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1. General overview of the application, what it should do, and how it should perform

This application will provide Computer Science students at Columbus State University the ability to create a profile which contains degree information. They can choose which degree and calendar year they are registered for and the application will pull those requirements for the curriculum. The desktop interface will provide the ability to upload a .csv file for classes they have already taken to bulk update their profile of existing classes, or manually add them one by one. The system will show what classes are being offered on schedule and what classes are needed by the student, for them to choose classes they would like to take. Once the student has decided on the classes they must submit them to their advisor for approval or adjustments. Advisors have the ability of seeing all students that have created a profile and reported them as their advisor. The student now has a digital record of what was suggested for them to take along with what classes they still need.

2. Mobile Implementations

a) Mobile Implementation

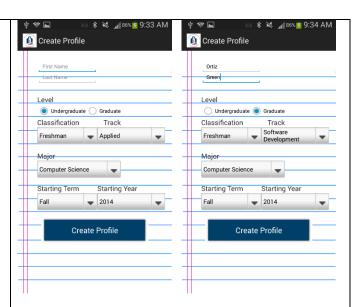
 The mobile implementation for Cougar Advisor begins as typical mobile applications begin, with a splash screen. This splash screen displays the Columbus State University logo and the title of the application. (see screen shot below)



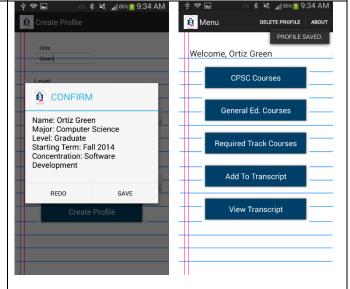
ii. Following the splash screen is a welcome screen that uses the splash screen as a background and prompts the user to create a profile for the application.



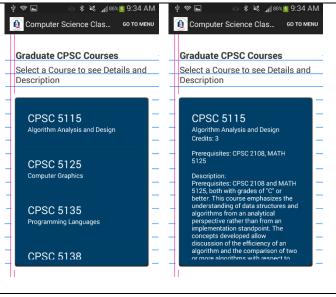
iii. In the profile creation screen the user is provided a form that consists of two textboxes and one radio group and five dropdowns menus. These selections are used to determine what information needs to be displayed to the user throughout the application.

