Sprint Report #2

November 3, 2016

Team Overview

Project

DoorPanes

Members

- Andrew Fagrey
- Jayson Kjenstad
- Samantha Kranstz

Sponsors

- Dr. Jeff McGough
- Dr. Christer Karlsson
- Brian Butterfield

Sponsor Overview

Sponsor Description

Dr. Jeff McGough is a Professor at South Dakota School of Mines and Technology in Rapid City, SD. He worked on high performance computing at Sun Microsystems, and has been teaching at SDSM&T for eighteen years. His research focuses on robotics, applied math, and scientific computing.

Dr. Christer Karlsson is an assistant Professor at South Dakota School of Mines and Technology in Rapid City, SD. The former Captain in the Swedish Army has been teaching in the Mathematical and Computer Science department for the last four years. He focuses his research on parallel computing and multicore architectures.

Brian Butterfield co-owns Pixel Pines, a local software business in Rapid City, SD. Brian has spent 17 years in the Telecommunications software industry and became the Technology Manager for a billing and operational support system early in his career. He works closely with South Dakota School of Mines and Technology in Rapid City, SD.

Sponsor Goal

Program a kiosk mode information display for faculty office doors, meeting room doors, labs etc. Have the display scroll through a user specified/designed system (some hyperlinked system). Have the system on the web and accessible via internet protocol. The system would default to a splash screen sign. It would have links that jump to a schedule (classes, office hours, etc), a contact page with a quick note (sends email in the background), information about homeworks/exams/etc. A collection of these units could be centrally managed.

Sponsor Needs

- A door
- A digital display and accompanying hardware
- Web API
- Responsive Web App
- Mobile App
- Cloud-based database

Project Overview

The objective of this project is to produce a working proof of conecpt. The project essentially will be a electronic display on a classroom or faculty office door that has multiple applications communicating with it. This idea was inspired by Dr. McGough because of his constant agony of producing a permanent schedule for his office door. The teacher application will be a responsive web app, with forums or templates to get his or her schedule and messages across to anyone it may concern more easily. The students will have a mobile app that will be able to receive push notifications about important messages, such as a class has been canceled or moved to a different room. The student app will also allow the student to request a reservation of a classroom or a meeting with a professor. The project will be organized and maintained in Microsoft Azure. As for hardware for this project, a tablet will be used; however, this project will not mainly be focused on hardware. The tablet will serve the purpose of displaying our application.

Project Environment

Project Boundaries

- Will be used by faculty and students in educational institutions
- Must have university credentials to register and use product
- Source code will be kept in a private Bitbucket repository owned by Dr. McGough

Project Context

- The backend for the project will be created using Microsoft Visual Studio and Microsoft Azure
- The mobile and tablet apps will be written using Xamarin
- Mobile application will be coded for both Android and iOS environments
- The project will interface with a tablet

Deliverables

- Web app login page
- Tablet app login page
- Web app calendar view
- Web app connected to database in cloud
- Researched Xamarin and API

Backlog

Azure

- Set up Azure
- Create Azure database
- User Authentication
- App Communication

Database

- Design database for professor
- Design database for office personnel
- Design database for student

Tablet App

- Design Wireframes
- Code the user interface according to wireframes
- Create room login screen
- Design and create splash screen
- Enable tablet to connect to Azure
- Display a message on tablet screen
- Display schedule on tablet
- Put tablet in kiosk mode

Teacher / Office Web App

- Design Wireframes
- Code the user interface according to wireframes
- Create website login screen
- Communicate with Azure
- Create schedule templates
- Create send and receive message system

Student Mobile App

- Design Wireframes
- Code the user interface according to wireframes
- Create app login screen
- Communicate with Azure
- Create send and receive message system
- Allow push notifications on mobile app
- Allow user to view professor and classroom schedules
- Create request form for meeting with instructor
- Create request form for a classroom reservation

Miscellaneous

- Product logo
- Learn Azure
- Learn Xamarin
- Connect Visual Studio to Azure
- Look into networking for tablets
- Look into a prebuilt calendar framework for displaying calendar events
- Color scheme

Sprint Report

Work for this sprint included:

- Created an API project
- Created an Web app project
- Created a Xamarin app project
- Created a dashboard view
- Edited login pages
- Started flushing out backlog
- Began integrating open source calendar framework in web app

Remaining Backlog for this semester includes:

- Finish Web app
- Finish Tablet app
- Write API calls
- Color scheme and layout
- Product logo