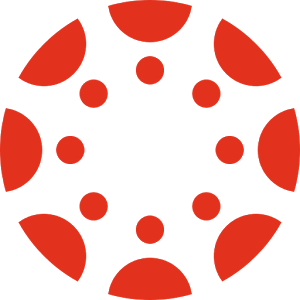
90’s Canvas

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CS329E Project 3 & 4

# Basic description

A program that allows instructors “flip” the teaching and learning experience within the classroom. This program is a gamification of Canvas and is built using Microsoft Visual Studio and C#. It is basically a Windows Form application. Students can have a level and they can increase the level by completing quests. Students also have homework, quizzes, projects and tests which give them a grade. We can have a grade for each skill so students can see how well they perform in each skill. Teachers can create assignments and assign skills to the assignments. They can also look at the students’ scores, see the average grade of each assignment and the number of submissions.

# Major changes / alternations

We had to change the information from being stored on a local database to a Microsoft Access file. There is an issue with the file in that the changes made are temporary. They seem to happen while to program runs, but once it closes they go away. We did not have this trouble on the server and cannot figure out why it is happening.

# Completed Features

1. Create (or upload) homework assignments, projects, quizzes, and test content into the system
   1. Teacher Create Assignment Page
2. Create a series of “Quests” to build certain skills
   1. Teacher Create Assignment Page
3. Create (or display) a skill list related to a class/assignment/project/quizzes/tests
   1. Student Choose Assignment Page
4. Assign a skill, difficulty level, etc to each problem
   1. Teacher Create Assignment Page
5. Create a level list with corresponding point values
   1. Student Home bar/header
6. Each question / item / Quest has a skill(s) designation
   1. Teacher Create Assignment Page
7. Quests can contain multiple combinations of skills or skill levels
   1. Teacher Create Assignment Page
8. Keep track of individual student progress
   1. Teacher Home Page
9. Allows students to be members of various defined groups (guilds)
   1. Student Group page
10. Generate reports in various ways (i.e., individual quests, individual skills, individual students, specific groups, etc.)
    1. Teacher Assignment Report Page
    2. Teacher Skills Report Page
11. Calculate the current level for each student
    1. Teacher Home Page

# User stories

## Project 3 - Release 0

1. Teacher Create Assignment Page (4 days –hard) COMPLETED
   1. Choose if it will be a quest, homework, project, quiz, and test.
   2. Choose what skills will be associated with assignment.
   3. Description.
   4. Enter in questions for assignment.
2. Teacher Assignment Report Page (2 day - medium) COMPLETED
   1. Name of assignments
   2. Average grade of each assignment
   3. Number of students submitted
   4. Type of assignment
   5. Remove assignment button
3. Teacher Assignment Skills Page(1 day- easy) COMPLETED
   1. Name of Skills
   2. Average Grade of each skill
4. Teacher Header (1 day – easy) COMPLETED
   1. Button to create quests
   2. Button to Assignment Report page
   3. Button to Skills Report page
   4. Button to Student report page

## Project 4 - Release 1

1. Student Group page (4 days - normal) COMPLETED
   1. Choose, find, create, join group…
   2. Will be simple label, multiple people have label
   3. All groups stored in a text file
2. Teacher home(7 days – easy) COMPLETED
   1. Shows each student, their level and completed assignments and grades
3. Teacher Create Assignment Page (4 days –hard) COMPLETED
   1. Choose if it will be a quest, homework, project, quiz, and test.
   2. Choose what skills will be associated with each question.
   3. Choose what difficulty is associated with each question
   4. Description.
   5. Enter in questions for assignment.

# Project 4-Release 2

1. Student Home bar/header (3 days – normal) COMPLETED
2. Always present
3. Displays student progress/level
4. Display group the student is associated with
5. Link to Choose Assignment page
6. Link to Student Group page
7. Link to logout
8. Login Page (3 days – normal)- COMPLETED
   1. Users login, authentication stored in text file
   2. If authentication is valid
      1. Links to either students choose assignment or teacher choose assignment
   3. If not
      1. Reloads the page and displays an error
9. Student Choose Assignment Page (5 days - hard) COMPLETED
   1. Skills and point value assigned to each assignment
   2. Quests list:
      1. Description and questions
      2. Complete quest when all answers are correct
   3. Homework List
      1. Only description
   4. Project List
      1. Only description
   5. Quiz List
      1. Only questions
   6. Test List
      1. Only questions
10. Student Play Assignment Page (5 days - hard) COMPLETED
    1. If questions assignment
       1. Answers question (set), submit button.
       2. One question at a time
       3. Four multiple choice questions
       4. At end display score
    2. If description page
       1. Just display description

# Project 4-Release 3

1. Login Page (3 days – normal)- COMPLETED
   1. Send user ID to form
2. Student Choose Assignment Page (5 days - hard COMPLETED
   1. Send chosen Assignment ID
3. Student Play Assignment Page (5 days - hard) COMPLETED
   1. Get chosen Assignment ID

# Pair programming chart

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date, Time Start, Stop | Member 1 | Member 2 | Task(s) Completed | # of Switches between Driver/Navigator |
| 11/15; 2-4pm | All Members |  | Planned work, created report. | 8 |
| 11/17; 2-4pm | All Members |  | Worked on Teacher Create Assignment Page, started Teacher Assignment Report page, and started Teacher Skills Report page | 10 |
| 11/20;2-5pm | All Members |  | Finished Teacher Header Buttons, finished Teacher Skills Report page, finished Teacher Assignments Report Page, and finished Teacher Create Assignment Page | 20 |
| 11/27; 2-4 | All Members |  | Worked on Teacher Create Assignment Page, Teacher Home, and Student Group Page | 12 |
| 11/29 | All Members |  | Worked on Teacher Create Assignment Page, Teacher Home, and Student Group Page | 13 |
| 12/6 | All Members |  | Worked on Teacher Create Assignment Page, Student Home bar/header, Login Page, Student Choose Assignment Page, and Student Play Assignment Page | 10 |
| 12/11 | All Members |  | Finished the project | 6 |

# Summary of Pair Programming

We split our group into small groups (2 people and 3 people) so that it was easier to do pair programming.

# Summary of Unit and Acceptance Testing

Unit testing was done through the use of the Visual Studios unit test suits. We created tests for when the program made changes to the database to ensure the correct adding, deleting, and updating were being done. There are 10 tests that all pass.

The way we did acceptance testing was manually. After we finished all of the user stories, we tested the following features:

* When you click login with correct credential, the login form will disappear and show the Main Form.
* Clicking all the buttons leads you to the right place / form.
* Creating new assignment will show the new assignment in the assignment page.
* Completing a quest give proper amount of points to student level.
* Completing any other the assignments add to the student grade.

# Summary of Refactoring

We refactored the code by first the individual groups will write their code. Then when we met as a whole group every few days we look at everyone’s code and see how it can be improved and changed. The main refactoring that we did was splitting up methods so that they were shorter and parts could be reused and renaming variables so they could be understood by everyone.

# References

Picture 1, <https://upload.wikimedia.org/wikipedia/en/5/51/WWTBAM2010falllogo.png> Nov 2, 2017.