SpeedTester 1.0

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Introduction

       SpeedTester is a simple and small game for Android phones. To be good in the game you have to have fast reactions, good dexterity and also good memory might help you. The goal of the game is to get as many points as possible. You gain one point every time when you press the right button. There are four buttons for playing, each of them different colour and also close and play buttons. When the button is pressed it is indicated by narrow white border around the button.

The buffer

       The program has its own class for saving the blinked buttons to an array. The size of the array has been set to 50 nodes. If there are 50 unpressed buttons in the buffer the game will end and the score is shown in the screen. The array is reset every time when the game ends. The array consists of five different numbers. Numbers 0, 1, 2 and 3 indicate the buttons that have blinked but the player has not pressed them yet. Number 5 means that there is no correct button to press because it hasn't been chosen yet. If there are no fives in the array it means that the array is full and the game will end. The game checks that the player has pressed the correct button and then changes the node's value to five (figure 1). The class keeps track of the nodes that contain the next pressable button and the last blinked button. When a new button blinks the last node will be the next node in the array unless the previous node is the last node of the array when next blink will be set on the first node of the array. When the player presses the correct button the node which contains the next pressable button will be the next node in the array and the previous node is set to value five corresponding an empty node. This way the values slide through the array and because the class tracks the first and the last values in the arrray there is no need to reorganize it.
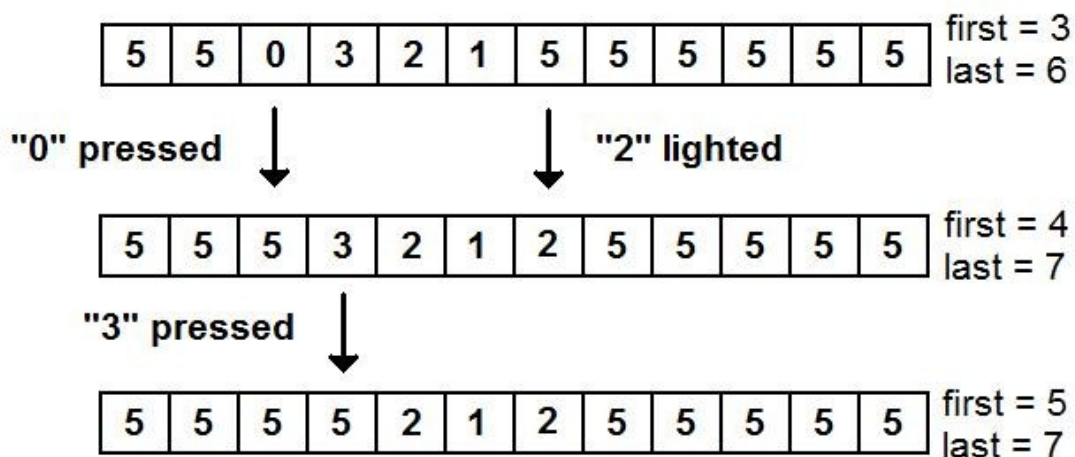

Figure 1: Changing values in the array when button blinks or is correctly pressed.

The game

Time interval between the blinks decreases all the time. The application has been made so that the delay between blinks is 0.995 times the previous delay. The first delay is set to one second. If the user is not convenient with these values he or she may easily change them in the source code and re-install the software. The next button to blink is randomly chosen so that it is never the same as the previously blinked button so the player won't ever have to press the same button twice in a row. The buttons are made so that a push is counted when you press the button. You don't have to release it in order to get a push counted as in normal clicks. The game has a thread running which controls the lights of the buttons by switching them on or off when necessary. The thread also saves new buttons to the array which works as a button buffer.

Starting and exiting the game

When user starts SpeedTester application, the program initializes the array, the buttons and the layout. When user starts a game, every button light is turned off, delay is set to 1000 milliseconds and score to zero. Every time when the application ends up in the pause state, the current game will be ended to prevent players getting better scores by cheating. When a game ends, every button light is set on and the button buffer is reset. When user exits the application none of the information is saved.