CSC 106 Assignment 4: The game's the thing!

Due: Monday, December 3, 2012 at 11:55 pm

Marks: 50 marks: 37 marks for the team effort (each member of the team gets this mark) + 13 marks for the individual component (each member of the team gets his or her own mark for this component)

Learning Goals:
At the end of this assignment you will be able to:
● Create and use a simple team work log to track progress;
● Inspect and evaluate Scratch code;
● Experiment with creating work plans in a straightforward software development environment;
● Specify and build specific software features in Scratch.

Submission: This assignment is to be done as a pair or small group (no more than 3). The submitted assignment will include a Scratch file of the new Scratch game and a .doc, .docx, .pdf, .rft, or .pages file answering the other components of the assignment. It should be attached to the CSC106 Assignment 4 submission page on Connex.

MOST IMPORTANT: Only ONE submission for a pair / group. One person in the pair or group will be responsible for submitting the assignment components. As well, that person will include the names of the other member(s) of the team in the Assignment Submission Text Box on Connex under the Assignment 4 submission page.

Please, make sure that **only ONE member of the group submits this assignment**. This assignment takes a while to mark, and we need to be mindful of the marker's time. Marks will be deducted if the marker spends time going over the same assignment twice because of multiple submissions.

A few reminders:
---- Make sure that you include the name of everyone on the team in the Assignment Text box on Connex under Assignment 4.

-- Please make sure that you include the Task number/section you are answering above your response. This makes it easier for your marker to stay with the flow of your answers.

-- Make sure that your files are attached before you click the final submission button on Assignment 4 in Connex. There is a bug in the Connex submission attachment, so you only get one chance to submit you work. Make sure it is all there before you press the

final submit.

Resources: You will find the candidate Scratch Games under the Resources tab in Connex. There are 7 games to choose from and they are in the folder labeled Lab Scratch Assignment part 2. A copy of this Assignment specification will also be included in the folder, along with notes from the associated CSC106 labs.

TASK 1: Inspect and Evaluate Code (15 marks)

1. (5 marks) Working as a team identify and describe two features that you think are well implemented in the game/code you have selected to inspect. For each feature, include information on the following:

- **identify the feature;**
- **describe how it is implemented;**
- **identify the audience you are writing this description for (player, developer...);**
- **describe why you feel this feature is important.**

2. (5 marks) Working as a team identify and describe one feature you feel could be improved. Features for improvement could include(but are not limited to) user instructions, commenting, code, graphical elements, usability issues, input issues, etc.

- **identify the feature;**
- **describe how it is implemented;**
- **identify the audience you are writing this description for (player, developer...);**
- **identify how you will improve the feature;**
- **describe why you feel this feature is important.**

3). (5 marks) Working as a team layout a work plan for implementing the feature you identified in 2 above. It should include the tasks you need/want to accomplish, their approximate order, time estimate for each, and if it is a shared or single responsibility. You might even want to assign a person to specific

tasks/jobs/undertakings. Anything to do with project, including meetings, can go onto the work plan.

It is important to at least try to answer this component before you undertake any more of the assignment. We are asking you to do this not because we expect you to follow the plan to the letter, but to give a flavour of how very challenging it can be to plan even small software development projects.

You might want to use the table below as your template. You may, of course, make changes to suit your own team.

Work Plan

Order	Task	Time est.	Responsibility	.....

TASK 1 DELIVERABLES: A word processed document containing the Task heading, and responses to all of the components. Marks will be assessed for clear reasoning, respectful critique, and plausible / do-able improvements.

(This Task is worth 15 marks).

TASK 2: Implementation (15 marks)

Implement the feature you described in Task 1.

1). (5 marks) Take before and after screen shots of your team's Scratch implementation. Label and include them in your word processed document. On the "After" document highlight or circle the changes that were made. If necessary, include more than one of each type of screen shot.

Below your screen shots, indicate where on the following scale of difficulty your implementation falls (put an X or check mark in the appropriate place) :

Very easy	Easy	Medium Difficulty	Difficult	Very Difficult

Write a brief paragraph (not more than 100 words) explaining why you selected the level of difficulty that you did.

 2). **(10 Marks)** Provide the modified version of the Scratch program with your implementation.

