

Chapter 9 Projects

2. Primary Colors

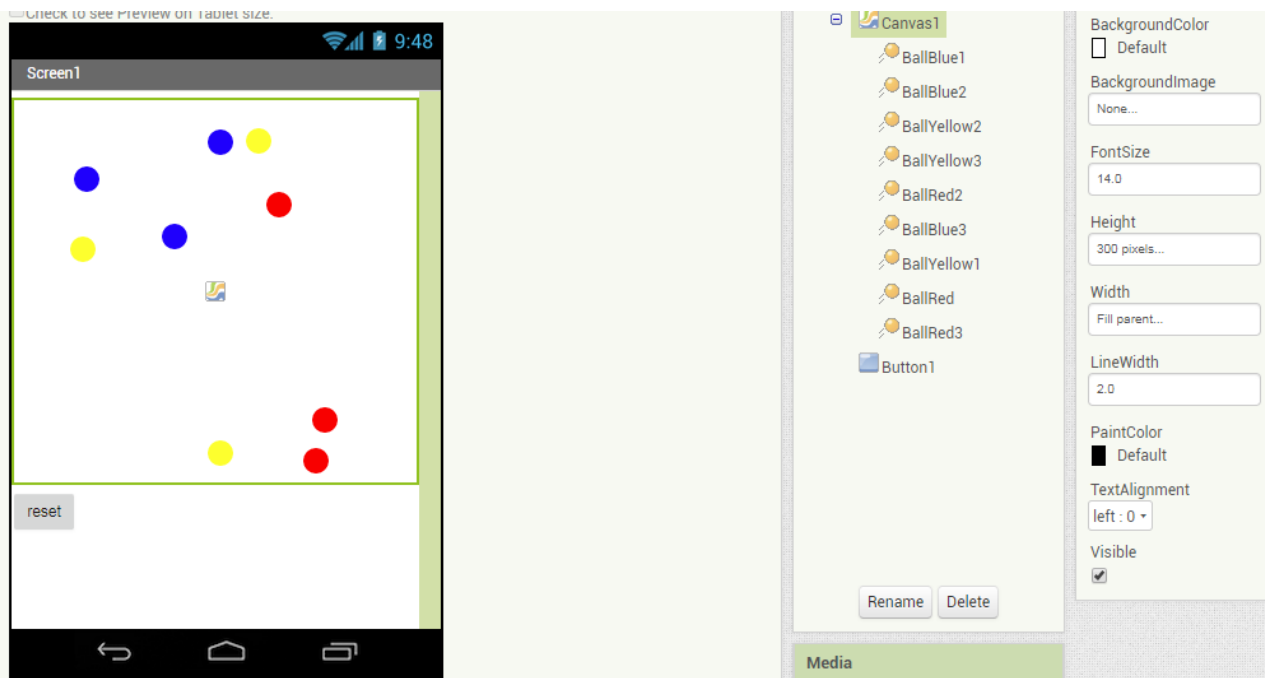
Write an application that has nine Ball sprites each with a radius of 10: three red, three blue, and three yellow.

Have the Balls bounce around a 300 x 300 pixel Canvas. (Hint: Use the EdgeReached event and the Bounce method, and set your Interval, Speed and Direction appropriately.)

Use a Clock Timer and collision detection to change the sprites to their mixed color if they collide.

- Blue and Yellow = Green,
- Red and Yellow = Orange,
- Blue and Red = Pink and so forth.

Once a ball has collided and changed color, have it drop to the bottom of the Canvas. If a sprite collides with a ball that is already mixed, take no action.



```

when BallBlue3 .CollidedWith
  other
  do
    if
      get other = BallRed
    then
      set BallBlue3 .PaintColor to
      set BallRed .PaintColor to
      set BallBlue3 .Speed to 0
      set BallRed .Speed to 0
      set BallBlue3 .Y to 300
      set BallRed .X to 300
      set BallRed .Y to 300
      set BallBlue3 .X to 300
    if
      get other = BallRed2
    then
      set BallBlue3 .PaintColor to
      set BallRed2 .PaintColor to
      set BallBlue3 .Speed to 0
      set BallRed2 .Speed to 0
      set BallBlue3 .X to 300
      set BallBlue3 .Y to 300
      set BallRed2 .X to 300
      set BallRed2 .Y to 300
    if
      get other = BallRed3
    then
      set BallBlue3 .PaintColor to
      set BallRed3 .PaintColor to
      set BallBlue3 .Speed to 0
      set BallRed3 .Speed to 0
      set BallBlue3 .X to 300
      set BallBlue3 .Y to 300
      set BallRed3 .X to 300
      set BallRed3 .Y to 300
  
