**Lab Goal :**   This lab was designed to teach you more inheritance and object oriented programming while learning more about how to write a very simple game.

Lab Description :   Now that Block, Ball, and Paddle have all been tested numerous times, we can put them all together to make the Ping Pong Game.   The hardest part of the game is getting the paddles to hit the ball. I am giving you some logic to make the Ball hit the left paddle. You must then create the logic to make the Ball hit the right paddle.   You will use `Pong.java` to write the final game.

Basic logic to see if the Ball collides with the left Paddle

```
if(  (ball's x <=  left paddle's x +left paddle's width+abs(ball x Spd)
      &&
      ( balls's y >= left paddle's y &&
      balls's y <= left paddle's y + left paddle's height  ||
      ball's y + ball's height >= left paddle's y &&
      ball's y + ball's height  < left paddle's y + paddle's height )  )
{
  if(  balls's x   <=   left paddle's x +left paddle's width – abs(ball x Spd )
      set Y speed to negative of current speed
  else
      set X speed to negative of current speed
}
```



```
PONG
                                                rightScore = 1
                                                leftScore = 5
```
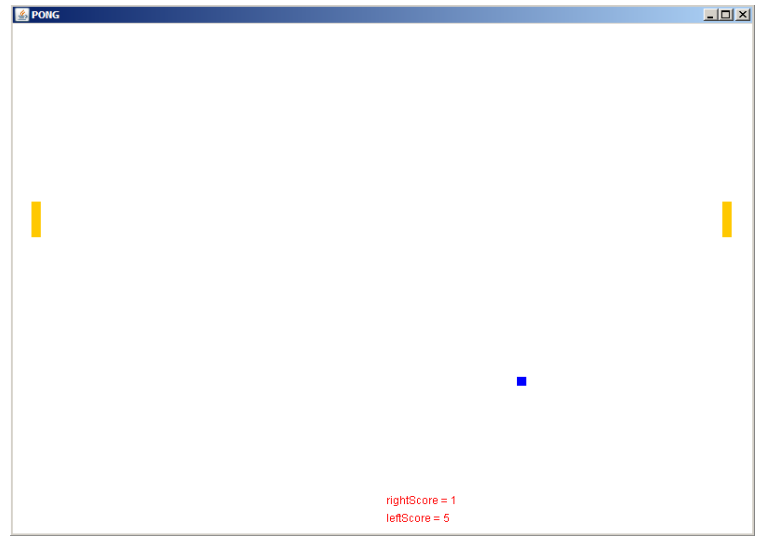
PONG GAME EXTENSIONS

1. Open the BlinkyBall.java file and write the code for BlinkyBall. BlinkyBall will change colors every time it moves. You must override some methods and make super calls.

2. Open the SpeedUpBall.java file and write the code for SpeedUpBall.   SpeedUpBall will speed up every time it collides with a wall or a paddle. You must override some methods and make super calls.

3. Create a new Ball named InvisibleBall that will turn invisible randomnly.   At random times, it will turn invisible for random durations of time.