TASK 2 DELIVERABLES:
Using the same word processed document as you created for Task 1 make a new Task 2 heading. Under this heading you will have the screen shots, the difficulty scale, and the difficulty rational as agreed upon by the team. Also attach the modified Scratch program in the Assignment 4 submission in Connex.

Your team's scratch program will be evaluated on how well it addresses the feature you identified as needing improvement. **(This Task is worth 15 marks).**

TASK 3: Keeping track of the effort (13 marks)

It is a standard practice in the software industry for developers to keep track of time spent on various tasks. There are many reasons for this, not least of which is the importance, in many cases, of "billable hours". These will be hours charged back to a client, a budget line, a project, etc. Also, work logs help developers look back and reflect on what worked and what didn't with the goal of being more efficient the next time a similar project comes along.

1). (5 marks) This task presents a sample Work Log that all members of the team should work with. Each member of the team should keep a log of their portion of the assignment. Each entry should include the following:
Date and time;
Amount of time spent;
Task # from the Assignment (e.g. If it is Task 1, part 1, you might put 1.1). You will probably have several entries for each Assignment Task;
Goal;
Comments.

Below is a sample Work Log you might want to use (add extra rows or columns as needed).

Each member of the team will keep a Work Log. Each member of the team will keep his or her own Work Log. The Work Log will submitted separately (see the Deliverables for this Task -- the Work Log is a personal document and will not be shared, so we'll mark it by itself.)

Date	Time spent	Task #	Goal	Comments

2). (3 marks) Along with the Work Log, every team member should write a short reflection on what she or he would do differently next time. The reflection should include one thing that worked as planned, and one thing that she or he would do differently in the future when involved in a team-based software project.

This component should be included below the Work Log and submitted on the same word processed document as the individual Work Logs.

3). (5 marks) After the implementation is complete, write one or two brief paragraphs comparing your team's Work Plan in Task 1 with how the project actually unfolded. Did the work proceed as planned? If yes, give some reasons why (e.g. someone on the team had experience with software implementation, good choice of feature to improve, spent time laying out the plan, etc.). If not, give some reasons why not.

TASK 3 DELIVERABLES:
The Work Logs, individual reflections, and Work Plan analysis should be on a new word processed document. This will be submitted individually using the Work Log Assignment 4 link (under the Assignments tab).

The Task 4 document should be headed up with the name of the person creating the log. As well, please include the names of the other team member(s).

(This Task is worth 13 marks -- they will be individually assigned under the Work Log Assignment 4 submission link.)

OVERALL ASSESSMENT (7 Marks):
As usual, five marks are set aside for overall assessment. 4 to 5 marks are given for outstanding work. The assessment proceeds as follows:

7 marks given for an outstanding assignment - original thought, outstanding organization, well demonstrated analysis and synthesis capabilities, excellent grasp of subject matter with sound critical evaluations throughout. As well, a very difficult modification was successfully added to the game.

6 marks given for strong evidence of original thinking; excellent organization; capacity to analyze and synthesize; superior grasp of subject matter with sound critical evaluations. All other material in the assignment is correctly completed in an exemplary manner. As well a difficult modification was successfully added to the game. Or, a very difficult modification was added, but with limited success.

5 marks given for strong evidence of original thinking; excellent organization; capacity to analyze and synthesize; superior grasp of subject matter with sound critical evaluations. All other material in the assignment is correctly completed in an exemplary manner. As well a medium difficulty modification was successfully added to the game. Or, a difficult modification was added, but with limited success.

3 - 4 marks given for strong evidence of original thinking; excellent organization; capacity to analyze and synthesize; superior grasp of subject matter with sound critical evaluations. All other material in the assignment is correctly completed in an exemplary manner. As well an easy modification was successfully added to the game. Or, a medium difficulty modification was added, but with limited success.

1- 2 marks given for evidence of grasp of subject matter, some evidence of critical capacity and analytic ability; reasonable understanding of relevant issues; evidence of familiarity with the concepts. All other material in the assignment is correctly completed. As well, a very easy modification was successfully added to the game.

Marks for the Overall Assessment can vary a bit - for example, if the team selects a very difficult modification, but then presents poor work logs, or has a less than convincing rational as to why their modification should be considered very difficult, the Overall Assessment mark would not gain a 7, but might be in the 4, 5, or 6 range. Conversely, a medium difficulty modification with all components completed in an outstanding fashion could be assessed at a 6 instead of a 4 or 5.