

IF either player paddle touches the top or bottom of the screen and the paddle is still moving

Set the paddle speed to zero

END IF

IF the ball is at the top or bottom edge of the window

deflect in opposite direction on the y axis

END IF

IF the ball is at the left edge of the window

IF the player paddle misses the ball

then increment opponents score

reset the ball and paddle positions

serve the ball

ELSE IF the player paddle collides with the ball

IF the ball hits the top 7th of the paddle

Set the ball velocity to move diagonally up and right at a ratio of 2:1

ELSE IF the ball hits the second top 7th of the paddle

Set the ball velocity to move diagonally up and right at a ratio of 1:1

ELSE IF the ball hits the middle top 7th of the paddle

Set the ball velocity to move diagonally up and right at a ratio of 1:4

ELSE IF the ball hits the middle 7th of the paddle

Set the ball velocity to move in straight line to the right

ELSE IF the ball hits the middle bottom 7th of the paddle

Set the ball velocity to move diagonally down and right at a ratio of 1:4

ELSE IF the ball hits the second bottom 7th of the paddle

Set the ball velocity to move diagonally down and right at a ratio of 1:1

ELSE IF the ball hits the bottom 7th of the paddle

Set the ball velocity to move diagonally down and right at a ratio of 2:1

END IF

END IF

END IF

IF the ball is at the right edge of the window

IF the player paddle misses the ball

then increment opponents score

reset the ball and paddle positions

serve the ball

ELSE IF the player paddle collides with the ball

IF the ball hits the top 7th of the paddle

Set the ball velocity to move diagonally up and left at a ratio of 2:1

ELSE IF the ball hits the second top 7th of the paddle

Set the ball velocity to move diagonally up and left at a ratio of 1:1

ELSE IF the ball hits the middle top 7th of the paddle

Set the ball velocity to move diagonally up and left at a ratio of 1:4

ELSE IF the ball hits the middle 7th of the paddle

Set the ball velocity to move in straight line to the left

ELSE IF the ball hits the middle bottom 7th of the paddle

Set the ball velocity to move diagonally down and left at a ratio of 1:4

ELSE IF the ball hits the second bottom 7th of the paddle

Set the ball velocity to move diagonally down and left at a ratio of 1:1

ELSE IF the ball hits the bottom 7th of the paddle

Set the ball velocity to move diagonally down and left at a ratio of 2:1

END IF

END IF

END IF

IF there is more than one ball

IF ball one collides with ball two

Calculate the difference in position of the two balls

Calculate the angle of the difference from the centre point of the difference in position

Calculate the new velocities for the balls by multiplying the magnitude by the difference angle

Set the new velocities for the balls

Update the positions of the balls until they are no longer colliding by moving them by their new velocities

END IF

END IF