Virtual Classroom

Test Results

COP 4331C, Fall, 2015

Modification History

Version	Date	Who	Comment
V 0.0	10/06/2015	J. Casserino	Created Initial Draft
V 0.1	10/06/2015	J. Casserino	Updated Rough Draft - Added the Introduction - Added Description of Test Environment
V 0.2	10/08/2015	J. Casserino J. Bender	Updated Rough Draft - Added Overall Stopping Criteria - Description of Individual Test Cases
V 1.0	10/08/2015	J. Casserino	Check for errors and updated Rough Draft to Final Draft
V 1.1	12/03/2015	M. Friedman	Added Test Results
V 2.0	12/03/2015	J. Casserino	Check for errors and updated Rough Draft to Final Draft

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Contents of this Document

Introduction

Overall Objective for Software Test Activity

The initial software tests are to make sure that we have a working and bug-free application before issuing the software to customers. We hope to identify any flaws or possible improvements in the program during these tests in an effort to make the product release ready.

Reference Documents

Concept of Operations;
github.com/bender-joe/VirtualClassroom/tree/master/Documetation/Deliverable%201

Project Plan;
github.com/bender-joe/VirtualClassroom/tree/master/Documetation/Deliverable%201

SRS;
github.com/bender-joe/VirtualClassroom/tree/master/Documetation/Deliverable%202

Description of Test Environment

An iPhone with a current operating system and internet access will be used for testing. The testers will be team and non-team members, who are non-developers, to use the software objectively without knowing all the ins-and-outs of the implementation. The developers will perform tests in developed functionalities and performance, to test individual features, before beta testing. The environment for development will be the same as the live environment.

Stopping Criteria

During the testing phase, the team will test the software logging all defects and giving them a rank of severity in relation to the usability of the application. As issues and bugs are reported, the developer(s) will immediately begin addressing the highest severity issues and form a resolution plan to be approved with the remainder of the team before implementation. This will ensure that a comprehensive solution to the issue is to be implemented.

Multiple test cases will be run, feeding in 90% of all possible permutations of variable input for each functionality and component of the system. Once these test cases have all passed without error and the system is observed to behave correctly in all scenarios, then the software may be deemed ready for delivery. This will require that there are no known errors within the system. The test cases will involve completing all tasks for each functionality in the application and passing all permutations of possible input to the applications.

Description of Individual Test Cases

Test Case 1 Plan – Login

- Test Objective: This will test the functionality of logging in, and reject or grant access to the system based on input credentials.

- Test Description: The login function will have inputs that contain both false and valid username and password combinations. A test user name of TestUser@email.com and a password of Passw0rd in order to test login acceptance. Invalid combinations involving all permutations will be used to test login rejection.
- Test Condition: This is not applicable as this functionality is under a general mode for the application.
- Expected Results: For valid test username and password combinations that are in the database the system will log the user in and present the home page to them. Invalid usernames and passwords will be rejected further access to the system.

Test Case 1 Results – Login

- False Input: Tested a correct user name (instructor@knights.ucf.edu) stored in the database with a false password (false). The correct error message was displayed when trying to log in with this information.
- False Input 2: Tested a false user name (instructor3@knights.ucf.edu) stored in the database with a password of an instructor stored in the database with a similar user name (passw0rd). The correct error message was displayed when trying to log in with this information.
- False Input 3: Tested a false user name (instructor3@knights.ucf.edu) stored in the database with a false password not stored anywhere in our database (false). The correct error message was displayed when trying to log in with this information.

- Valid Input: Tested the correct user name (instructor@knights.ucf.edu) with the correct password (passw0rd) and was granted access to the application.
- Ran By: Miles Friedman 8/25/15, all tests passed!

Test Case 2 Plan – Create User Account

- Test Objective: Testing the functionality of allowing the user to input information and create an account.
- Test Description: Create account function will receive input with all ranges of data. The only character string of information that will require validation are the password and email fields. The test will provide both valid and invalid passwords and an email addresses to test the applications data verification functionalities. Once the Teacher or Student user request a new account the Admin user will either approve or deny the request.
- Test Condition: The application will be in a neutral mode as this functionality is available to both Student, Teacher and Admin users
- Expected Results: When the system receives valid information an account will be created and the user will receive verification that the account has been created. If the information provided is invalid against the constraints the user will receive notification that the account could not be created.

