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package demojavaswing;

import java.awt.Color;

import java.awt.Dimension;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener;

import java.awt.event.ItemEvent;

import java.awt.event.ItemListener;

import java.util.ArrayList;

import javax.swing.BorderFactory;

import javax.swing.BoxLayout;

import javax.swing.DefaultListModel;

import javax.swing.JButton;

import javax.swing.JComboBox;

import javax.swing.JFrame;

import static javax.swing.JFrame.EXIT\_ON\_CLOSE;

import javax.swing.JLabel;

import javax.swing.JList;

import javax.swing.JOptionPane;

import javax.swing.JPanel;

import javax.swing.JSplitPane;

import javax.swing.JTextField;

import javax.swing.event.ListSelectionEvent;

import javax.swing.event.ListSelectionListener;

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\* @author Administrator

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public class QuanLySinhVien extends JFrame {

ArrayList < SinhVien > svList = new ArrayList < > ();

ArrayList < SinhVien > svListTam = new ArrayList < > ();

ArrayList < Khoa > khoaList = new ArrayList < > ();

JButton btThem, btXoa, btLuu, btThoat;

JTextField txtMaSV, txtTenSV;

JList < String > list;

DefaultListModel < String > model = new DefaultListModel < > ();

JComboBox < String > cbKhoa;

int maKhoaDaChon;

int maSVDaChon;

QuanLySinhVien() {

super("Quản Lý Sinh Viên");

showWindowns();

addControls();

addEvents();

}

public void showWindowns() {

setSize(new Dimension(800, 600));

setDefaultCloseOperation(EXIT\_ON\_CLOSE);

setLocationRelativeTo(null);

setVisible(true);

setResizable(true);

}

//Khởi tạo danh sách khoa

public void khoaTaoKhoa() {

khoaList.add(new Khoa("Công Nghệ Thông Tin", "CNTT"));

khoaList.add(new Khoa("Kinh Tế", "KT"));

khoaList.add(new Khoa("Điện-Điện Tử", "ĐT"));

khoaList.add(new Khoa("Khoa Học Tự Nhiên", "KHTN"));

cbKhoa = new JComboBox < > ();

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

cbKhoa.addItem(khoaList.get(i).tenKoa);

}

}

//Khởi tạo danh sách sinh viên

public void khoiTaoSinhVien() {

svList.add(new SinhVien("Nguyễn Hồ Duy Khang", "sv01", khoaList.get(0)));

svList.add(new SinhVien("Nguyễn Thiện Huy", "sv02", khoaList.get(1)));

svList.add(new SinhVien("Trần Văn A", "sv03", khoaList.get(1)));

svList.add(new SinhVien("Nguyễn Văn B", "sv04", khoaList.get(2)));

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

// if(svList.get(i).khoa.maKhoa=="CNTT")

model.addElement(svList.get(i).hoTen);

}

list = new JList < > (model);

}

//Chọn danh sách sinh viên theo khoa

public void chonSVTheoKhoa(String maKhoa) {

if (maKhoa != null) {

svListTam.clear();

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

if (svList.get(i).khoa.maKhoa == maKhoa) {

svListTam.add(svList.get(i));

}

}

model.removeAllElements();

model.clear();

list.removeAll();

list.clearSelection();

if (svListTam.size() != 0) {

model = new DefaultListModel < > ();

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

model.addElement(svListTam.get(i).hoTen);

}

list.setModel(model);

}

}

}

//Thêm sinh viên theo khoa

public void themSVTheoKhoa() {

//lấy mã sinh viên và tên từ textbox

String maSV=txtMaSV.getText();

String tenSV=txtTenSV.getText();

SinhVien sv=new SinhVien(tenSV, maSV,khoaList.get(maKhoaDaChon));

svListTam.add(sv);

svList.add(sv);

model.addElement(tenSV);

}

//Xoá sinh viên theo khoa

public void xoaSVTheoKhoa(){

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

if(svList.get(i).maSV==svListTam.get(maSVDaChon).maSV){

svList.remove(i);

}

}

svListTam.remove(maSVDaChon);

model.remove(maSVDaChon);

}

//Hiển thị sinh viên được chọn trên textbox

public void hienThiSinhVienTextbox(String maSV,String tenSV){

txtMaSV.setText(maSV);

txtTenSV.setText(tenSV);

