About the Game

1. Enter "Spacebar" to start the game.
2. The user player is a "Blue" coloured ball named "Buddy" .
3. The moment of Buddy is done with the help of mouse cursor. So where ever the mouse is moved to , there the Buddy will move.
4. The enemies here are the balls in "Orange" colour.
5. The moment of Enemies is Random .
6. This game is played by helping Buddy to escape from the enemy balls.
7. If Buddy hits anyone of these Enemy balls or goes outside the container within which these characters are moving about, then the game will be finished.
8. The Score will increase for the more number of time Buddy is alive.

Algorithm

1. Start the game by pressing the SpaceBar, which will trigger a variable named "IsPaused". If this variable is true, then the game is started/resumed , else the game is in paused state.  
    **if ( IsPaused ) then { GAME == START/RESUME}  
    else {GAME == PAUSED/STOPPED}**
2. But to stop the game when the ball touches either the Enemies or the border of the container, we use a counter variable with inital value '0'. If value is other than 0 , then the game is stopped. So the above expression becomes.  
   **if ( IsPaused && count ==0 ) then { GAME == START/RESUME}  
    else {GAME == PAUSED/STOPPED}**
3. As we are using HTML5 Canvas, when the game starts the characters are drawn like, Container, Enemies and Buddy ; as follows :  
     
   **// for Enemies**

**for(var i = 0; i < circles.length; i++){**

**c.fillStyle = 'hsl(' + circles[i].color + ',100%,50%)';**

**c.beginPath();  
 c.arc(circles[i].x,circles[i].y,circles[i].r,0,2\*Math.PI,false);  
 c.fill();   
 }**

**// for BUDDY/PLAYER   
c.beginPath();   
c.arc(buddy.x,buddy.y,buddy.r,0,2\*Math.PI,false);   
c.fillStyle="blue";   
c.fill();  
  
// for Background**

**c.fillStyle = 'black';**

**c.fillRect(container.x,container.y,container.width,container.height);**

4. Movement of Buddy within it's resctriction.

**if(buddy.x >= circles[i].x - circles[i].r && buddy.x <= circles[i].x + circles[i].r && buddy.y >= circles[i].y - circles[i].r && buddy.y <= circles[i].y + circles[i].r || (buddy.x + buddy.r > container.x + container.width) || (buddy.x - buddy.r < container.x)**

**|| (buddy.y + buddy.r > container.y + container.height) || (buddy.y - buddy.r < container.y) ) {**

**console.log("abc");**

**count=1;**

**document.getElementById("displayText").innerHTML="Press 'F5' or 'Ctrl+r' to restart the Game again!! Hope to beat your score ;)" ;**

**}**

**5.** Random movement of Enemies is done as follows : **if((circles[i].x + circles[i].vx + circles[i].r > container.x + container.width) || (circles[i].x - circles[i].r + circles[i].vx < container.x)){**

**circles[i].vx = - circles[i].vx;**

**}**

**if((circles[i].y + circles[i].vy + circles[i].r > container.y + container.height) || (circles[i].y - circles[i].r + circles[i].vy < container.y)){**

**circles[i].vy = - circles[i].vy;**

**}**

**circles[i].x +=circles[i].vx;**

**circles[i].y +=circles[i].vy;**

6. The movement of Buddy depends upon the movement of Mouse, so the movement of mouse should keep updating it's coordinates.

**// Mouse coordinates finding...**

**document.onmousemove = handleMouseMove;**

**function handleMouseMove(event) {**

**event = event || window.event; // IE-ism**

**if (event.pageX == null && event.clientX != null) {**

**eventDoc = (event.target && event.target.ownerDocument) || document;**

**doc = eventDoc.documentElement;**

**body = eventDoc.body;**

**event.pageX = event.clientX +**

**(doc && doc.scrollLeft || body && body.scrollLeft || 0) -**

**(doc && doc.clientLeft || body && body.clientLeft || 0);**

**event.pageY = event.clientY +**

**(doc && doc.scrollTop || body && body.scrollTop || 0) -**

**(doc && doc.clientTop || body && body.clientTop || 0 );**

**}**

**// Updating the Buddy's coordinates..**

**buddy.x = event.pageX -150 ;**

**buddy.y = event.pageY - 120;**

**}**