Name of the game: Brain

Short description:

There are multiple categories, each with 2 games included, that the user can play. The score is evaluated and stored for each user. There is a special section called statistics that shows users' progress over time.

How one session would work:

When the program is run, 2 things appear, “Enter user: _____” and “Add new user:_____ ”. If the correct, the already existing name is written, all data about that user is pulled from the text file previously-stored (and all new progress of the user will be written there as well). If the new user option is picked, it will create a new file with the username where all future data is stored

In both cases, the next window (main menu) will show the list of all games sorted into categories, and a statistics button which, when clicked, shows the progress chart of each category.

If one of the games is clicked, a short description of the game rules is shown and a button play is available. In case the user clicks it, the game starts.

During each game, there is a menu with restart, pause or quit (quit leads to the main menu).

The following games and categories will be available:

Memory

1) Path finding

2) Partial match

Problem-solving

3) Nanogram

4) From low to high

Focus

5) Sort

6) Color read

Language

7) Word hunt

8) Typing

1) 10 puzzles appear per session. One puzzle will be the following: for a short amount of time, a grid

(size from 6x6 to 10x10) is shown with mines on some of the places. After that, the mines get hidden, and 2 dots appear (guaranteed to be on the “safe” spots). The players' job is to connect the dots by choosing a path without any mines. If it is done successfully, the puzzle is added to the final score. Every grid is worth a different amount of points, and all the grids and the mine spots are produced at random (To make the game a bit easier, there will be at least 3 different ways to connect the dots – this will be checked with a path finding algorithm).

2) This game is timed by 1 minute, and the score is evaluated based on the number of correct answers. The way it works is that the player needs to decide is if the picture currently visible is the same, different, or partially different from the previous picture. Partially being if the shape is the same, but the color isn’t, or vice versa. The decision is made by clicking the left (no), down (partially), or right(yes) arrow key. Internally, a couple of different shapes will be stored as a 2D array, where “x” will be part of the shape, and “ “ will be an empty spot. The color of the shape will also be limited to approximately 5 colors. The choice of both will be random, but with a higher chance of getting partial or completely the same picture as before, to make the game more interesting.

3) 4 nanograms will have to be solved per one session of the game, the score is evaluated based on the time spent to solve it. Nanograms will be produced randomly, meaning at the end there won’t be a meaningful picture. On the screen there will be two buttons, one to make an x, player can put this if they want to mark where the colored square won’t be, or some temporary boundary, and one to fill the square. No mistakes will be counted, the game progresses to the next nanogram only if it is correctly solved, or the player clicked the skip button (in which case they get 0 points for that puzzle).

4) This game is timed by 1 minute, and the score is evaluated based on the number of correct answers. The game is simple, some amount of random integer number (negative included) nodes is shown on the screen, the player simply needs to click on them from the descending order. If a mistake is made, the answer is marked as incorrect and the next few numbers are shown.

5) This game is timed by 1 minute, and the score is evaluated based on the number of correct answers. There is a queue of pictures in the middle of the screen (2 different pictures only), on the left we see on the picture, on the right we see the other. The player simply needs to click the left arrow key if the picture on the left is the same as the one in front of the queue, similarly for the right key.

6) This game is timed by 1 minute, and the score is evaluated based on the number of correct answers. There is a color name written on the screen, the color that the color name is written in is what the user must choose. For example Green and on the bottom of the screen we see “Blue” “Red” ”Green” buttons. The user must choose Red as the correct answer in this case.

7) Simply a crossword puzzle, with 12 words to be found. The score is based on the amount of time needed. Words would be pulled from an online source and molded into a crossword puzzle.

8) A paragraph of text from a book would be written on the screen, as the user types the correct letters, part of the text typed will change the color. The score is based on the amount of time needed to get to the end.

This game is based on the mobile game Peak, and most of the small subgames are based on the subgames there as well.