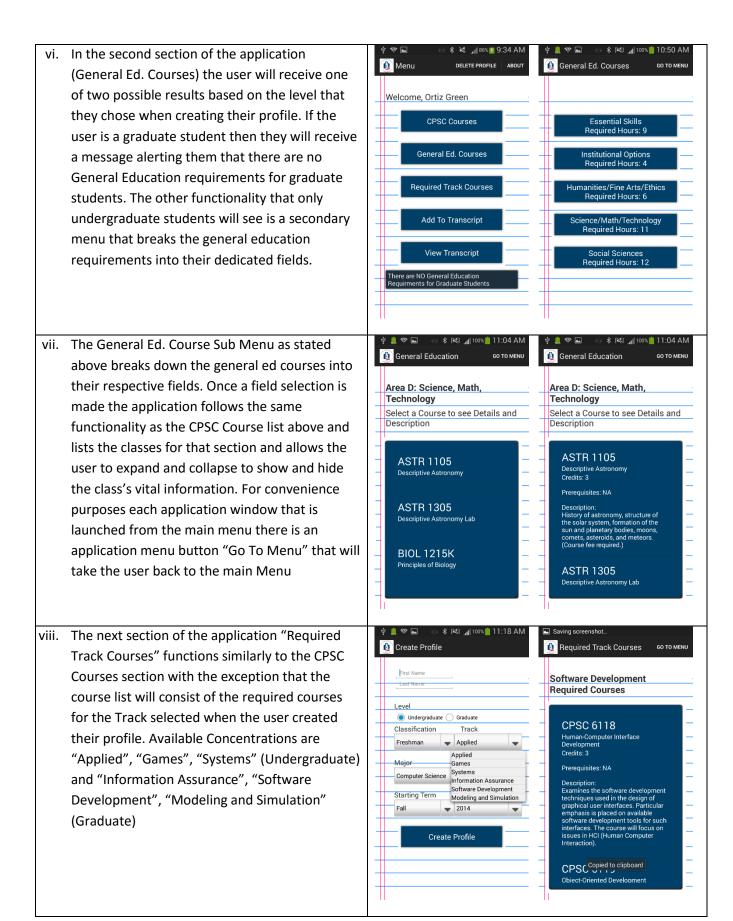


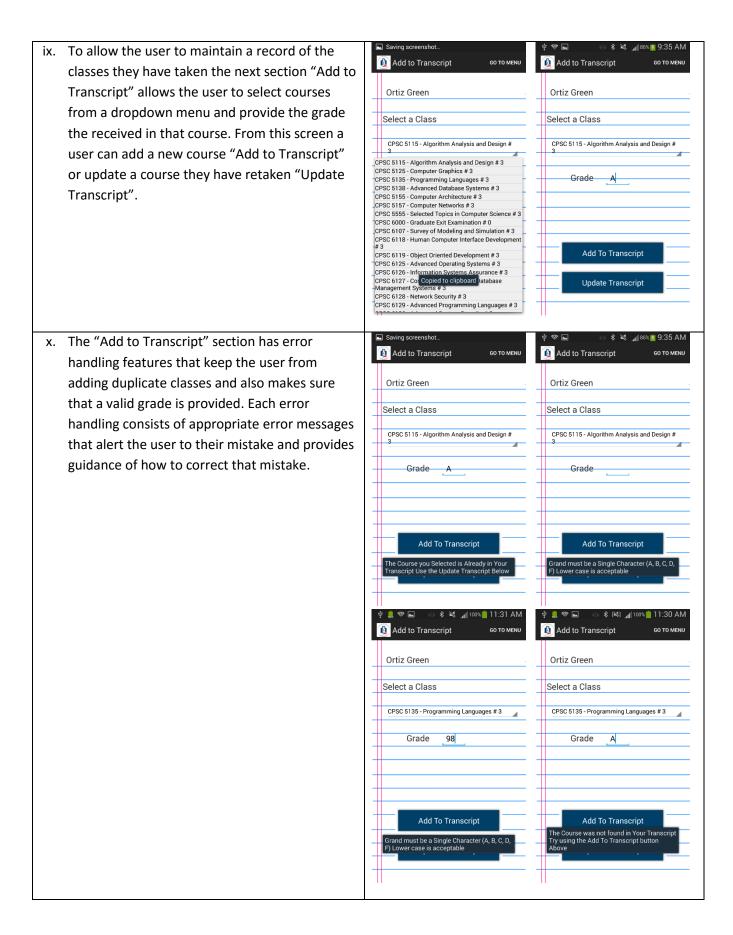
iv. After the users clicks the Create Profile button they will be prompted to confirm their entries and then they are presented with the main menu of the application from this menu they are able to choose what they would like to view. This Main menu consists of five main buttons (CPSC Courses, General Ed. Course, Required Track Courses, Add to Transcript, View Transcript) as well as two menu buttons (Delete Profile, About)



v. Starting with the first option of the main menu CPSC Courses this section of the application will list all of the available CPSC courses for the user depending on the level they selected (Undergraduate or Graduate) in this list of classes the user can select a class and the list item will expand providing the user the vital information for that class (Course Number, Name, Credit Hours, Prerequisites, and description) to collapse this information the user just simply selects the item again.





