COAL PROJECT REPORT

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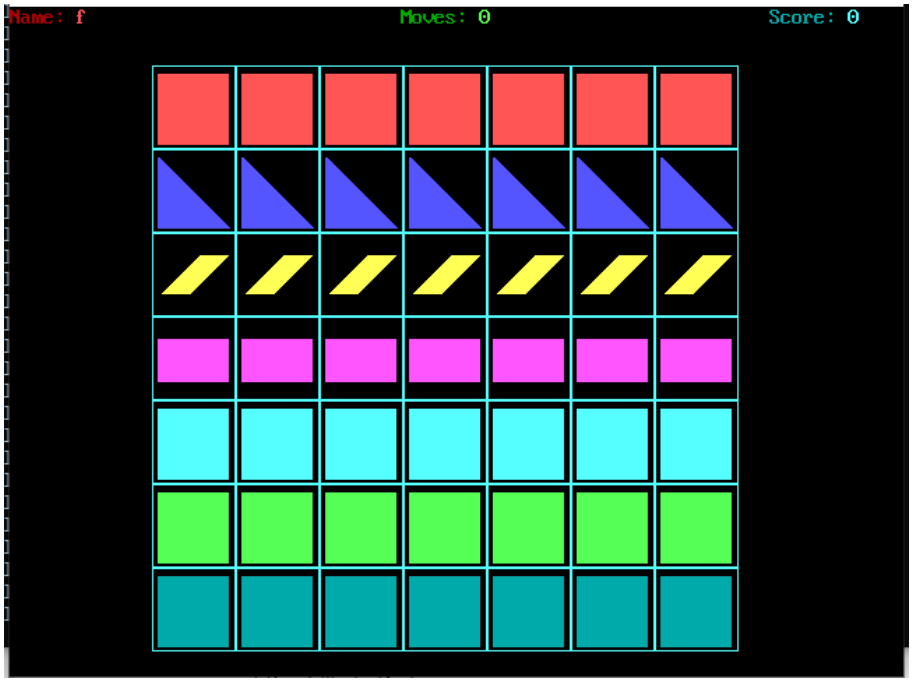
Introduction

The goal of this project was to make a game with functionality like candy crush using 16-bit assembly language. In the project we were supposed to implement horizonal and vertical crush of the candies using mouse click in-order to increment the score. Also, we were to make a candy bomb that would wipe all instances of that candy after matching it with a specific candy. There were to be multiple levels in the game.

Interrupts and Implementation

- I printed the candies using .while directive for the loop handling of printing multiple candies
  Example :-
  ; with the coordinates stored in cx and dx
  mov AH, 0ch
  mov BH, 0
  mov AL, 03h
  int 10h
- Used .while directive for printing candies pixel by pixel as well as int 10h interrupt to print in video mode
- I used a 640x480 resolution video
- Made a 7x7 grid for the game that fit in 420x420 dimensions

