Software Requirements for Bingo

Bingo
Created By: Chana Mindy Herszaft

Overview
This document describes the requirements for the software implementation of Bingo. This software will allow two players to play Bingo against each other. A description of the game plus the requirements of this implementation are provided below.

The game
Two players are presented with a 5x5 board that has to be filled in with letters or numbers based on the game mode. The players can choose if they would like the computer to fill out a random board for them or they can fill out the board on their own. The user clicks a button to choose a random letter/number. Each player checks if their board contains the chosen letter/number. The boxes containing that letter/number will have their back color changed to green. The first player to fill a winning set, defined as a row, column, or diagonal line of five boxes with a back color of green wins.

Software implementation
UI elements
The software will present the Bingo game with the UI elements listed below.
- Row of buttons across the top of the board that has:
    o Start button
    o Label to display game mode and status
    o Radio buttons to choose if the game mode - numbers or letters.
- A button to pick the next letter or number (the text will be based on the game mode).
- A label next to the button displaying the next letter/number.
- Two 5x5 Grid of buttons that each have:
    o Label for player 1 or 2
    o Middle box says bingo with a green back color.
    o Radio buttons above each board to choose between the computer picking the board or the player picking their board.
    o Radio buttons below each board to select if the board contains the letter or number for that round.

Game modes
There are two modes of play – (1) Board with letters (2) Board with numbers

Game Process and Rules
- The game starts when the player clicks Start. Until then all clicks on any buttons are ignored, and the game status message is "Click Start to begin the Game."
- After Start is clicked:
    o The game status message changes to "Choose game mode and Board"
    o The user should choose if they want to play a game with a board of letters or numbers.
    o Each player chooses how the board values will be assigned. Either the computer can create a random board or the player chooses the values for their board.
    o If the player is assigning values themselves then they should type in one value to each box on their board.

Software Requirements for Bingo

- Once both players boards are filled up the game status message will change to "Playing".
- The user clicks the button to pick a letter/number.
- Each player will check if their board contains the chosen letter/number.
    - If the board doesn't contain it they will select "No".
    - If the board contains the chosen letter/number the user will click "Yes" and the back color of any boxes containing that letter/number will change to Green.
- Continue picking new rounds of letters/numbers until there is a winner.
- When any player has a row, column, or diagonal with the back color Green they are the winner.
- Once there is a winner the game status changes to Win.
    - The game status message will display "Winner is:" followed by the player that won.
    - All button clicks are ignored.
- If the user clicks Start in middle of a game, then the game should interrupt and begin a new game.