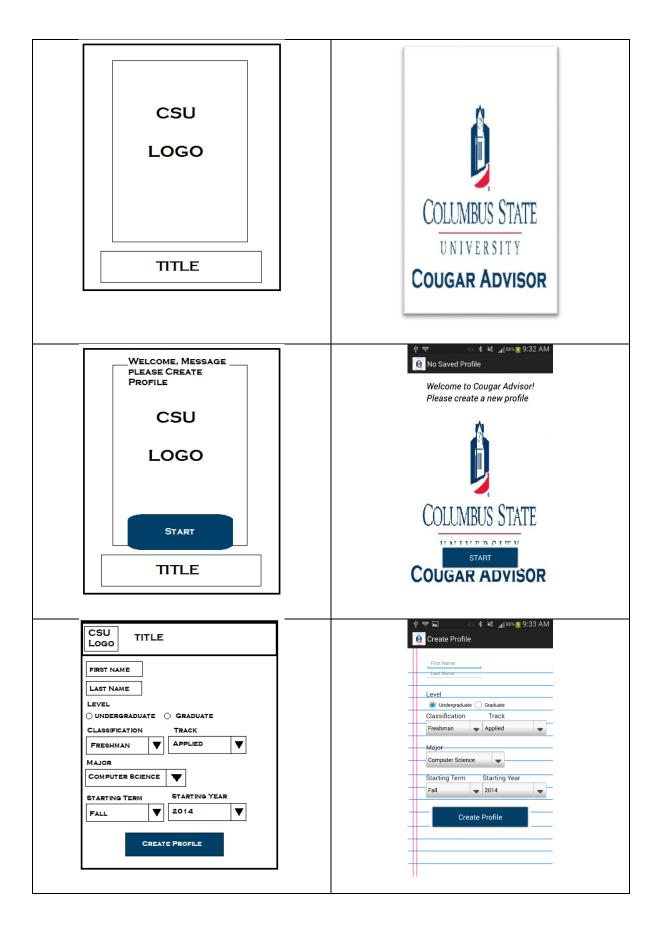


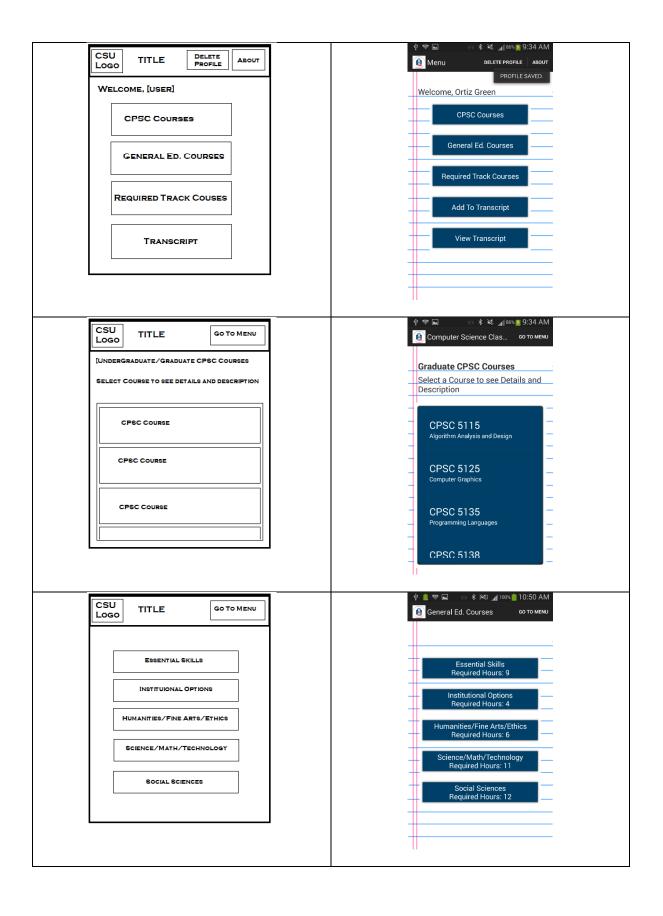
xi. The Final Section of the application allows the Transcript GO TO MENU user to view their transcript (View Transcript) providing a list of the courses they have taken GPA: 4.0 Credits: 6 GPA: 0.0 Credits: 0 while also providing their calculated GPA and CPSC 5115 the amount of credit hours they have **CPSC 5138** accumulated. If the user has not added any classes to their transcript then an empty list is displayed and their GPA and Credits are displayed as 0.0 and 0 🗱 📈 100% 📙 12:01 PM Other screens and maintenance functionality of About Cougar Advisor GO TO MENU this application include an About Screen that provides a general overview of the application Welcome, Ortiz Green and a delete profile function that will clear the Cougar Advisor is an app that allows you to vier course descriptions and curiculum requirement CSU Computer Science Majors Graduate and data from the application allowing the user to start over. Both of these screens are found in **©** CONFIRM the application menu of the Main Screen (top Do you wish to delete your profile? ease note, this will delete your right corner) Transcript as well. CANCEL DELETE

