry includes a session ID, a title, and a 'Start New Session' button with associated icons. The footer of the application area reads 'Classroom Engagement App ALPHA' and features a green circular button with a plus sign.

Session ID	Session Title	Action
NewQuiz-1518991003983		Start New Session
NewQuiz-1519078065203		Start New Session
Andrew's Fake Quiz		Start New Session
Andrew's iBeacon Quiz		Start New Session
NewQuiz-1519085332520		Start New Session



Web Session Edit

web-client x

default-environment.sryhjpnmx.us-east-1.elasticbeanstalk.com/#/Sessions/2/edit

Michigan State University

CSE 100

CSE 231

HST 101

Home Assignments Sessions Forum Instructor Tools

Quiz Name

Andrew's Fake Quiz

Quiz Type:

In-Class

Save Changes

1) The Time Complexity of this Algorithm is:

☐ O(n)

☐ Constant

☐ $O(n^2)$

☐ $O(\log N)$

Add Choice

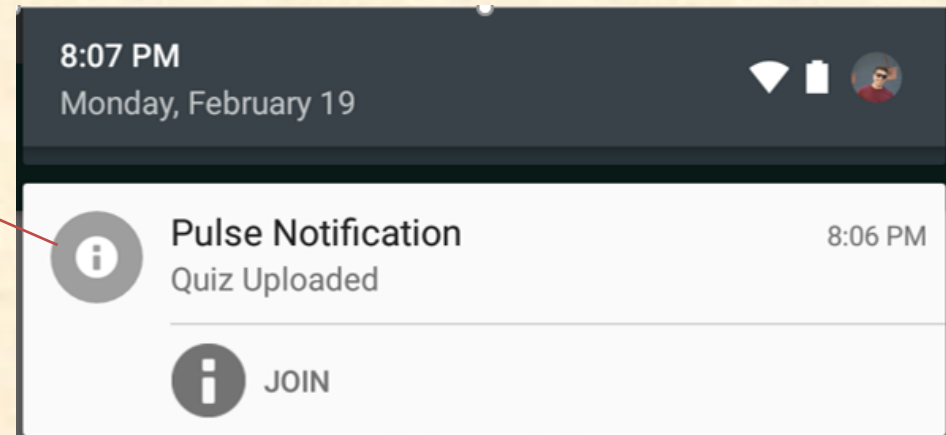
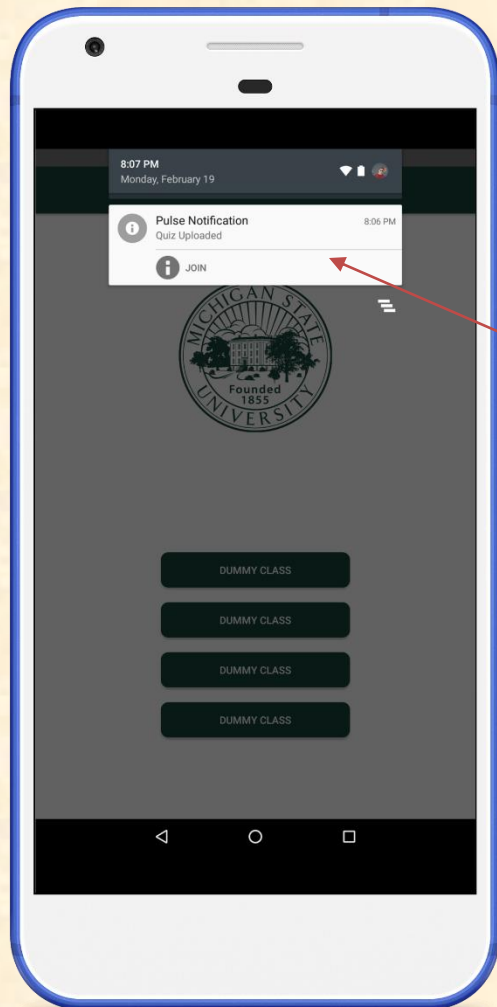
Timer (optional)

