КИЇВСЬКИЙ НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ

ІМЕНІ ТАРАСА ШЕВЧЕНКА

Кафедра інтелектуальних та інформаційних систем

Лабораторна робота № 3

з дисципліни

“ Технологія створення програмних продуктів ”

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Нижче показан результат. Код:

package src;

import java.awt.EventQueue;

import javax.swing.JFrame;

import javax.swing.JButton;

import javax.swing.JLabel;

import javax.swing.JToolBar;

import javax.swing.JTextField;

import javax.swing.JTabbedPane;

import javax.swing.JTable;

import javax.swing.table.DefaultTableModel;

import java.awt.event.ActionListener;

import java.awt.event.MouseListener;

import java.awt.event.ActionEvent;

import javax.swing.SwingConstants;

import java.awt.Color;

import java.awt.Dimension;

import java.awt.Font;

import java.awt.event.MouseAdapter;

import java.awt.event.MouseEvent;

import javax.swing.JScrollPane;

import javax.swing.ListSelectionModel;

import javax.swing.ScrollPaneConstants;

public class FrameGUI {

private JFrame frame;

private JTextField textField;

private JTable table\_1;

private JTable table;

private Student [] students = new Student[10];

private int size;

private Student [] gStudent = new Student[10];

/\*\*

\* Launch the application.

\*/

public static void main(String[] args) {

EventQueue.invokeLater(new Runnable() {

public void run() {

try {

FrameGUI window = new FrameGUI();

window.frame.setVisible(true);

} catch (Exception e) {

e.printStackTrace();

}

}

});

}

/\*\*

\* Create the application.

\*/

public FrameGUI() {

initialize();

}

/\*\*

\* Initialize the contents of the frame.

\*/

private void initialize() {

frame = new JFrame();

frame.getContentPane().addMouseListener(new MouseAdapter() {

@Override

public void mouseEntered(MouseEvent e) {

int r = (int)(Math.random() \* 1000) % 256, g = (int)(Math.random() \* 1000 ) % 256, b = (int)(Math.random() \* 1000) % 256;

frame.getContentPane().setBackground(new Color(r, g, b));

}

});

frame.getContentPane().setBackground(Color.GRAY);

frame.setBounds(100, 100, 544, 507);

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

frame.getContentPane().setLayout(null);

JButton btnNewButton = new JButton("\u0412\u044B\u0445\u043E\u0434");

btnNewButton.addMouseListener(new MouseAdapter() {

@Override

public void mouseEntered(MouseEvent e) {

int x = (int) (Math.random()\*500+50);

int y = (int) (Math.random()\*500+50);

int r = (int) (Math.random()\*1000 % 256);

int g = (int) (Math.random()\*1000% 256);

int b = (int) (Math.random()\*1000% 256);

btnNewButton.setBackground(new Color(r,g,b));

btnNewButton.setLocation(x, y);

}

@Override

public void mouseClicked(MouseEvent arg0) {

System.exit(0);

}

});

btnNewButton.setFont(new Font("Corbel", Font.BOLD, 11));

btnNewButton.setForeground(new Color(0, 0, 0));

btnNewButton.setBackground(new Color(204, 0, 0));

btnNewButton.addActionListener(new ActionListener() {

public void actionPerformed(ActionEvent e) {

}

});

btnNewButton.setBounds(10, 400, 89, 23);

frame.getContentPane().add(btnNewButton);

JButton btnNewButton\_1 = new JButton("\u0412\u0432\u043E\u0434 \u0434\u0430\u043D\u043D\u044B\u0445");

btnNewButton\_1.addActionListener(new ActionListener() {

public void actionPerformed(ActionEvent e) {

}

});

btnNewButton\_1.addMouseListener(new MouseAdapter() {

@Override

public void mouseClicked(MouseEvent arg0) {

for(int i = 0; i< size; i++) {

int [] marks = {

Integer.parseInt(table.getValueAt(i, 4).toString()),

Integer.parseInt(table.getValueAt(i, 5).toString()),

Integer.parseInt(table.getValueAt(i, 6).toString()),

Integer.parseInt(table.getValueAt(i, 7).toString()),

Integer.parseInt(table.getValueAt(i, 8).toString())

};

students[i] = new Student(

table.getValueAt(i, 1).toString(),

Integer.parseInt(table.getValueAt(i, 2).toString()),

Integer.parseInt(table.getValueAt(i, 3).toString()),marks

);

}

}

});

btnNewButton\_1.setBackground(new Color(102, 51, 153));

btnNewButton\_1.setFont(new Font("Corbel", Font.BOLD, 11));

btnNewButton\_1.setBounds(10, 173, 114, 23);

frame.getContentPane().add(btnNewButton\_1);

JButton btnNewButton\_2 = new JButton("\u0427\u0442\u043E-\u0442\u043E");

btnNewButton\_2.addMouseListener(new MouseAdapter() {

@Override

public void mouseClicked(MouseEvent e) {

int help = 0;

boolean flag;

for(int i = 0; i < size; i++) {

flag = true;

for(int mark : students[i].marks) {

if(mark < 3 )

flag = false;

}

if(flag) {

gStudent[help] = students[i];

help++;

}

}

String [] [] st = new String[help][9];

for(int i =0; i< help; i++) {

st [i][0] = Integer.toString(i+1);

st [i][1] = gStudent[i].FIO;

st [i][2] = Integer.toString(gStudent[i].byear);

st [i][3] = Integer.toString(gStudent[i].syear);

st [i][4] = Integer.toString(gStudent[i].marks[0]);

st [i][5] = Integer.toString(gStudent[i].marks[1]);

st [i][6] = Integer.toString(gStudent[i].marks[2]);

st [i][7] = Integer.toString(gStudent[i].marks[3]);

st [i][8] = Integer.toString(gStudent[i].marks[4]);