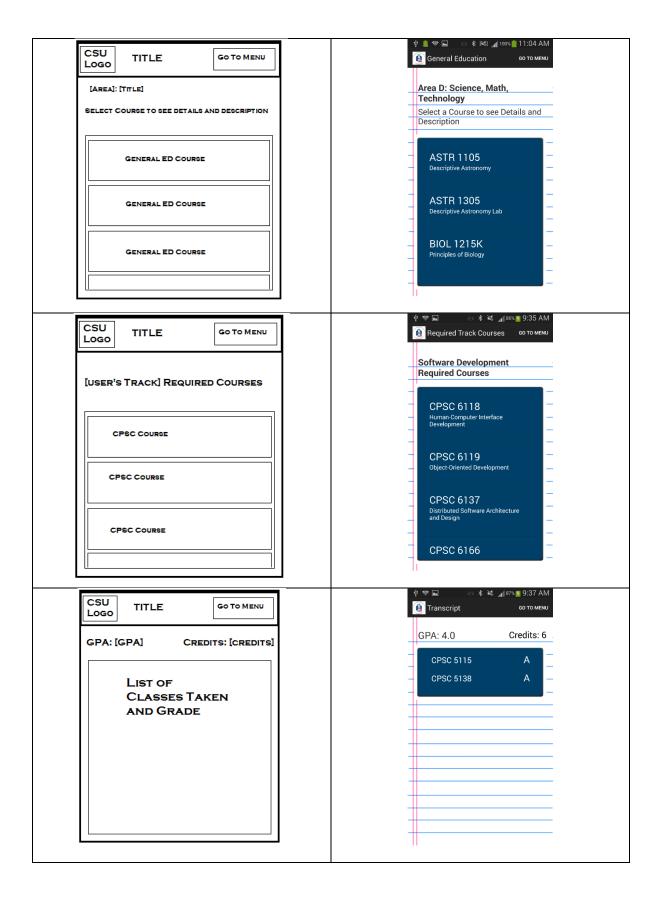
b) Mobile Design Adherence

i. Original Design Wireframes vs Final Screens

As shown in the table below the Final desgin stays true to the original wirefram layouts that were outlined in the design document

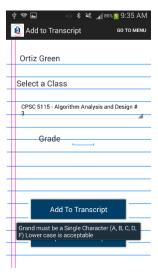






ii. Additional Screens not included in Design

One additional screen was added that was missed in the original design document and that is the "Add to Transcript" Screen shown in the screen shot below.



iii. Background and Color Scheme

The background and Colors for all screens, buttons, text, and lists were configured to match all screens from the original design document. This was accomplished by creating images with the selected colors and/or design and using them as the background for all lists, screens, and buttons.

c) Mobile Requirements Adherence

Requirement	Met by implementation of
2. Functional Requirements c. Mobile Application i. Allows users to see curriculum requirements ii. Allows users to see courses they have taken	 i. "Required Track Course" and "General Ed. Courses" allow the user to see their selected track's required Courses (Undergraduate and Graduate) as well as the General Education Course required (Undergraduate Only) ii. "Add to Transcript" and "View Transcript" allowing the user to add taken courses to their transcript as well as view their transcript which lists all courses they have completed.
3. Performance Requirements a. Scalability i. System should be able to handle multiple departments to spread school wide ii. System should be able to handle up to 10,000 users and advisors b. Workload i. System should be able to keep work queued during peak work load if backed up ii. System should use transactions to allow rollback in case of overload crashing	 a. Scalability i. Systems is scalable to multiple departments as all functionality would work as is and to expand to other departments only additional database entries would be required ii. N/A as mobile version is an application that is self-contained on users mobile device b. N/A to Mobile Application c. N/A as Mobile Application requirements were revised and Mobile App is now a native app and not a mobile browser application

c. Platform

- Desktop application should support windows platform
- ii. Web application should be supported by all browsers
- iii. Mobile application should be supported by all mobile device browsers

d. Response Time

- Users should not see an impact due to workload
- ii. Database connections should be kept short and avoid excess information
- iii. 95% of all responses should remain under 8 seconds

d. N/A to Mobile Application

4. Functional Requirements

- **a.** User must have access to database from desktop, web, and mobile application
- **b.** User must have profile created and advisor assigned
- **c.** User must be able to choose a curriculum for Computer Science
- **d.** User must be able to add classes to track their progress in the curriculum
- **e.** User must be able submit schedule of classes for advisors approval
- **f.** Advisor must be able to approve/adjust students classes request

- **a.** Database is built into the mobile application via sqlite so user will always have access to data.
- b. Requirement is met during the profile create process. (No advisor is assigned as mobile application is only for student to view curriculum and Transcript information)
- **c.** Requirement is met during the profile create process with the Track dropdown list
- **d.** Requirement is met by the add to transcript functionality
- e. N/A for Mobile Application
- **f.** N/A as Mobile Application is for student use only.

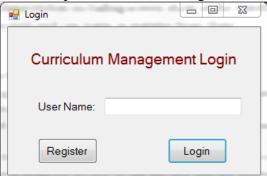
5. Interface Requirements

- **a.** Interface must provide methods for all functional requirements
- **b.** Interface must be flexible and dynamic
- Interface must provide fluid design to transition between features and functions
- Met by the successful implementation of the "Required Track Courses", "General Ed. Courses", and "View Transcript" sections of the application
- **b.** Interface displays data as it pertains to the Track the user selected
- **c.** Interface is fluid and transitions seamlessly as a typical mobile application would.

