

COMP 4021 Internet Computing

Fall 2021 Homework 1

Due Date: See Canvas

In Lab 1, you have tried out the monster and hammer games and studied the codes. In this homework, you are asked to enhance the hammer game with the following additional functions:

1. Add 3 buttons Expert, Normal and Novice to control the speed of the monster movements: Normal is the speed set in the current code, Expert doubles the speed whereas Slow halves the speed. The buttons are implemented as 3 DIVs with "yellow" background color. Clicking a button changes its color to red and set the corresponding speed. When the game is started, set the speed to Normal. Speed is changeable when the game is running.
2. Add a DIV functioning as a Start/Stop button to start or stop the game at any time. When the page is first loaded, the game should stop, the button is labelled "Start", and the monster is at the center cell. Clicking the button starts the game and changes the label to "Stop". Clicking the button stops the game, sets the game to its initial state, and changes the label to "Start".
3. Instead of using keystrokes to hit the monster, use the mouse to click the cell containing the monster.

I do not expect fancy UI. You can decide reasonable sizes and positions of the buttons. Use the code of the monster and hammer games and extend the codes to provide the above functions. You cannot use any framework or library; use plain JavaScript and HTML.

Grading Scheme:

0) Reasonable layout: 5

1) Button and actions:

- Button color: 10
- Speed change function: 20

2) Start/Stop button:

- Initial state when page is loaded: 10
- Start/Stop function and label change: 20

3) Mouse actions:

- Sound function: 5
- Monster hit and score update: 20
- Correctness under different speeds: 10