CS-278 Final Project Specification

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# Problem Definition

The program will be a functioning Pong game. It will support two players, with each player controlling their own paddle. It will also feature a scoring system which will allow multiple points to be played.

# Project Design

## Functions Used

GetAsyncKeyState: Checks the state of a given key

CreateRectRgn: Creates a rectangular region that can be used for various purposes

CreateSolidBrush: Used with FillRgn, this function enables you to fill a region with a selected color

FillRgn: Fills the selected region with the selected color using the selected brush

We also wrote two procedures to handle collision logic and move the paddles.

## Program Flow

### main

Get a handle to the current process

Load the program’s icon and cursor

Register the window class

Create the application’s main window (show message if failed)

Display a greeting message

Set up a timer

Show and draw the window

Begin message handling loop

Exit program if no more messages

### WinProc

Check for message types and take the appropriate action:

Create the window

Close the window

Check the timer

Redraw the window

When the window is redrawn:

Move the box

X position

Y position

Update paddle locations (UpdatePaddles process)

Draw the box (ball)

Draw the paddles based on new locations

Check for paddle/ball collision (BounceBall process)

If no paddle collision, bounce the ball off the edge of the playing field

Output the scoreboard

Check for any other messages

### UpdatePaddles

Check the state of each key and move paddles as appropriate

### BounceBall

Check left paddle and bounce ball if collision detected

Check right paddle and bounce ball if collision detected