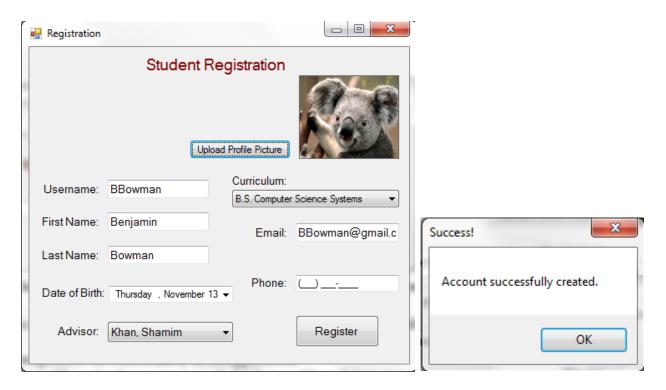
3. Desktop Implementation

a) Implementation

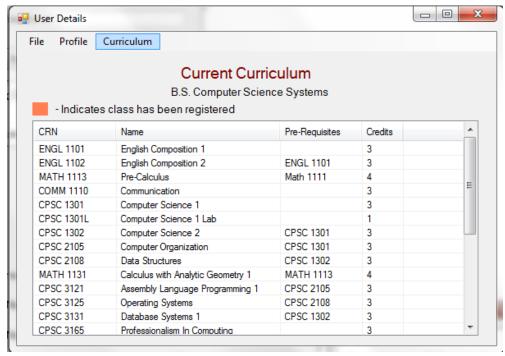
Users are presented with the login screen and can login or register from there.



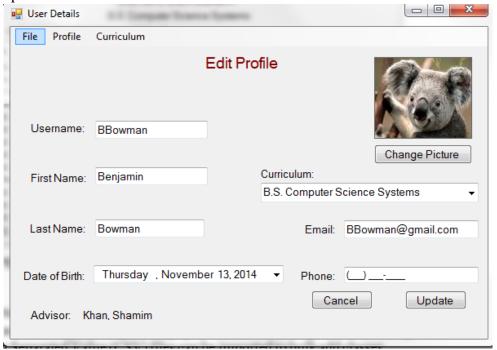
When clicking the register button users can create their profile and upload a picture.



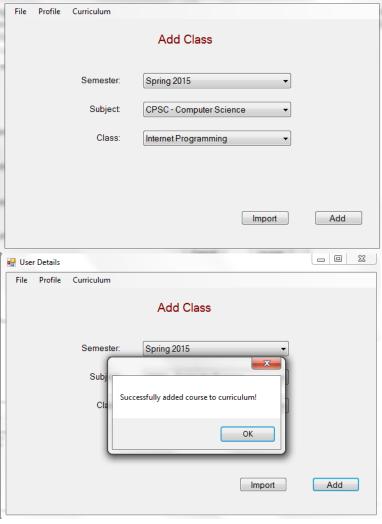
When logging in users are presented with their curriculum and currently registered classes. This is also accessible through curriculum -> view curriculum.



Once logged in user can logout or exit to be returned to the login screen. User can select profile -> edit to be presented with the following profile edit screen; clicking cancel will refresh all the information while clicking update will commit it to the database.

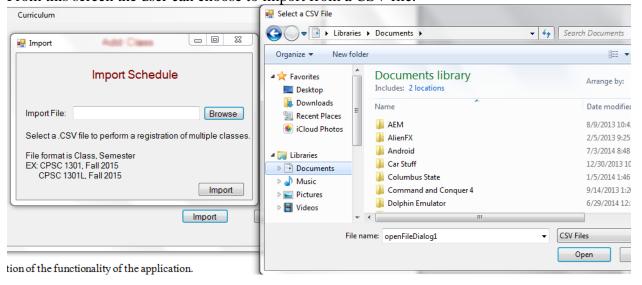


The curriculum menu gives the user the ability to add, drop, view and submit their semester of classes.

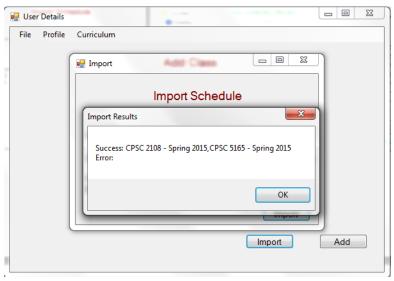


User Details

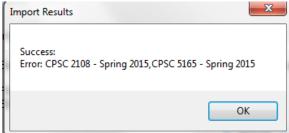
From this screen the user can choose to import from a CSV file.