Test Case 2 Results – Create User Account

- False Input: Tried entering values into only some of the fields, if not all fields were populated, the application successfully outputted the correct error message.

- False Input 2: Tried entering a password that did not match the password criteria (“pass”). Passwords must have at least 7 characters and at least one number. The correct error message was outputted to the screen.
- False Input 3: Tried entering a password that did not match the password criteria (“password”). Passwords must have at least 7 characters and at least one number. The correct error message was outputted to the screen.
- Valid Input: Populated each of the empty fields with valid input including a valid password (passw0rd) and clicked the button to register. The application successfully created an entry in the database to reflect the new user and correctly redirected the user back to the login page.
- Ran By: Miles Friedman 8/25/15, all tests passed!

Test Case 3 Plan – Create Course and Content

- Test Objective: Testing the functionality for Teacher and Admin users to create a course module and populate it with relevant content.
- Test Description: The test case will provide input into the content fields when creating a course. The data validation functionalities will be tested with invalid and valid data strings in fields such as Course Name and Course ID. This test case will also provide testing for publishing content into the files and assignments sections of the course.
- Test Condition: This test case will require the mode of Admin and Teacher users.

- Expected Results: The application should create a course based on the input from the ‘create course’ function and if valid character strings are received for the course code, the application will create a new course with all provided data.

Test Case 3 Results – Create Course and Content

- Test Ran: Populated the Course Prefix and Course Number fields of the create a course page (EGN 1006) as a logged in instructor. As a result the new course entry was successfully created in the database under the Course table. Additionally, the user was correctly redirected back to their courses home, which now listed the newly created course in addition to their previously associated courses. (NOTE: Courses may be created by only populating the Course Prefix and Course Number fields as opposed to every field if desired. Any course created is automatically associated with the Instructor that created the course. This was correctly validated)
- Ran By: Miles Friedman 8/25/15, all tests passed!

Test Case 4 Plan – Student Select and Add Courses

- Test Objective: Testing the functionality for Students to select an available course and add it to their inventory of courses.
- Test Description: The test case will simulate a Student user searching and adding a course to their available course list.
- Test Condition: This test case will require the mode of Students.
- Expected Results: The application should add the course to the Students available/current courses list otherwise the application will reject the request.

Test Case 4 Results – Student Select and Add Courses

- Test Ran: As a logged in student (John Smith) attempted to search for all courses with a COP prefix. All courses were correctly displayed. Selected COP 4331C and 4302 and clicked the button to add the courses.
- Result: The database correctly added entries for each course in the Enrolled table linking the logged in student with the selected courses, and the user was correctly redirected to the courses home page where their newly added courses were displayed.
- Ran By: Joseph Bender 8/25/15, test passed!

Test Case 5 Plan – Student have access to course data

- Test Objective: Testing the functionality for Students to have access to an available course.
- Test Description: The test case will simulate a Student user selecting to access the course and the course's material of a previously added course.
- Test Condition: This test case will require the mode of Students users.
- Expected Results: The application should allow access to the available course and its available content.

Test Case 5 Results – Student have access to course data

- Test Ran: As a logged in student (John Smith), clicked into COP 4331C and was correctly redirected to the correct course page, which allowed access to the discussion board and file download pages that correspond with COP 4331C.
- Ran By: Joseph Bender 8/25/15, test passed!

Test Case 6 Plan – Student Post/Create Discussion

- Test Objective: Testing the functionality for Student users to create a discussion and/or post to a current discussion for the courses.
- Test Description: The test will simulate Student users creating a new discussion and/or post to a current discussion attached to that course.
- Test Condition: This test case will require the mode of Student users.
- Expected Results: The application should upload the discussion and/or discussion post and give Students currently in the course access to the relevant content.