}

public void addEvents() {

//Sự kiện khi click vào combobox khoa

cbKhoa.addItemListener(new ItemListener() {

@Override

public void itemStateChanged(ItemEvent e) {

maKhoaDaChon = cbKhoa.getSelectedIndex();

chonSVTheoKhoa(khoaList.get(maKhoaDaChon).maKhoa);

}

});

//Sự kiện khi chọn sinh viên trong list

list.addListSelectionListener(new ListSelectionListener() {

@Override

public void valueChanged(ListSelectionEvent e) {

maSVDaChon = list.getSelectedIndex();

if(maSVDaChon!=-1){

hienThiSinhVienTextbox(svListTam.get(maSVDaChon).maSV,svListTam.get(maSVDaChon).hoTen);

}

}

});

//Sự kiện nhấn nút thêm

btThem.addActionListener(new ActionListener() {

@Override

public void actionPerformed(ActionEvent e) {

themSVTheoKhoa();

}

});

//Sự kiện nhân nút xoá

btXoa.addActionListener(new ActionListener() {

@Override

public void actionPerformed(ActionEvent e) {

xoaSVTheoKhoa();

}

});

//Sự kiện nút thoát

btThoat.addActionListener(new ActionListener() {

@Override

public void actionPerformed(ActionEvent e) {

System.exit(1);

}

});

}

public void addControls() {

JPanel pnMain = new JPanel();

pnMain.setLayout(new BoxLayout(pnMain, BoxLayout.Y\_AXIS));

add(pnMain);

pack();

//Chọn khoa

JPanel pnRow1 = new JPanel();

JLabel lbMain = new JLabel("Chọn Khoa");

khoaTaoKhoa();

pnRow1.add(lbMain);

pnRow1.add(cbKhoa);

pnMain.add(pnRow1);

//Split left

JSplitPane pnSplit = new JSplitPane(JSplitPane.HORIZONTAL\_SPLIT);

JPanel pnLeft = new JPanel();

pnLeft.setBorder(BorderFactory.createTitledBorder(

BorderFactory.createLineBorder(Color.BLACK), "Danh Sách Sinh Viên"));

khoiTaoSinhVien();

pnLeft.add(list);

//Split right

JPanel pnRight = new JPanel();

pnRight.setLayout(new BoxLayout(pnRight, BoxLayout.Y\_AXIS));

pnRight.setBorder(BorderFactory.createTitledBorder(

BorderFactory.createLineBorder(Color.BLACK), "Thông Tin Chi Tiết"));

//Label Mã Sinh Viên

JPanel pnLbMaSV = new JPanel();

JLabel lbMaSV = new JLabel("Mã Sinh Viên");

pnLbMaSV.add(lbMaSV);

pnRight.add(pnLbMaSV);

//Txt Mã SInh Viên

JPanel pnTxtMaSV = new JPanel();

txtMaSV = new JTextField(15);

pnTxtMaSV.add(txtMaSV);

pnRight.add(pnTxtMaSV);

//Label Tên Sinh Viên

JPanel pnLbTenSV = new JPanel();

JLabel lbTenSV = new JLabel("Tên Sinh Viên");

pnLbTenSV.add(lbTenSV);

pnRight.add(pnLbTenSV);

//Txt Tên Sinh Viên

JPanel pnTxtTenSV = new JPanel();

txtTenSV = new JTextField(15);

pnTxtTenSV.add(txtTenSV);

pnRight.add(pnTxtTenSV);

pnSplit.setLeftComponent(pnLeft);

pnSplit.setRightComponent(pnRight);

JPanel pnButton = new JPanel();

btThem = new JButton("Thêm");

btLuu = new JButton("Lưu");

btXoa = new JButton("Xoá");

btThoat = new JButton("Thoát");

pnButton.add(btThem);

pnButton.add(btLuu);

pnButton.add(btXoa);

pnButton.add(btThoat);

pnMain.add(pnSplit);

pnMain.add(pnButton);

}

}

//Class SinhVien

public class SinhVien {

public String hoTen;

public String maSV;

public Khoa khoa;

public SinhVien(String hoTen, String maSV,Khoa khoa) {

this.hoTen = hoTen;

this.maSV = maSV;

this.khoa=khoa;

}

}

//Class Khoa

public class Khoa {

public String tenKoa;

public String maKhoa;

public Khoa(String tenKoa, String maKhoa) {

this.tenKoa = tenKoa;

this.maKhoa = maKhoa;

}

}