

More Ways to Die

Ignoring Sides

We will add the ability to ignore different sides of the screen when the ball bounces.

If the ball hits a side that is ignored, it will disappear. If the side is not ignored, it bounces off it.

The game controller will draw a white line on every side that the ball bounces off

In our normal level, you will see a white square surrounding the screen

All sides are bounced

If we ignore the bottom, there will be lines on all sides except the bottom

This lets the player know when a ball will bounce and when it will go through and die

Instance Variables

The game controller will have 4 instance variables, one for each side

It will also have a paint to paint the lines for the sides

```
bool ignoreTop=false;    // go through top of screen instead of bouncing off it
bool ignoreBottom=false;
bool ignoreLeft=false;
bool ignoreRight=false;
Paint paint = Paint();    // paint the lines showing sides not ignored
```

We now have something to put in our render() method

Try and add the code for drawing the lines yourself first.

Render

```
void render(Canvas c) {  
    if (state == GameState.LAUNCHING || state == GameState.PLAYING) {  
        // draw lines showing which sides are ignored  
        if (!ignoreTop) {  
            c.drawLine(Offset(0.0, 1.0), Offset(sizeX, 1.0), paint);  
        }  
        if (!ignoreBottom) {  
            c.drawLine(Offset(0.0, sizeY), Offset(sizeX, sizeY), paint);  
        }  
        if (!ignoreLeft) {  
            c.drawLine(Offset(1.0, 0.0), Offset(1.0, sizeY), paint);  
        }  
        if (!ignoreRight) {  
            c.drawLine(Offset(sizeX, 0.0), Offset(sizeX, sizeY), paint);  
        }  
    }  
}
```

Constructor

We set up the paint object for drawing the lines in the constructor.

```
// constructor  
GamePlay(this.game, ) : super() {  
    paint.color = Colors.white;  
    paint.strokeWidth = 1;  
    paint.style = PaintingStyle.stroke;  
}
```

And finally, when creating a ball from the launcher, we copy in the ignore values to the ball. We do it in checkLaunch() where we have the ball object

```
launched = true;    // found a bouncing one  
// set the bounce on edge properties of the ball  
c.ignoreTop = ignoreTop;  
c.ignoreBottom = ignoreBottom;  
c.ignoreLeft = ignoreLeft;  
c.ignoreRight = ignoreRight;
```


Add the New Feature

When we want a side ignored, we do it when making a new level

In our makeLevel() method, we can add this line.

```
gp.ignoreBottom = true;
```

Try it out.

You could use this feature to make levels more difficult. If you want the player to have to have a good aim, ignore all the sides and don't have an aiming block. They will have to set up the ball launches well to get all the blocks.

Next time we will add different levels to the game.

The code is here

https://github.com/shawnlg/flutter_ball/tree/20_sides