Candy Crush ReadMe

Overview:

Our Candy Crush game is built to mimic the original game of Candy Crush. It calculates the score and allows the user to play for one minute(as the timer is of one minute). The user can swap candies on the grid to make matches of different types and lengths to increase their score. To play the game the four keys of up down right left may be used, this will allow you to move over the grid, to swap press shift and the key(left, right, down or right).

Installation:

To play the game, kindly use the help.h file submitted by us along with the original code. The submitted help.h file is different from the one provided to us, and not using the file submitted by us will result in errors while using the original game file.

Project structure:

The main file first has functions for all the candies first (about 21 types of candies in total). The main candies are 5, then their vertical and horizontal stripped version, the destroyer version and finally the disco ball.

The next three functions are for assigning candies to the grid randomly using the rand() function, making the graphic grid and then placing the graphic candies on the board according to the number assigned to them. Each of the five candies has a number assigned to it (between 1 to 5).

The next two functions (down(), right())are for checking the matches vertically and horizontally. These two functions are then used in the findMatches function, to determine if there's a match vertically horizontally, or its there an L-shape. The length for vertical or horizontal matches is determined from the down (), right() functions as the length is passed by reference. The find matches then puts a stripped candy in case of match

length of four, a disco ball in case of match length of five, and a destroyer in case of an L-shape. The variable for calculating the score is declared globally and the score is increased depending upon the type and length of match with maximum score in case of the match length of five.

To allow only legal swaps to take place a separate function has been made named isLegalmove to check that after a swap by the user is there any match being formed, if the answers true , then the function that handles the movement named moving_positions allows the swap to take place. In case it is false the function first does the swap and then reswaps back to the orignal position indicating that the move is illegal.

Whenever a match has been found, the matching candies are given a number zero and then to make the candies fall from above, to fill the upper cells with random numbers again a function named applyGravityandRefill has been made.

A separate function for disco ball activation has been made, whenever a disco ball appears on the grid, the game allows the user to swap this special candy with any candy. The candy (number at the back) with which the disco ball is swapped is then stored in a different variable and all the occurrences for that one candy are given the number zero. Finally the gravity and refill function is called to refill the grid and make candies fall from above.

The next functions are for displaying the time, score and some other text graphically. To correctly display the time and score, separate functions for each have been made and they do some calculations to get the individual digits of a number and then calls the graphic numbers accordingly.

The final function named as the Candy Crush() is so made to control the overall flow of the game, it calls the rest of the functions in a specific manner for the game to function properly.It first displays the grid with candies time and score. The main condition controlling the function is that the user still has time, as soon as one minute is complete the game ends. While the user has time the function checks if the use has pressed any key, if

yes, then it finds matches, applies gravity, and then finally displays the grid. The loop continues until there's time. After the time ends, a screen gets displayed where the player can chose to leave the game or to play again. For this purpose, a different function named exit has been created.

When you run the code, you will see a menu page. The page is all graphics and a separate function for menu, and the curtains have been made. In menu you can chose to read the rules, dive into the game or simply exit. To further facilaiate the writing, a function for text has been made in help.h where you have to enter the text size, font type and x y coordinates, and it prints the aplhabets at that place of respective coordinates.

HAPPY PLAYING!

By:

Khadija Imran(25L-2521)

Nigarish Naseem (25L-2019)