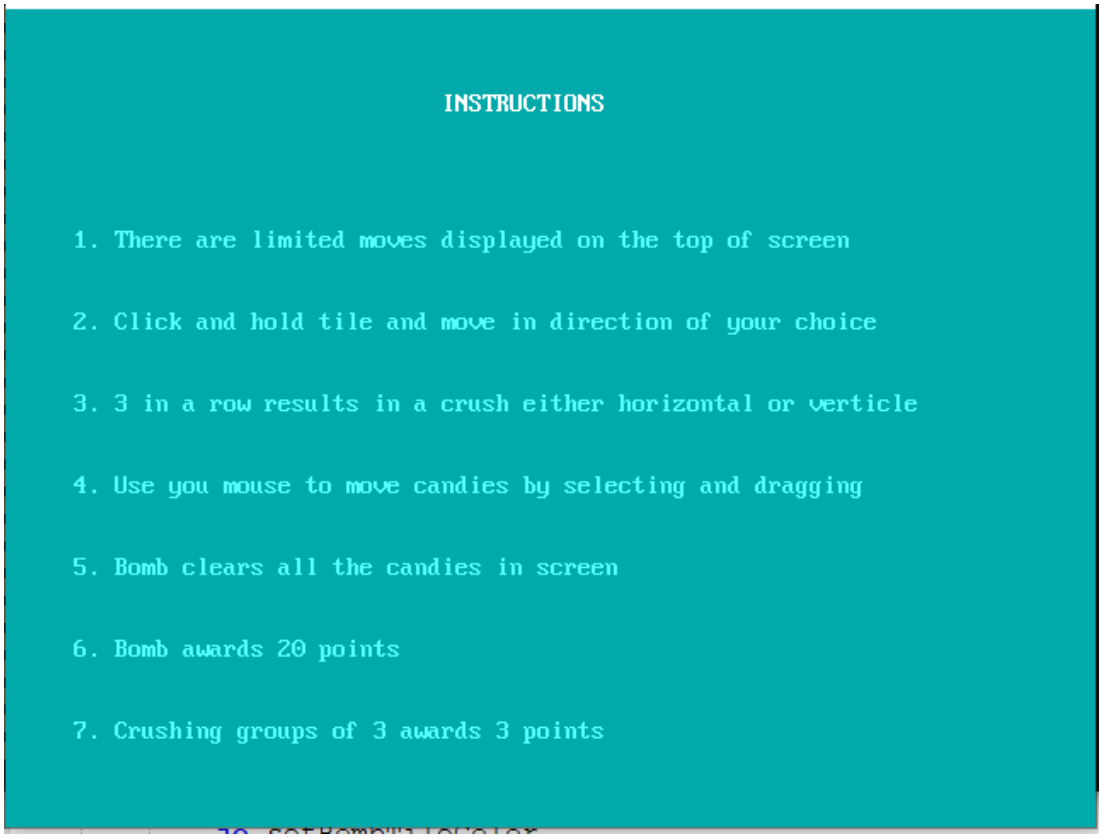


- I used the int 21h interrupt for file handling in which I wrote to the file the name entered by the user for the game
  Example:- ;writing to file the players name
  mov bx, fhandle
  mov cx, 4
  mov dx, offset playerName
  mov ah, 40h
  int 21h
- I used a function to carry out a one second delay every time it's called as a bonus feature using int 15h interrupt
  mov cx, 0Fh ; Add time delay of 1 sec
  mov dx, 4240h
  mov ah, 86h
  int 15h
- I made generic functions for printing shapes that work with an value of cx dx coordinate positioning

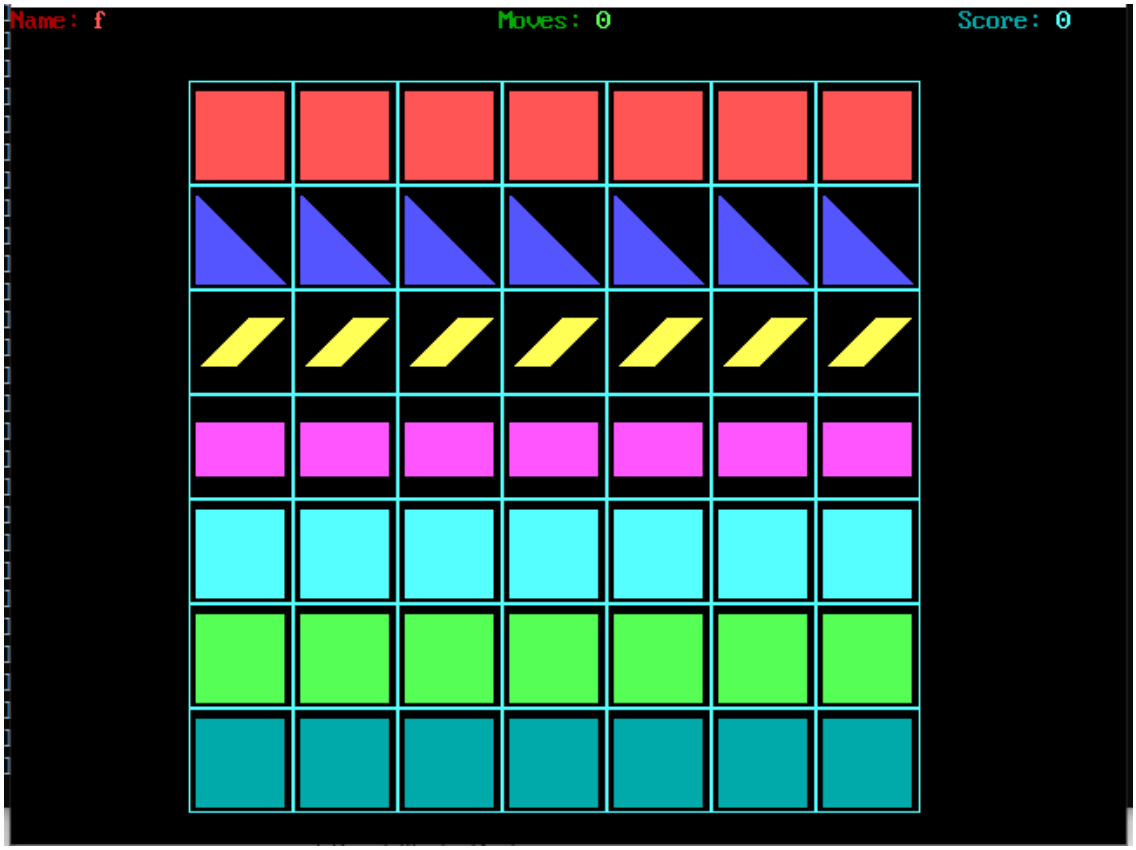
Phases Of The Game

1. Phase 1 : main page where the title of the game is displayed and asks user to enter their name

2. Phase 2: instructions page that informs the player of key rules he/she must know before playing



3. Phase 3: the game itself is displayed as well as showing name, score and moves-left on the top of screen



4. Phase 4: the end screen that display the total score earned after playing the game as well as a thank you message for playing the game.