Randomize each responder's choice order ☐

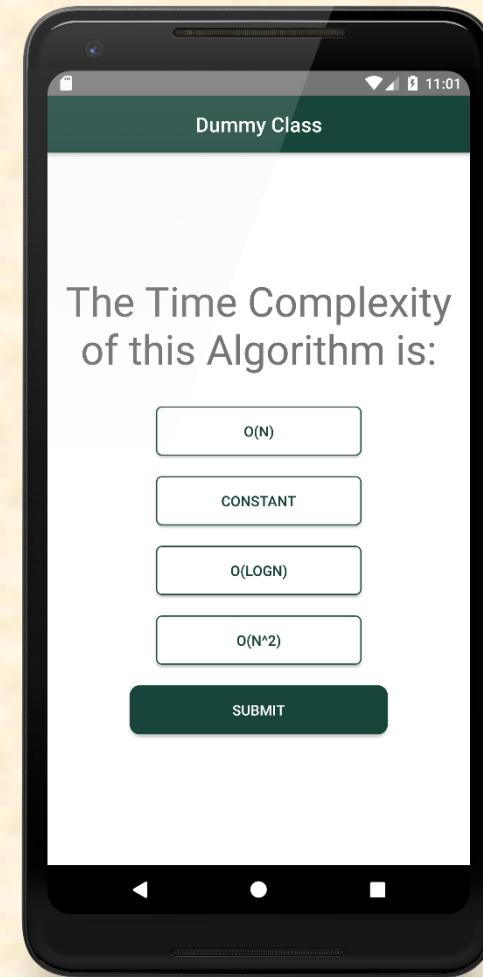
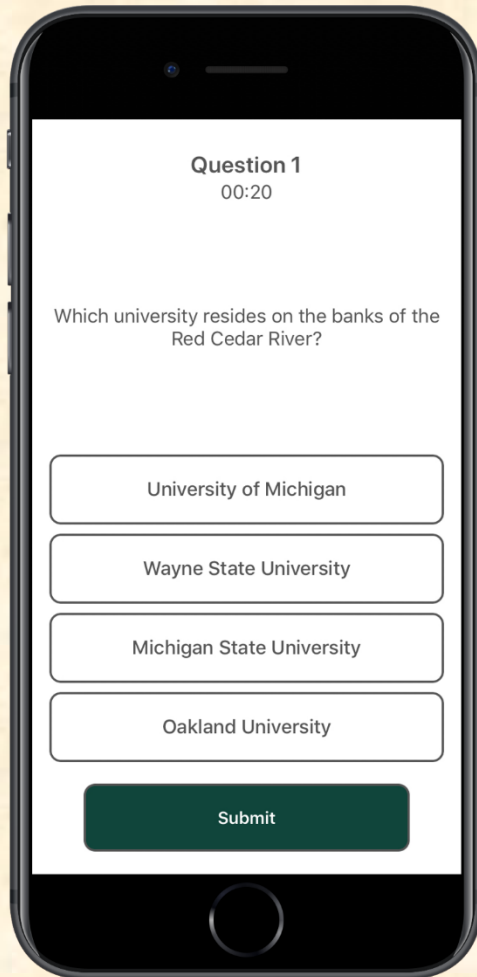
Classroom Engagement App ALPHA



Android Notification



Mobile Questions



Web Question View

The screenshot shows a web browser window displaying a question session. The browser's address bar shows the URL: `default-environment.s3hjzpmxus-east-1.elasticbeanstalk.com/#Sessions/2`. The application has a green header bar with the text "Michigan State University" and a navigation menu with links: Home, Assignments, Sessions (highlighted), Forum, and Instructor Tools. Below the navigation bar, there is a sidebar with a list of courses: CSE 100, CSE 231, and HST 101. The main content area is titled "Session: 24" and contains a question: "The Time Complexity of this Algorithm is:". Below the question, there are four radio button options: $O(n)$, Constant, $O(n^2)$, and $O(\log N)$. A red "Close Question" button is located below the options. Below the question, there is a bar chart with four bars labeled A, B, C, and D. The y-axis ranges from 0 to 20. Bar A is pink and has a value of approximately 14. Bar B is blue and has a value of approximately 20. Bar C is purple and has a value of approximately 9. Bar D is orange and has a value of approximately 5. An "Update Graph" button is located below the chart. At the bottom of the page, there is a footer that reads "Classroom Engagement App ALPHA".

Michigan State University

CSE 100
CSE 231
HST 101

Home Assignments Sessions Forum Instructor Tools

Chepullers Session: 24 Open Session

The Time Complexity of this Algorithm is:

☐ $O(n)$
☐ Constant
☐ $O(n^2)$
☐ $O(\log N)$

Close Question

Update Graph

A B C D

Classroom Engagement App ALPHA



Web Beacon Configuration

Beacon Name	Beacon ID	Session ID	Action
Mint	9c40b3a5dc517011e031685b7572907	NewSession-1519088556578 Unbind from Session	
Chepullers	12345678901234567890123456789012	Open	
Ice	7d406f563dec079d25677dbff577b12	Open	

Classroom Engagement App ALPHA



What's left to do?

- Refine Session/Class Joining
- Web Sockets
- Web App Permissions
- Different Types of Questions
- External Resource Integration
- Forum Threads

Questions?

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