

ECE243 FINAL PROJECT

OSU



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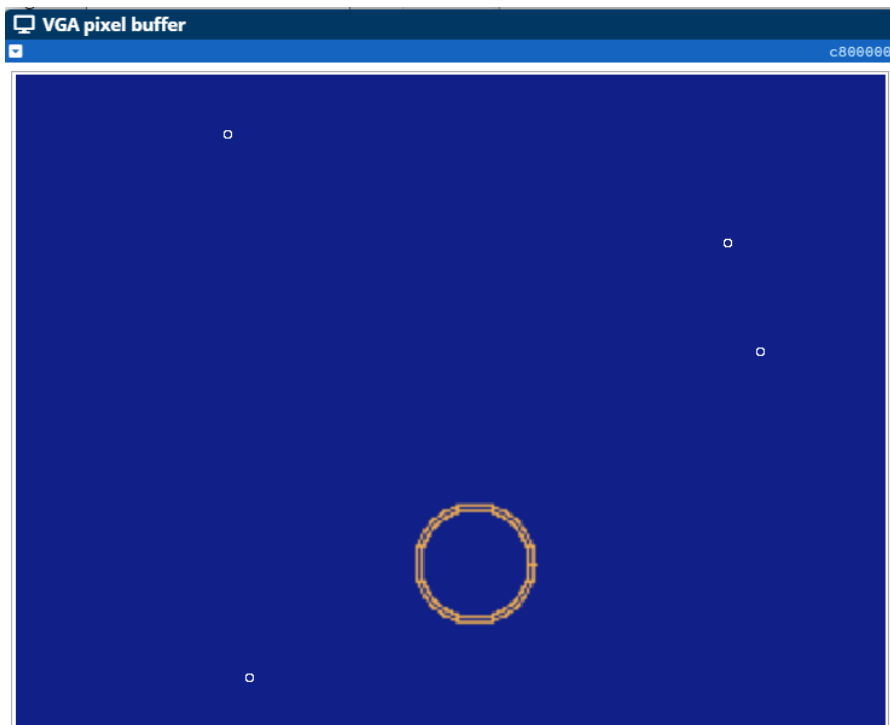
Game Description:

Overview:

The user chooses the difficulty level using keyboard inputs (which are 1,2 and 3; it defaults to level 1 if the user presses the enter key). OSU game starts and circles with random colours and random locations appear on the screen. The game lasts for 10 seconds (timer displayed on the HEX-Display), after which the final score appears on the screen.

Objective:

The user has to press the 'x' key every time the moving circle radius is the same as the stationary circle. With the increase in level, the circle moves faster and the user has to be more attentive to the location and movement of the circles.



Score:

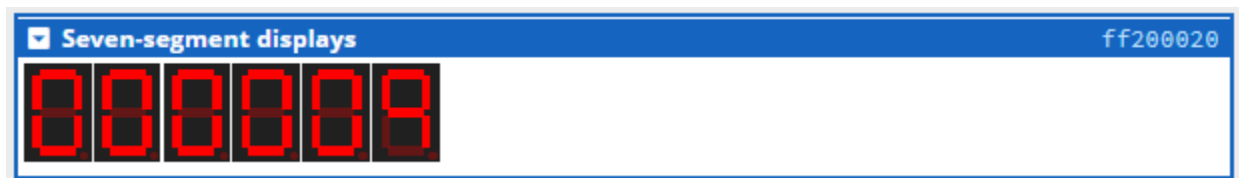
The user clicks 'x' when the bigger circle is closest to the size of the circle on the screen. The score is calculated based on the difference between the outer and inner radius of circles.

```
//calculation of score  
score = score + 20 - ABS(r_ring - r_circle);
```

```
time out: 9
Score: 6
Score: 21
time out: 8
time out: 7
time out: 6
time out: 5
time out: 4
time out: 3
time out: 2
time out: 1
time out: 0
Final score: 21
```

Special features:

We use the HEX display to show the time left to the player. Our timer starts from 10 and counts to zero when the game ends.



```
time out: 9
time out: 8
time out: 7
time out: 6
time out: 5
```

We use multiple functions to randomize, write text, clear text and draw objects like solid and empty circles on the screen.

A double buffer is used to display the circles for smooth printing and text is displayed using the standard function for text writing.

Attribution Table:

Section	Description	Chahit Uppal	Smaran
Circle Algorithm	Prints a circle of radius 20, and a ring of radius 40. The ring radius steadily decreases until it hits 0 (end of subroutine).		Done
Start Screen graphics	Start screen visuals	Done	
User Input	Wrote code for interrupts and polling		Done
Game output	Updating score and printing it	Done	