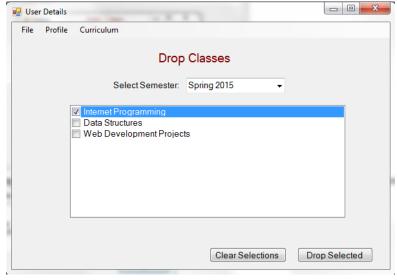
- - X



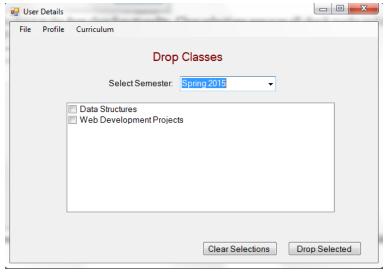
If attempting to import again since they are already registered the following error is displayed.



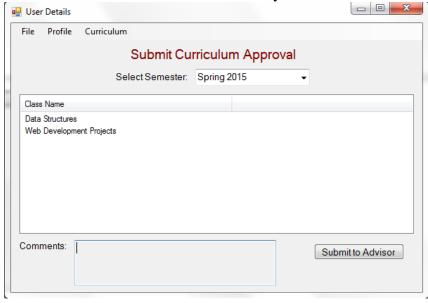
When looking at the drop class functionality. Clear selections removes all check marks and drop selected will remove the classes from the pending registration table.



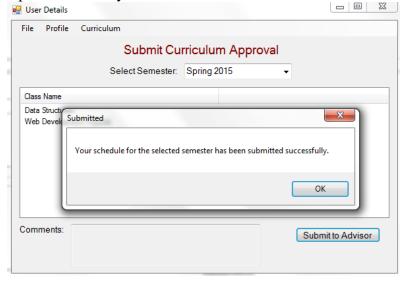
If successful the screen will refresh and when selected the intended semester the class should be gone.



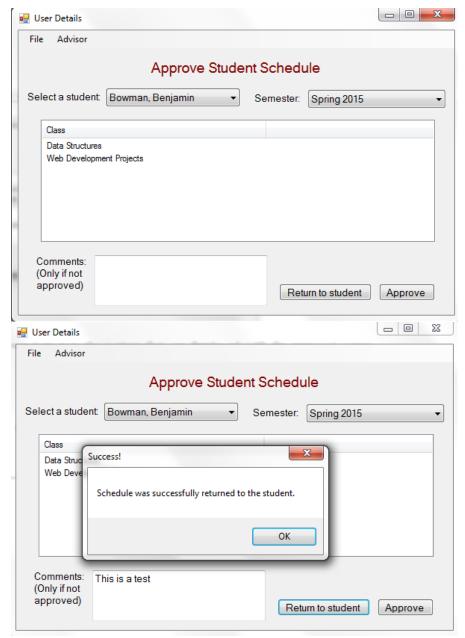
When submitting the curriculum semester you must select a semester to display the classes the below to be submitted. Comments cannot be entered by the student but will be display if returned by the advisor.



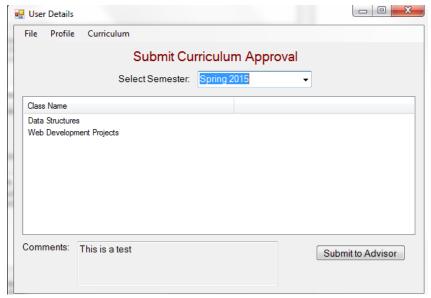
Upon successfully submission



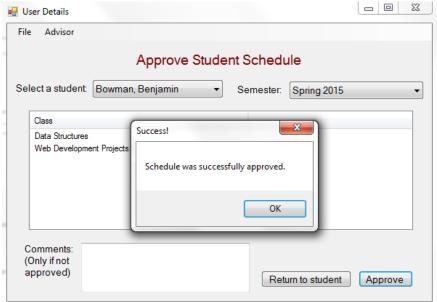
When the advisor logs in to the system they are displayed with the approval screen



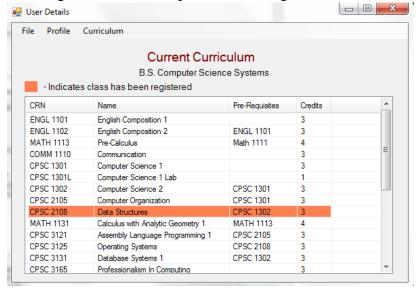
The student will now see the curriculum returned with notes and will have to resubmit. Which will clear out the comments.