Test Case 6 Results – Student Post/Create Discussion

- Test Input 1 Adding a Discussion Post: As a logged in student, (John Smith) from within the COP 4710 course, attempted adding a discussion on the discussion page. Upon clicking the button to add a new discussion post, was correctly redirected to a page that allowed the user to add a title and description for a new post. Once submitted, the user was correctly redirected to the discussion board page for that class where a link (the title of his post) to his discussion post was displayed. This was correct behavior.
- Test Input 2 Posting a Comment On An Existing Discussion Post: Clicked an existing discussion post (HELP! Hello World Program Not Working!) while logged in as the same user on the COP 4710 discussion board page. Was correctly redirected to the individual discussion post page. Clicked the button for adding a comment on the discussion board post. The user was correctly redirected to a page that allowed said user to enter a text entry comment. Upon clicking the button to

submit the comment, was correctly redirected back to the individual discussion post page where the comment was displayed underneath the posts title and description.

- Ran By: Joseph Bender 8/25/15, all tests passed!

Vlass - Virtual Classroom App User Manual

Contents of this Document

Introduction

Welcome to Vlass the Virtual Classroom App! Vlass is an iPhone app that will improve the current learning management systems. This system's main goal is to increase the availability of information the students have directly from the instructors, to improve the data integrity; and to increase the information the instructors have about the current level of understanding of the students. With a direct line of communication between the instructor and students through discussion post, the instructor will be able to cover topics more thoroughly. With these improvements to an already successful educational system, Vlass will only improve the education of students and increase the proficiency of the instructors.

Different User types

Vlass uses different user types to protect the integrity of the overall system and to make the overall system easer to navigate. The different user modes are Student and Teacher. A system admin will also have access to the system through the database.

Instructor

This user will have full control of the course that it has been assigned too. Instructors will create the course, submit files to be uploaded to the course by an admin, view/create discussions and view grades.

Students

This user will be able to download course files that the Instructor user has loaded to the course, view current grade and create/view discussions

Student User Operations

Creating an account and logging in

It's very simple to register... You just have to type in your first and last name, your school, email address and create a password that matches the described criteria. The minimum requirements for a password are;

- Must contain 8 characters
- Must contain at least one number
- Must contain at least one uppercase letter

To login just enter in the user name and password you created.

Enrolling in a Course

To enroll in courses at your school, tap enroll button in the top left corner. To search for courses available at your school, type in the course prefix, or the course number and tap the search button. The results of your search will be displayed in the table at the bottom of the screen. Tap the desired course, a checkmark will appear to indicate your selection, and then tap enroll at the bottom right corner of the screen

Course Home Screen

Once logged in the app will display the courses screen. This screen will display all enrolled in courses, to access a course just tapped the name of the desired course. This will take you the course home screen. Your grade for the course will appear at the top right corner next to the course title. The files and discussion options will now be available.

Course Files

To access course files tap the Files option in the menu. Tap the desired file to download.

A checkmark will indicate your selection. Tap the download button at the bottom right corner of the screen. An alert will notify you of a successful download. This app does not current display the files themselves so an outside app will be required to view files.

Course Discussion

Tap the Discussion option in the menu. This screen will display all available discussion threads. To create a new discussion thread, simply tap the New Discussion Button on the bottom right corner of the screen. This will take you to the “create a discussion” screen. This screen will display two text input fields. One for the title, and one for main content. To create a discussion, tap create discussion to post the new discussion. The newly created discussion will now be displayed. To view a desired discussion thread, tap the discussion title on the screen. This screen will display the original discussion post as well as any replies. To post a new reply tap the reply button in the bottom right corner of the screen. Input the new reply in the text field and tap the post reply button in the bottom right corner of the screen.

Instructor User Operations

Logging in

To log in input your username and password created for you by an admin of the system. After logging in, the courses home screen will display all of the courses that the professor is currently instructing.

Creating a course

To create a course, tap the create button in the top left corner of the screen. This screen will display required criteria for each course. The required criteria are:

- Course prefix
- Course number

- Course's start and end time
- Days of the week that the course meets.

Once all of the fields have been filled, tap create course.

