This project began in the fall of 2014, and was picked up by the current team at the start of fall semester this year. Students and visitors to the VCEA buildings find themselves regularly lost or in need of information. By using the applications developed for this project, users can readily have access to directions and key information without needing to ask others for help.

**Background & Motivation**

**Navigation**
- User can tap on a room and be given the option to display a route from their location to a desired room or building
- Displays which buildings are included in the route at the top
- Displays which floors of the current building are included on the right
- Shows a picture of each staircase or elevator the user must enter
- Allows for "Elevator Only" routing to provide access for those who are disabled or can't walk up stairs

**Search**
- Users are able to search for classes, faculty, and rooms
- Spell correction implemented
- Outputs multiple possibilities of what user's input could be
- Queries database for information
- Queries created in such a way that multiple options are displayed for the user

**Bus Schedule**
- Shows a live update of the Pullman Transit bus locations and their routes
- User is able to select which route they want to view
- Continues to work if network connection drops by giving a time estimate of each bus stop arrival time

**New Framework**

The original project was written in C# using the XNA game studio framework. This meant that all user interface components had to be made from scratch and it prevented the application from running at a reasonable speed. Because of this, the project was rewritten this year using the WPF framework.

**Updated User Interface**

New GUI designed to be more appealing and easier to use.

**Admin Interface**

- Provides an interface for an administrator to keep the kiosk up to date
- Allows change of language texts
- Provides tools such as web parses for updating kiosk information

**iOS Mobile App**

- Spring semester marked the start of development for the mobile application
- Allows similar functionality as the kiosk, but on an iPhone
- Navigation, Search, and Bus Route information available
- Adjusted user interface for mobile viewing

**Class & Faculty Webpage Parsers**

- C# HTML parser for class schedules & staff/faculty
- Used to update database for each semester
- Crawls the EECS and WSU web pages for info and adds it to the database for searching
- Refined from previous team’s initial code

**Future Work**

- Optimizing Indoor Navigation
- Refactor iOS code for organization and neatness
- Bus route calls on server
- Addition of Android App

**Glossary**

GUI – Graphical User Interface; the part of the program that is displayed to the user
API – Application Program Interface; a way for a program to allow outside programs to interact with it.

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Team Tyrell