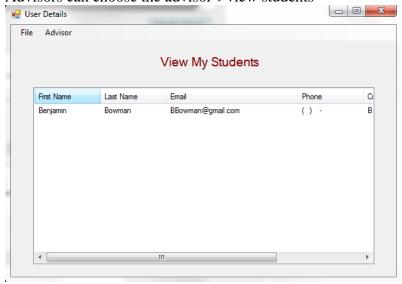
Now the user has corrected his issues or made his changes the advisor will accept.



If the registered class is required for the degree it will be on the students curriculum view when logging back in.



Advisors can choose the advisor->view students



b) A detailed description of the functionality of the application.

Users can create a profile, uploading a picture and edit their profile and their picture.

Comma Separated Value (CSV) files can be imported to bulk add classes.

Students can pull up their registered curriculum and see a highlighted row for classes they are registered for.

Students can view required classes for their curriculum, drop and add classes individually.

Students can finally submit their curriculum for review to the advisor and see notes upon return.

Advisors can send a schedule back to the student with notes or approve the curriculum which will highlight on the students schedule.

Advisors can see students that are assigned to them.

c) How the implementation adheres to the previously submitted design.

The design screenshots submitted were used with minor modifications, utilizing the standard controls stated in the design and following a pattern of displaying information. Buttons, Grids, Text Boxes, File Dialog, and Message boxes were used for direct manipulation

d) How the implementation meets the previously submitted requirements definition.

Requirements were to provide functionality stated above. The requirements were implemented through stored procedure execution from the database. The detailed description of functionality covers the requirements definition

4. Web Implementation

a) A detailed description of the implementation including screen shots of the interfaces



Login.aspx

The first page they will see is the login page. Here they can register for a new account or login into their account. If they type in an incorrect username, they will receive an error.



Register.aspx

This page appears when the user clicks on the register button in the *Login.aspx* page. The user can create an account by typing their details.

User Name, First Name and Last Name are all required fields so if they do not enter these details, they cannot proceed.

There are two types of accounts; student and instructor.

The application features will be different depending on what account the user creates.



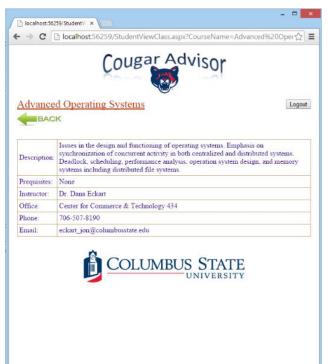
StudentHome.aspx (Without classes)

Student accounts will see this home page when they login. Here they can see the classes they registered for and they can also add more classes, edit their profile and logout.



StudentHome.aspx (With classes)

The student's registered classes are shown in a GridView. They can click on the trash icon to drop that class and they can click on the magnifying glass icon to get more details on the course.



StduentViewClass.aspx

When students click no the magnifying class they are redirected to this page that contains details for that specific course.

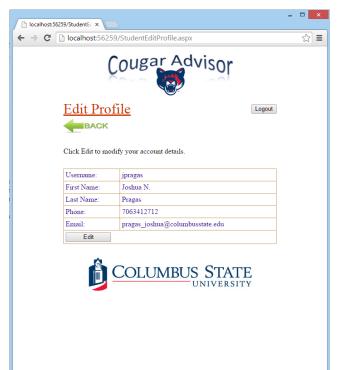
They can return to the home page by clicking the "Cougar Advisor" banner or the green back button.



StudentAddClass.aspx

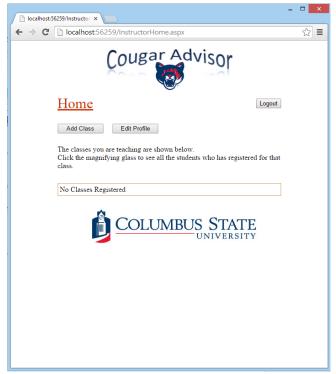
Students can add classes by selecting a course from the drop down list. They can also select their grade if they have already completed their class.

They can return to the home page by clicking the "Cougar Advisor" banner or the green back button.



StudentEditProfile.aspx

Students can edit their profile by clicking on the Edit button. They can return to the home page by clicking the "Cougar Advisor" banner or the green back button.



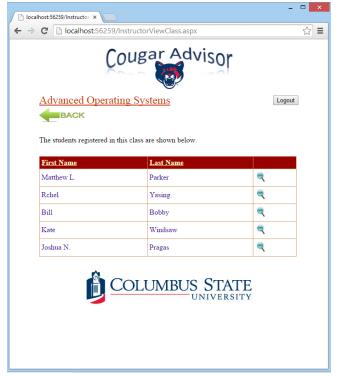
InstructorHome.aspx (Without classes)

Instructor accounts will see this home page when they login. Here they can see the classes they are teaching and they can also add more classes, edit their profile and logout.



