平成23年度基盤システム演習A第8回レポート

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1　オブジェクト指向

Drum クラスのフィールド

型	フィールド名	内容
boolean	running	ドラムの回転状態
long	sleeptime	スレッドの停止時間
String [ ]	drum	ドラムの絵の配列

Drum クラスのメソッド

戻り値の型	メソッド名	引数	機能
void	run		スレッドの処理
void	rollStart		ドラムの回転を開始
void	rollStop		ドラムの回転を停止
void	drumRepaint	int i	ドラムの絵を再描画

SlotMachine クラスのフィールド

型	フィールド名	内容

SlotMachine クラスのメソッド

戻り値の型	メソッド名	引数	機能

2 Drum

```
//Drum.java
import java.awt.event.*;
import javax.swing.*;
import java.awt.*;

public class Drum extends JPanel implements Runnable {
    protected boolean running;
    String [] drum;
    long sleeptime;
    JLabel l1, l2, l3;

    public Drum( String [] drum, long sleeptime ) {
        this.drum      = drum;
        this.sleeptime = sleeptime;

        l1 = new JLabel( drum[0] );
        l1.setFont( new Font( "SanSerif", Font.PLAIN, 70) );
        l2 = new JLabel( drum[1] );
        l2.setFont( new Font( "SanSerif", Font.PLAIN, 70) );
        l3 = new JLabel( drum[2] );
        l3.setFont( new Font( "SanSerif", Font.PLAIN, 70) );
        setLayout( new GridLayout( 3, 1, 20, 10 ) );
        add( l1 );
        add( l2 );
        add( l3 );
    }

    public void run() {
        for( int i = 1; running; i++ ) {
            if( i > 19 ) {
                i = 1;
            }

            drumRepaint( i );

            try {
                Thread.sleep( sleeptime );
            }
            catch( InterruptedException ie ) {
                ie.printStackTrace();
            }
        }
    }
```

```
    void rollStart() {
        if( running == false ) {
            running = true;
            Thread t = new Thread( this );
            t.start();
        }
    }

    void rollStop() {
        running = false;
    }

    private void drumRepaint( int i ) {
        l1.setText( drum[i-1] );
        l2.setText( drum[ i ] );
        l3.setText( drum[i+1] );
    }
}
```

3 SlotMachine.java

```
//SlotMachine.java
import java.awt.event.*;
import javax.swing.*;
import java.awt.*;

public class SlotMachine extends JFrame implements ActionListener {
    Drum d1, d2, d3;

    SlotMachine() {
        super( "SlotMachine" );

        String [][] picture = {{"◎", "■", "×", "☆", "☆", "※", "△", "◎", "樽", "△",
                                "■", "×", "◎", "樽", "※", "■", "※", "△", "×", "7", "
☆"},
                               {"■", "樽", "◎", "×", "△", "※", "☆", "※", "△", "☆",
                                "×", "樽", "◎", "☆", "△", "■", "×", "◎", "■", "7", "
※"},
                               {"※", "◎", "△", "×", "■", "△", "×", "☆", "×", "◎",
                                "樽", "■", "※", "☆", "■", "☆", "※", "△", "◎", "7", "
樽"}};

        Container myContainer = getContentPane();
        JPanel  p1 = new JPanel( new FlowLayout( FlowLayout.CENTER, 10, 10 ) );
        JButton b1 = new JButton( " LEFT " );
        JButton b2 = new JButton( "CENTER" );
```

```
    JButton b3 = new JButton( " RIGHT " );
    p1.add( b1 );
    p1.add( b2 );
    p1.add( b3 );

    JPanel p2 = new JPanel( new FlowLayout( FlowLayout.CENTER, 20, 10 ) );
    d1        = new Drum( picture[0], 52 );
    d2        = new Drum( picture[1], 50 );
    d3        = new Drum( picture[2], 48 );
    p2.add( d1 );
    p2.add( d2 );
    p2.add( d3 );

    myContainer.add( p1, BorderLayout.SOUTH  );
    myContainer.add( p2, BorderLayout.CENTER );
    pack();
    setVisible( true );

    b1.addActionListener( this );
    b1.setActionCommand("B1");
    b2.addActionListener( this );
    b2.setActionCommand("B2");
    b3.addActionListener( this );
    b3.setActionCommand("B3");

    addWindowListener( new WinAdapter() );
}

public void actionPerformed( ActionEvent ae ) {
    String cmd = ae.getActionCommand();

    if( d1.running == false && d2.running == false && d3.running == false ) {
        d1.rollStart();
        d2.rollStart();
        d3.rollStart();
    }else {
        if( cmd == "B1" ) {
            d1.rollStop();
        }
        else if( cmd == "B2" ) {
            d2.rollStop();
        }
        else if( cmd == "B3" ) {
            d3.rollStop();
        }
    }
```

```
    }

    public static void main( String [] args ) {
        SlotMachine p0 = new SlotMachine();
    }
}
```

4 winAdapter.java

```
//WinAdapter.java
import java.awt.event.*;

public class WinAdapter extends WindowAdapter {
    public void windowClosing( WindowEvent we ) {
        System.exit( 0 );
    }
}
```