Course Home Screen

This will display the courses home screen for the instructor, which will now display the newly created course. Click the desired course you wish to access. This will take the user to the course home screen which will display the students enrolled in the class along with their respective course grade. The instructor also has the capability to access discussion threads and course files.

Course Files

To access course files tap the Files option in the menu. Tap the desired file to download. A checkmark will indicate your selection. Tap the download button at the bottom right corner of the screen. An alert will notify you of a successful download. This app does not current display the files themselves so an outside app will be required to view files.

Course Discussion

Tap the Discussion option in the menu. This screen will display all available discussion threads. To create a new discussion thread, simply tap the New Discussion Button on the bottom right corner of the screen. This will take you to the “create a discussion” screen. This screen will display two text input fields. One for the title, and one for main content. To create a discussion, tap create discussion to post the new discussion. The newly created discussion will now be displayed. To view a desired discussion thread, tap the discussion title on the screen. This screen will display the original discussion post as well as any replies. To post a new reply tap the reply

button in the bottom right corner of the screen. Input the new reply in the text field and tap the post reply button in the bottom right corner of the screen.

Uploading Course Content

In order for the instructor to load course content, the required files have to be sent to the admin with the course title. The admin will upload the file directly into the database and assign that file to the course. Once complete the instructor will be emailed and content will be available to all users enrolled to the course.

Code Source

The full code can be found at; https://github.com/bender-joe/VirtualClassroom

Build Instructions

Software Requirements

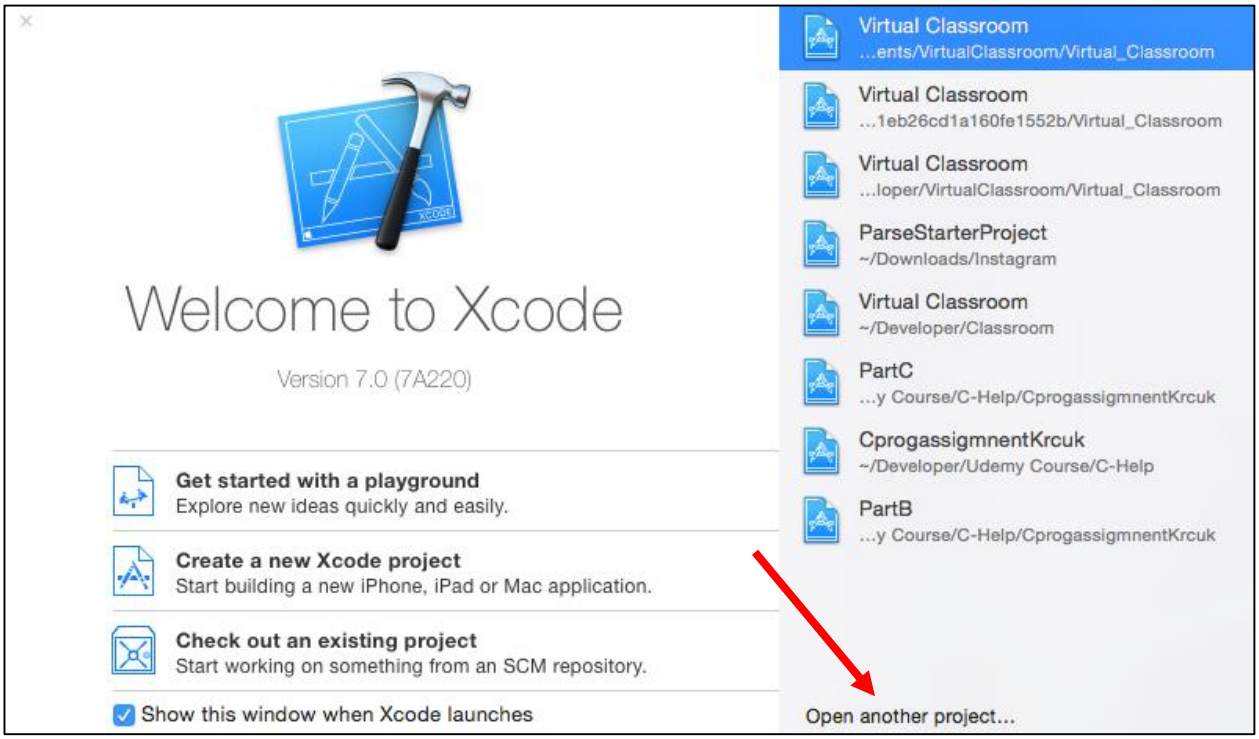
1 Macintosh OSX based computer running 10.7 or later

