| **Homework Assignment 04** | **Assigned:** | Mon 03 OCT 2022 |
| **Extending the Breakout Game** | **Due:** | Wed 19 OCT 2022 |

Description
This assignment is a simple set of extensions to the Breakout Game built in class. The code and ten steps built in class can be found at the Mozilla Developer Network (MDN) website located at: https://developer.mozilla.org/en-US/docs/Games/Tutorials/2D_Breakout_game_pure_JavaScript

Assignment
As observed in class, this basic game to illustrate how to code JavaScript functions and actions is rudimentary and does not offer many features of a typical Breakout game of the vintage Atari brand (https://en.wikipedia.org/wiki/Breakout_(video_game)). Your task is to make modifications to the code that will enhance the look, feel, and play of the game. A few brainstormed modifications include:
- Randomize the colors of the bricks
- Randomize the bounce angle of the ball when it hits a wall, a brick, or the paddle
- Track levels and refresh the board when a level is completed
- Adjust the speed of the ball
  - Either as a user setting at the start of a game, or
  - As the levels increase, the speed of the ball increases
- Record a high score (only in the running game, not a perpetually stored version)
- Adjust the length of the paddle
  - Either as a user setting at the start of a game, or
  - As the levels increase, the length of the paddle decreases, being sure not to reduce to a level that is smaller than the ball
- Or any other adjustment that you would want to introduce

Identify as a comment in the top of your index.html file the listing of the changes you made to the core code developed in class.

To secure a passing score (85), introduce three (3) changes to the core code from class. To secure a high passing score (100), introduce five (5) changes to the core code from class. Your set of changes need not be strictly from the above list. Be creative and consider something you might not have done before. Consult the MDN website for ideas and code to assist in your implementation.

Deliverables
The only file expected to be submitted in your GitHub repository is index.html as it should contain the HTML and JavaScript code necessary to run the game. Additionally, you should have a comment included in the HTML code that describes the changes, numbered one to the total number implemented, that you made to the code.