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package pFarbTausch;
import java.awt.*;
import javax.swing.JOptionPane;

private void BEndeActionPerformed(java.awt.event.ActionEvent evt) {
    System.exit(0);
}

private void BStartActionPerformed(java.awt.event.ActionEvent evt) {
    fuelleZufallMitGarantie();
    zeichne();
}

private void jPanellMouseClicked(java.awt.event.MouseEvent evt) {
    int mx=evt.getX();
    int my=evt.getY();
    int xK=mx/breite;
    int yK=my/breite;
    for (int xi=-1; xi<=1; xi=xi+1)
    for (int yi=-1; yi<=1; yi=yi+1)
    {
        if (xK+xi>=0 && xK+xi<=10 && yK+yi>=0 && yK+yi<=10)
        {
            if (feld[xK+xi][yK+yi]==0)
            {
                feld[xK+xi][yK+yi]=1;
            }
            else
            {
                feld[xK+xi][yK+yi]=0;
            }
        }
    }
    zeichne();
    if (pruefung())
    {
        JOptionPane.showMessageDialog(this, "geschafft!");
    }
}

private void zeichne()
{
    Graphics g=jPanell.getGraphics();

    for (int x=0; x<=10; x=x+1)
    for (int y=0; y<=10; y=y+1)
    {
        if (feld[x][y]==0)
        {
            g.setColor(Color.green);
        }
        else
        {
            g.setColor(Color.red);
        }
        g.fillRect(x*breite, y*breite, breite, breite);
    }

    g.setColor(Color.black);
    for (int x=0; x<=11; x=x+1)

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    for (int y=0; y<=11; y=y+1)
    {
        g.drawLine(0, y*breite, 11*breite, y*breite);
        g.drawLine(x*breite, 0, x*breite, 11*breite);
    }
}

private void fuelleZufall()
{
    for (int x=0; x<=10; x=x+1)
    for (int y=0; y<=10; y=y+1)
    {
        feld[x][y]=(int) (Math.random()*2);
    }
}

private void fuelleZufallMitGarantie()
{
    for (int x=0; x<=10; x=x+1)
    for (int y=0; y<=10; y=y+1)
    {
        feld[x][y]=0;
    }
    for (int i=0; i<100; i=i+1)
    {
        int xK=(int) (Math.random()*11);
        int yK=(int) (Math.random()*11);
        for (int xi=-1; xi<=1; xi=xi+1)
        for (int yi=-1; yi<=1; yi=yi+1)
        {
            if (xK+xi>=0 && xK+xi<=10 && yK+yi>=0 && yK+yi<=10)
            {
                if (feld[xK+xi][yK+yi]==0)
                {
                    feld[xK+xi][yK+yi]=1;
                }
                else
                {
                    feld[xK+xi][yK+yi]=0;
                }
            }
        }
    }
}

private boolean pruefung()
{
    boolean fertig=true;
    for (int x=0; x<=10; x=x+1)
    for (int y=0; y<=10; y=y+1)
    {
        if (feld[x][y]==0) fertig=false;
    }
    return fertig;
}

int breite=20;
int[][] feld=new int[11][11];

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