}

table\_1.setModel(new DefaultTableModel(st,

new String[] {

"\u041D\u043E\u043C\u0435\u0440", "\u0424\u0418\u041E", "\u0413\u0420", "\u0413\u041F", "\u041B\_\u0410", "\u041C\_\u0410", "\u0418\u041D\u0424", "\u0424\u0418\u0417\u0418\u041A\u0410", "\u0424\u0418\u0417\_\u0420\u0410"

}

));

}

});

btnNewButton\_2.setFont(new Font("Corbel", Font.BOLD, 11));

btnNewButton\_2.setBackground(new Color(102, 51, 153));

btnNewButton\_2.addActionListener(new ActionListener() {

public void actionPerformed(ActionEvent e) {

}

});

btnNewButton\_2.setBounds(10, 207, 114, 23);

frame.getContentPane().add(btnNewButton\_2);

JButton btnNewButton\_3 = new JButton("\u0420\u0430\u0437\u043C\u0435\u0440\u043D\u043E\u0441\u0442\u044C");

btnNewButton\_3.addMouseListener(new MouseAdapter() {

@Override

public void mouseClicked(MouseEvent arg0) {

size = Integer.parseInt(textField.getText());

String [] [] st = new String [size] [9];

for(int i = 0; i < size; i++) {

st[i][0] = Integer.toString(i+1);

for(int j = 1; j < 9; j++)

st[i][j] = null;

}

table.setModel(new DefaultTableModel(

st ,

new String[] {

"\u041D\u043E\u043C\u0435\u0440", "\u0424\u0418\u041E", "\u0413\u0420", "\u0413\u041F", "\u041B\_\u0410", "\u041C\_\u0410", "\u0418\u041D\u0424", "\u0424\u0418\u0417\u0418\u041A\u0410", "\u0424\u0418\u0417\_\u0420\u0410"

}

));

table.getColumnModel().getColumn(7).setMinWidth(46);

}

});

btnNewButton\_3.setBackground(new Color(102, 51, 153));

btnNewButton\_3.addActionListener(new ActionListener() {

public void actionPerformed(ActionEvent e) {

}

});

btnNewButton\_3.setForeground(new Color(0, 0, 0));

btnNewButton\_3.setFont(new Font("Corbel", Font.BOLD, 11));

btnNewButton\_3.setBounds(10, 139, 114, 23);

frame.getContentPane().add(btnNewButton\_3);

JLabel lblNewLabel = new JLabel("\u041A\u043E\u043B-\u0432\u043E \u0441\u0442\u0443\u0434\u0435\u043D\u0442\u043E\u0432");

lblNewLabel.setBackground(new Color(0, 0, 0));

lblNewLabel.setBounds(10, 42, 103, 23);

frame.getContentPane().add(lblNewLabel);

textField = new JTextField();

textField.setBounds(118, 43, 31, 20);

frame.getContentPane().add(textField);

textField.setColumns(10);

JScrollPane scrollPane\_1 = new JScrollPane();

scrollPane\_1.setHorizontalScrollBarPolicy(ScrollPaneConstants.HORIZONTAL\_SCROLLBAR\_ALWAYS);

scrollPane\_1.setBounds(164, 282, 354, 141);

frame.getContentPane().add(scrollPane\_1);

table\_1 = new JTable();

scrollPane\_1.setViewportView(table\_1);

table\_1.setFillsViewportHeight(true);

table\_1.setColumnSelectionAllowed(true);

table\_1.setModel(new DefaultTableModel(

new Object[][] {

{null, null, null, null, null, null, null, null, null},

},

new String[] {

"\u041D\u043E\u043C\u0435\u0440", "\u0424\u0418\u041E", "\u0413\u0420", "\u0413\u041F", "\u041B\_\u0410", "\u041C\_\u0410", "\u0418\u041D\u0424", "\u0424\u0418\u0417\u0418\u041A\u0410", "\u0424\u0418\u0417\_\u0420\u0410"

}

));

JScrollPane scrollPane = new JScrollPane();

scrollPane.setHorizontalScrollBarPolicy(ScrollPaneConstants.HORIZONTAL\_SCROLLBAR\_ALWAYS);

scrollPane.setBounds(164, 46, 354, 141);

frame.getContentPane().add(scrollPane);

table = new JTable();

scrollPane.setViewportView(table);

table.setSelectionMode(ListSelectionModel.MULTIPLE\_INTERVAL\_SELECTION);

table.setModel(new DefaultTableModel(

new Object[][] {

{"", "", "", "", "", null, null, null, null},

},

new String[] {

"\u041D\u043E\u043C\u0435\u0440", "\u0424\u0418\u041E", "\u0413\u0420", "\u0413\u041F", "\u041B\_\u0410", "\u041C\_\u0410", "\u0418\u041D\u0424", "\u0424\u0418\u0417\u0418\u041A\u0410", "\u0424\u0418\u0417\_\u0420\u0410"

}

));

table.getColumnModel().getColumn(0).setMinWidth(27);

table.getColumnModel().getColumn(7).setMinWidth(46);

}

}

package src;

public class Student {

public String FIO;

public int byear;

public int syear;

public int marks [] = new int [5];

Student(String FIO, int byear, int syear, int [] marks) {

this.FIO = FIO;

this.byear= byear;

this.syear = syear;

this.marks = marks;

}

}