InstructorHome.aspx (With classes)

The instructor's registered classes are shown in a GridView. They can click on the trash icon to delete that class and they can click on the magnifying glass icon to view which students are taking that class.



InstructorViewClass.aspx

The instructor will be redirected to this page when they click on the magnifying glass icon in the *InstructorHome.aspx* page. Here they can see a list of students taking that class and they can get their details by clicking on the magnifying glass icon. They can return to the home page by clicking the "Cougar Advisor" banner or the green back button.



InstructorViewStudent.aspx

The instructor will be redirected to this page when they click on the magnifying glass icon in the *InstructorViewClass.aspx* page. Here they can see the details for a specific student such as their name phone number, email and the classes they are taking along with their grades.

They can return to the home page by clicking the "Cougar Advisor" banner or return to the *InstructorViewClass.aspx* page by clicking the green back button.



InstructorAddClass.aspx

Instructors can add the classes they will be teaching by selecting a course from the drop down list.

They can return to the home page by clicking the "Cougar Advisor" banner or the green back button.



InstructorEditProfile.aspx

Instructors can edit their profile by clicking on the Edit button. They can return to the home page by clicking the "Cougar Advisor" banner or the green back button.

b) A detailed description of the functionality of the application.

Users can create their account – student/instructor.

When a student logs in they can add classes or edit their profile.

They can drop their classes and view detailed descriptions for that specific class.

When an instructor logs in they can add classes they are teaching and edit their profile.

They can delete any classes they are teaching.

They can view which students are taking that class and view the student's details.

The 'Cougar Advisor' logo will always redirect the user to their home page.

Excluding the login, register and home pages there will always be a green back arrow button to allow users to return to the previous page

c) How the implementation adheres to the previously submitted design.

The design has changed quite a bit in areas of how it functions and its interface. The interface now includes metaphors such as the magnifying glass icon and trash icon instead of 'Delete' and 'View' buttons. The CSU banner is now always at the bottom and the 'Cougar Advisor' logo is located at the top. There is also a green back arrow button for users to return to the previous page. With regards to the functionality, users cannot upload a picture to their profile and students cannot upload a list of their classes. They can only add them one at a time. Instructors can only view who's taking their class and see the student's details but not approve them.

d) How the implementation meets the previously submitted requirements definition.

Functional Requirements

- i. Allows users to create/edit their profile
- ii. Allows users to see and edit curriculum requirements
- iii. Allows users to add classes they have taken, individually
- iv. Allows users to submit their schedule to the advisor for approval or adjustments
- v. Allows advisors to manage their students
- vi. Allows advisors to approve or adjust students submitted schedules

- Students and instructors can create an account and edit their profile if they wish.
- ii. Students can see what perquisites are required to take the course.
- iii. Students are allowed to add classes they have completed or are going to take.
- iv. Instructors can see what classes students are taking.
- v. Instructors can see who are taking their class and view their student details.
- vi. Instructors can only view and read students schedules.

Performance Requirements

a. Scalability

- System should be able to handle multiple departments to spread school wide
- ii. System should be able to handle up to 10,000 users and advisors

b. Workload

- i. System should be able to keep work queued during peak work load if backed up
- ii. System should use transactions to allow rollback in case of overload crashing

c. Platform

i. Web application should be supported by all browsers

d. Response Time

- i. Users should not see an impact due to workload
- ii. Database connections should be kept short and avoid excess information
- iii. 95% of all responses should remain under 8 seconds

a. Scalability

- i. Currently only Computer
 Science courses are in the list
 of courses available. More
 classes can be included in the
 database if required.
- ii. If the database table allows unlimited rows for new data then it should be able to handle it.

b. Workload

- i. N/A
- ii. N/A

c. Platform

i. It currently works on Mozilla Firefox and Google chrome.

d. Response Time

- i. There can be a small delay when logging in to your account.
- ii. There are few columns in each table and only the necessary information is displayed.
- iii. Nothing takes more than 8 seconds to respond.

Interface Requirements

- a. Interface must provide methods for all functional requirements
- b. Interface must be flexible and dynamic
- c. Interface must provide fluid design to transition between features and functions
- a. Interface provides methods for most of the functional requirements.
- b. It works and is s viewable in popular web browsers such as Firefox and Chrome.
- c. There are small instructions on each page to help the user. The interface uses nice images, colors and buttons to make it a visually pleasing interface to work with.