2 XCode 7.0 IDE with iOS SDK

3 Virtual_Classroom Source file

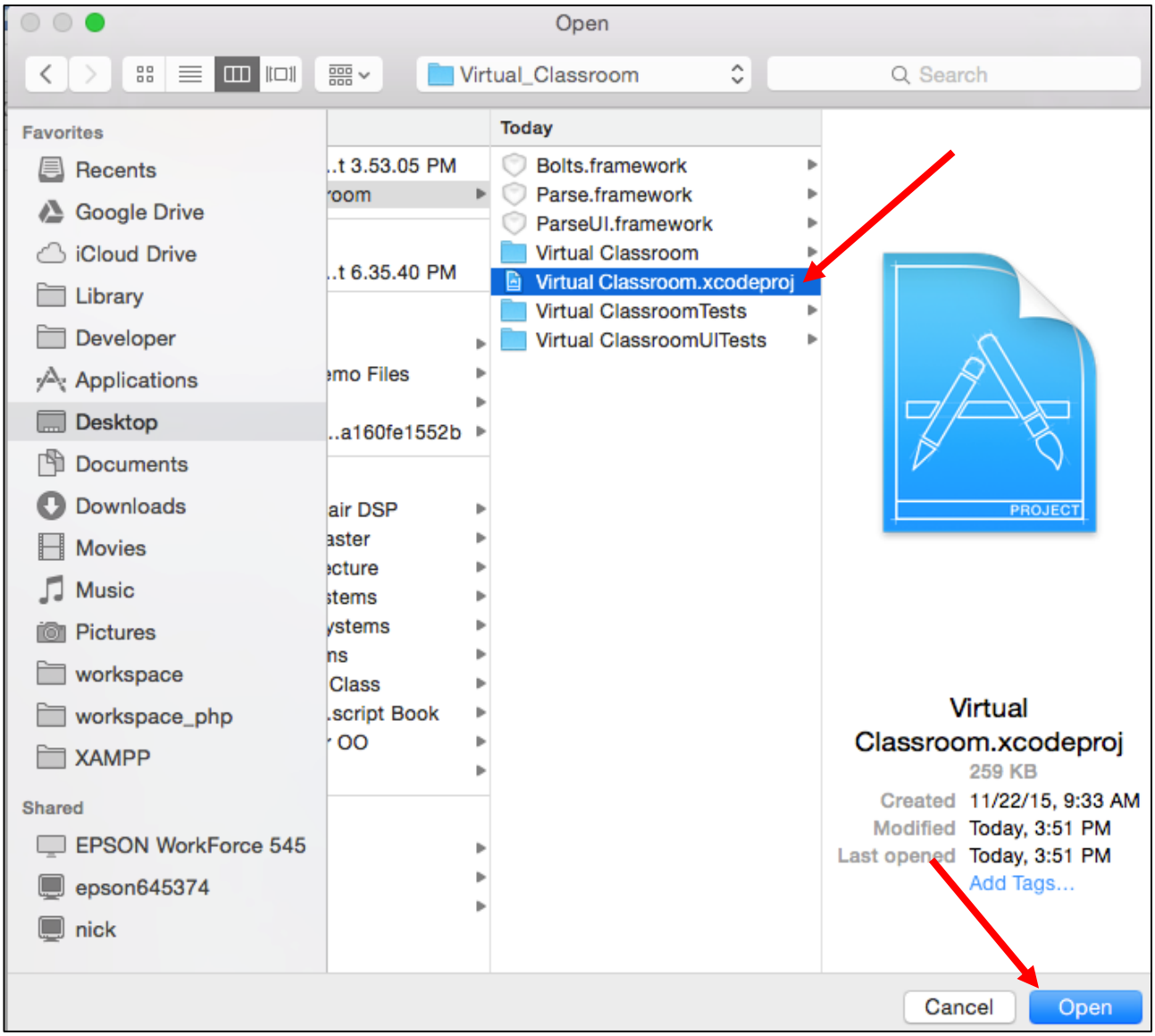
Instructions

1. Unzip the Virtual_Classroom.zip source file into a designated folder
2. Open XCode. In the main screen, click “Open another project…” at the bottom right corner of the screen.



