COMP397 – Web Game Programming

Assignment 2
Web Slot Machine

Due class #6 (Friday February 26, 2016) @ midnight.

Value 10%

The slot machine game   **Maximum Mark: 68**

Overview: Use your accumulated knowledge of the JavaScript and Web technologies and the **slot machine code** (provided on GitHub as a template) and the Web API of your choice to create a HTML5 Slot Machine game.

Instructions :
(15 Marks: GUI, 17 Marks: Functionality, 12 Marks: Internal Documentation, 12 Marks: External Documentation, 4 Marks: Site Structure, 4 Marks: Version Control, 4 Marks: Cloud Deployment)

1. Add three images to the GUI (one for each **Reel** of the slot machine) that have a default image (e.g. "SPIN") when the GUI initially loads. The images in the Reels will change every time the user presses the **Spin Button**. The images that appear in the image windows should be one of the symbols (e.g. fruits) that match the randomly generated symbols within your code. You will have to connect the functions contained in the **slot machine code** provided, or write your own code. (3 Marks: GUI, 6 Marks Functionality).

2. Add a "**Spin" Button** control to your GUI that allows the user to spin the reels of the slot machine each time the user clicks the button. This is where the action happens. The code to make your Reels Spin should be connected to this button (1 Mark: GUI, 3 Marks: Functionality).

3. Add a **Button** control to your GUI that allows the user to reset the game (1 Mark: GUI, 1 Mark: Functionality).

4. Add a **Button** control to your GUI that allows the user to quit the game (1 Mark: GUI, 1 Mark: Functionality).

5. Add **Labels** (or other appropriate controls) that display the users **Money**, the current **Jackpot** and the current **Bet** (6 Marks: GUI, 3 Marks: Functionality).

6. Ensure that when the user enters a Bet amount in the Bet Entry control that the program checks (validates) if he has enough money. If the user doesn't have enough money to make his bet, grey out (disable) the **Spin Button** control to prevent him from playing the game (2 Marks: Functionality).

7. Include conditions that allow the player to potentially win the Jackpot. You can use the example code provided for your odds. Reflect a Jackpot Win by displaying a special message (1 Mark: GUI, 1 Mark: Functionality).
8. Add a **Slot Machine Graphic** object that gives the interface the look and feel of a Slot Machine (2 Marks: GUI).
9. Include **Internal Documentation** for your program and create an appropriate **site structure** for your project **(12 Marks: Internal Documentation, 4 Marks: Site Structure):**
   a. Ensure you include a program header that indicates: The Source file name, Author's name, Last Modified by, Date last Modified, Program description, Revision History (6 Marks: Documentation).
   b. Ensure your program uses contextual variable names that help make the program human-readable (2 Marks: Documentation).
   c. Ensure you include **inline comments** that describe the conditional structure you will use for your decision tree matrix (4 Marks: Documentation)
   d. Ensure your project files are organized within an appropriate site Structure, separating the **View** (HTML Document and CSS Files) and your **Game Logic** (JavaScript and TypeScript files) (2 Marks: Site Structure).
   e. Use **TypeScript** to create a scalable, object-oriented application (2 Marks: Site Structure).
10. Include **External Documentation** for your program that includes **(12 Marks: External Documentation)**:
   a. A company Logo (1 Marks: External Documentation).
   b. Table of Contents (1 Marks: External Documentation).
   c. Version History (2 Marks: External Documentation).
   d. Detailed Game Description – describing how your slot machine works (2 Marks: External Documentation).
   e. Game Play Mechanics (1 Marks: External Documentation).
   f. Controls (1 Mark: External Documentation).
   g. Interface Sketch (1 Mark: External Documentation).
   h. Screen Descriptions – Include screen shots for your game (1 Mark: External Documentation).
   i. Scoring (1 Mark: External Documentation).
   j. Art / Multimedia Index – Include examples of your image assets (1 Mark: External Documentation).
11. Share your files on **GitHub** and deploy to a **Cloud Service** (Microsoft Azure, Heroku, etc.) to demonstrate Version Control Best Practices **(4 Marks: Version Control, 4 Marks: Cloud Deployment).**
   a. Your repository must include **your code** and be well structured (2 Marks: Version Control).
   b. Your repository must include **commits** that demonstrates the project being updated at different stages of development – each time a major change is implemented (2 Marks: Version Control).

    c. Ensure your game is live and online. Deploy to a Cloud Service of your choice (4 Marks: Cloud Deployment).

Optional Game Features (i.e. Potential Bonus Marks).
    A. The Slot Machine activates **sound clips** each time the **Spin Button** is pressed, the player wins, etc.
    B. Create an **animation effect** for the Reels when the **Spin Button** is pressed.
    C. Include additional Reels (i.e. 5 Reels instead of just 3).
    D. Include additional "Bet Lines" (e.g. a primary and two secondary Bet Lines as well as Diagonal Bet Lines).

Example Interfaces

SUBMITTING YOUR WORK
Your submission should include:
    1. An external document (MS Word or PDF).
    2. A link to your project files on GitHub.
    3. A link to your live site on a Cloud Service of your choice.

This assignment is weighted **10%** of your total mark for this course.

Late submissions:
    • 20% deducted for the first day late.
    • 10% deducted for each additional day.

External code (e.g. from the internet or other sources) can be used for student submissions within the following parameters:
    1. The code source (i.e. where you got the code and who wrote it) must be cited in your internal documentation.
    2. It encompasses a maximum of 10% of your code (any more will be considered cheating).

3. You must understand any code you use and include documentation (comments) around the code that explains its function.
4. You must get written approval from me via email.