import java.awt.\*;

import java.awt.event.\*;

import javax.swing.\*;

public class BrickBreaker1 extends JPanel implements KeyListener,ActionListener,Runnable

{

// movement keys..

static boolean right = false;

static boolean left = false;

// ..............

// variables declaration for ball.................................

int ballx = 160;

int bally = 218;

// variables declaration for ball.................................

// ===============================================================

// variables declaration for bat..................................

int batx = 160;

int baty = 245;

// variables declaration for bat..................................

// ===============================================================

// variables declaration for brick...............................

int brickx = 70;

int bricky = 50;

int brickBreadth = 30;

int brickHeight = 20;

// variables declaration for brick...............................

// ===============================================================

// declaring ball, paddle,bricks

Rectangle Ball = new Rectangle(ballx, bally, 5, 5);

Rectangle Bat = new Rectangle(batx, baty, 40, 5);

// Rectangle Brick;// = new Rectangle(brickx, bricky, 30, 10);

Rectangle[] Brick = new Rectangle[12];

//reverses......==>

int movex = -1;

int movey = -1;

boolean ballFallDown = false;

boolean bricksOver = false;

int count = 0;

String status;

BrickBreaker1()

{

}

public static void main(String[] args)

{

JFrame frame = new JFrame();

BrickBreaker1 game = new BrickBreaker1();

JButton button = new JButton("restart");

frame.setSize(350, 450);

frame.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

frame.add(game);

frame.add(button, BorderLayout.SOUTH);

frame.setLocationRelativeTo(null);

frame.setResizable(false);

frame.setVisible(true);

button.addActionListener(game);

game.addKeyListener(game);

game.setFocusable(true);

Thread t = new Thread(game);

t.start();

}

// declaring ball, paddle,bricks

public void paint(Graphics g)

{

g.setColor(Color.LIGHT\_GRAY);

g.fillRect(0, 0, 350, 450);

g.setColor(Color.blue);

g.fillOval(Ball.x, Ball.y, Ball.width, Ball.height);

g.setColor(Color.green);

g.fill3DRect(Bat.x, Bat.y, Bat.width, Bat.height, true);

g.setColor(Color.GRAY);

g.fillRect(0, 251, 450, 200);

g.setColor(Color.red);

g.drawRect(0, 0, 343, 250);

for (int i = 0; i < Brick.length; i++)

{

if (Brick[i] != null)

{

g.fill3DRect(Brick[i].x,Brick[i].y,Brick[i].width,Brick[i].height,true);

}

}

if (ballFallDown == true || bricksOver == true) {

Font f = new Font("Arial", Font.BOLD, 20);

g.setFont(f);

g.drawString(status, 70, 120);

ballFallDown = false;

bricksOver = false;

}

}

// /...Game Loop...................

// /////////////////// When ball strikes borders......... it

public void run() {

// //////////// =====Creating bricks for the game===>.....

createBricks();

// ===========BRICKS created for the game new ready to use===

// ====================================================

// == ball reverses when touches the brick=======

//ballFallDown == false && bricksOver == false

while (true) {

// if(gameOver == true){return;}

for (int i = 0; i < Brick.length; i++) {

if (Brick[i] != null) {

if (Brick[i].intersects(Ball)) {

Brick[i] = null;

// movex = -movex;

movey = -movey;

count++;

}// end of 2nd if..

}// end of 1st if..

}// end of for loop..

// /////////// =================================

if (count == Brick.length) {// check if ball hits all bricks

bricksOver = true;

status = "YOU WON THE GAME";

repaint();

}

// /////////// =================================

else

{

repaint();

Ball.x += movex;

Ball.y += movey;

}

if (left == true) {

Bat.x -= 3;

right = false;

}

if (right == true) {

Bat.x += 3;

left = false;

}

if (Bat.x <= 4) {

Bat.x = 4;

} else if (Bat.x >= 298) {

Bat.x = 298;

}

// /===== Ball reverses when strikes the bat

if (Ball.intersects(Bat)) {

movey = -movey;

// if(Ball.y + Ball.width >=Bat.y)

}

// //=====================================

// ....ball reverses when touches left and right boundary

if (Ball.x <= 0 || Ball.x + Ball.height >= 343) {

movex = -movex;

}// if ends here

if (Ball.y <= 0) {// ////////////////|| bally + Ball.height >= 250

movey = -movey;

}// if ends here.....

if (Ball.y >= 250) {// when ball falls below bat game is over...

ballFallDown = true;

status = "YOU LOST THE GAME";

repaint();

System.exit(0);

// System.out.print("game");

}

try {

Thread.sleep(10);

} catch (Exception ex) {

}// try catch ends here

}// while loop ends here

}

// loop ends here

// ///////..... HANDLING KEY EVENTS................//

@Override

public void keyPressed(KeyEvent e) {

int keyCode = e.getKeyCode();

if (keyCode == KeyEvent.VK\_LEFT)

{

left = true;

// System.out.print("left");

}

if (keyCode == KeyEvent.VK\_RIGHT)

{

right = true;

// System.out.print("right");

}

}

@Override

public void keyReleased(KeyEvent e)

{

int keyCode = e.getKeyCode();

if (keyCode == KeyEvent.VK\_LEFT)

{

left = false;

}

if (keyCode == KeyEvent.VK\_RIGHT)

{

right = false;

}

}

@Override

public void keyTyped(KeyEvent arg0)

{

}

@Override

public void actionPerformed(ActionEvent e)

{

String str = e.getActionCommand();

if (str.equals("restart"))

{

this.restart();

}

}

public void restart() {

requestFocus(true);

initializeVariables();

createBricks();

repaint();

}

public void initializeVariables(){

// ..............

// variables declaration for ball.................................

ballx = 160;

bally = 218;

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// declaring ball, paddle,bricks

Ball = new Rectangle(ballx, bally, 5, 5);

Bat = new Rectangle(batx, baty, 40, 5);

// Rectangle Brick;// = new Rectangle(brickx, bricky, 30, 10);

Brick = new Rectangle[12];

movex = -1;

ballFallDown = false;

bricksOver = false;

count = 0;

status = null;

}

public void createBricks()

{

// //////////// =====Creating bricks for the game===>.....

/\*

\* creating bricks again because this for loop is out of while loop in

\* run method

\*/

for (int i = 0; i < Brick.length; i++) {

Brick[i] = new Rectangle(brickx, bricky, brickBreadth, brickHeight);

if (i == 5)

{

brickx = 70;

bricky = (bricky + brickHeight + 2);

}

if (i == 9) {

brickx = 100;

bricky = (bricky + brickHeight + 2);

}

brickx += (brickBreadth+1);

}

}

}