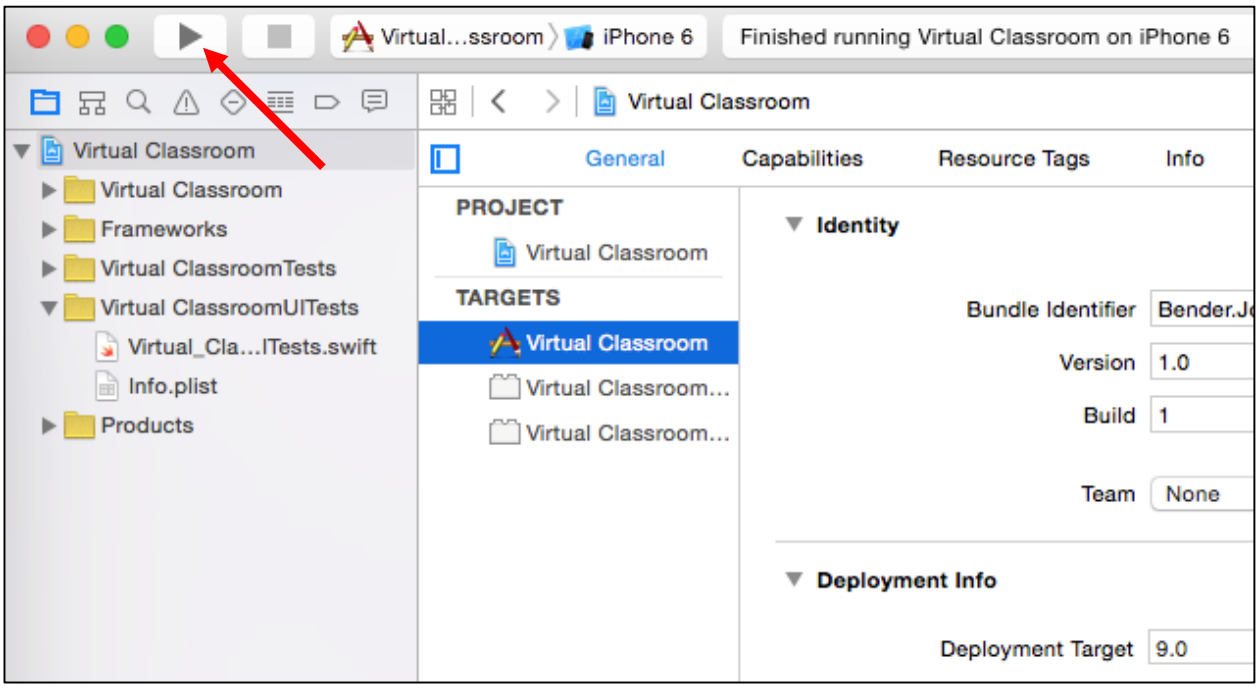
3. A file selection box will appear. Navigate to the location of the Virtual_Classroom folder created in step 1.

4. Select the “Virtual Classroom.xcodeproj” file and click open.



5. XCode will load all of the files and library dependencies into the project workspace. This may take a few minutes for XCode to finish indexing and processing all of the files.

6. Click the “Build and Run” button at the top left of the window to build and run the program.



Please Note: if the current version of XCode is older than XCode 7, please be sure to update to the most current version of XCode to properly run the program. If the version of XCode is newer than 7.0, please change the Base SDK option to the current version of XCode that you are running. Lastly, please set the simulator scheme to run on the iOS simulator for iPhone 6 (shown below).