```

3 Times

- when BallBlue1 .CollidedWi...
- when BallBlue2 .CollidedWi...
- when BallBlue3 .CollidedWi...

```

when ButtonReset .Click
do
  call BallRed2 .MoveTo
  x random Integer from 1 to 300
  y random Integer from 1 to 300
  set BallRed2 .PaintColor to
  set BallRed2 .Speed to 5
  call BallBlue3 .MoveTo
  x random Integer from 1 to 300
  y random Integer from 1 to 300
  set BallBlue3 .PaintColor to
  set BallBlue3 .Speed to 5
  call BallBlue1 .MoveTo
  x random Integer from 1 to 300
  y random Integer from 1 to 300
  set BallBlue1 .PaintColor to
  set BallBlue1 .Speed to 5
  call BallRed .MoveTo
  x random Integer from 1 to 300
  y random Integer from 1 to 300
  call BallRed3 .MoveTo
  x random Integer from 1 to 300
  y random Integer from 1 to 300
  set BallRed3 .PaintColor to
  set BallBlue3 .Speed to 5
  set BallRed .PaintColor to
  set BallRed .Speed to 5
  call BallYellow2 .MoveTo
  x random Integer from 1 to 300
  y random Integer from 1 to 300
  set BallYellow2 .PaintColor to
  set BallYellow2 .Speed to 5
  call BallYellow1 .MoveTo
  x random Integer from 1 to 300
  y random Integer from 1 to 300
  set BallYellow1 .PaintColor to
  set BallYellow1 .Speed to 5
  call BallYellow3 .MoveTo
  x random Integer from 1 to 300
  y random Integer from 1 to 300
  set BallYellow3 .PaintColor to
  set BallYellow3 .Speed to 5
  call BallBlue2 .MoveTo
  x random Integer from 1 to 300
  y random Integer from 1 to 300
  set BallBlue1 .PaintColor to
  set BallBlue1 .Speed to 5
  
```

9 Times

```

when BallBlue1 .EdgeReached
  edge
  do
    call BallBlue1 .Bounce
    edge get edge
  
```

3 Times

when BallYellow1 .CollidedWith

other

do

```
if (get other == BallRed)
then
  set BallYellow1 . PaintColor to yellow
  set BallRed . PaintColor to yellow
  set BallYellow1 . Speed to 0
  set BallRed . Speed to 0
  set BallYellow1 . X to 300
  set BallYellow1 . Y to 300
  set BallRed . X to 300
  set BallRed . Y to 300
```

when BallYellow1 .Collided...
when BallYellow2 .Collided...
when BallYellow3 .Collided...

```
if (get other == BallRed2)
then
  set BallYellow1 . PaintColor to yellow
  set BallRed2 . PaintColor to yellow
  set BallYellow1 . Speed to 0
  set BallRed2 . Speed to 0
  set BallYellow1 . X to 300
  set BallYellow1 . Y to 300
  set BallRed2 . X to 300
  set BallRed2 . Y to 300
```

```
if (get other == BallRed3)
then
  set BallYellow1 . PaintColor to yellow
  set BallRed3 . PaintColor to yellow
  set BallYellow1 . Speed to 0
  set BallRed3 . Speed to 0
  set BallYellow1 . X to 300
  set BallYellow1 . Y to 300
  set BallRed3 . X to 300
  set BallRed3 . Y to 300
```

```
if (get other == BallBlue1)
then
  set BallYellow1 . PaintColor to green
  set BallBlue1 . PaintColor to green
  set BallYellow1 . Speed to 0
  set BallBlue1 . Speed to 0
  set BallYellow1 . X to 300
  set BallYellow1 . Y to 300
  set BallBlue1 . X to 300
  set BallBlue1 . Y to 2
```

```
if (get other == BallBlue2)
then
  set BallYellow1 . PaintColor to green
  set BallBlue2 . PaintColor to green
  set BallYellow1 . Speed to 0
  set BallBlue2 . Speed to 0
  set BallYellow1 . X to 300
  set BallYellow1 . Y to 300
  set BallBlue2 . X to 300
  set BallBlue2 . Y to 300
```

```
if (get other == BallBlue3)
then
  set BallYellow1 . PaintColor to green
  set BallBlue3 . PaintColor to green
  set BallYellow1 . Speed to 0
  set BallBlue3 . Speed to 0
  set BallYellow1 . X to 300
  set BallYellow1 . Y to 300
  set BallBlue3 . X to 300
  set BallBlue3 . Y to 300
```