**Swing 특성**

**Kotlin**

**ClientEditor.java**

package clienteditor;

public class ClientEditor extends javax.swing.JPanel {

private Client client = Client.createTestClient();

public ClientEditor() {

initComponents();

bindingGroup.addBindingListener(new LoggingBindingListener(validationMsgLabel));

}

public Client **getClient**() {

return client;

}

public void **setClient**(Client client) {

Client oldClient = this.client;

this.client = client;

firePropertyChange("client", oldClient, client);

}

public static void **main**(String args[]) {

java.awt.EventQueue.invokeLater(new Runnable() {

public void run() {

javax.swing.JFrame frame = new javax.swing.JFrame("Client Editor");

frame.setDefaultCloseOperation(javax.swing.WindowConstants.EXIT\_ON\_CLOSE);

frame.getContentPane().add(new ClientEditor());

frame.pack();

frame.setVisible(true);

}

});

}

}

**Client.java**

package clienteditor;

import java.beans.PropertyChangeListener;

import java.beans.PropertyChangeSupport;

public class **Client** {

private String firstName;

private String surname;

private String nickname;

private int age;

/\*\* Sex of the client (0 - female, 1 - male). \*/

private int sex;

/\*\* Marital status of the client (0 - single, 1 - married, 2 - separated, 3 - divorced) \*/

private int maritalStatus;

private String email;

private String web;

private String im;

private final PropertyChangeSupport changeSupport = new PropertyChangeSupport(this);

public void **addPropertyChangeListener**(PropertyChangeListener listener) {

changeSupport.addPropertyChangeListener(listener);

}

public void **removePropertyChangeListener**(PropertyChangeListener listener) {

changeSupport.removePropertyChangeListener(listener);

}

public String **getFirstName**() { return firstName; }

public String **getSurname**() { return surname; }

public String **getNickname**() { return nickname; }

public int **getAge**() { return age; }

public String **getEmail**() { return email; }

public String **getWeb**() { return getWeb; }

public String **getIm**() { return im; }}

public int **getSex**() { return sex; }

public int **getMaritalStatus**() { return maritalStatus; }

public void **setFirstName**(String firstName) {

String oldFirstName = this.firstName;

this.firstName = firstName;

changeSupport.firePropertyChange("firstName", oldFirstName, firstName);

}

public void **setSurname**(String surname) {

String oldSurname = this.surname;

this.surname = surname;

changeSupport.firePropertyChange("surname", oldSurname, surname);

}

public void **setNickname**(String nickname) {

String oldNickname = this.nickname;

this.nickname = nickname;

changeSupport.firePropertyChange("nickname", oldNickname, nickname);

}

public void **setAge**(int age) {

int oldAge = this.age;

this.age = age;

changeSupport.firePropertyChange("age", oldAge, age);

}

public void **setEmail**(String email) {

String oldEmail = this.email;

this.email = email;

changeSupport.firePropertyChange("email", oldEmail, email);

}

public void **setWeb**(String web) {

String oldWeb = this.web;

this.web = web;

changeSupport.firePropertyChange("web", oldWeb, web);

}

public void **setIm**(String im) {

String oldIm = this.im;

this.im = im;

changeSupport.firePropertyChange("im", oldIm, im);

}

public void **setSex**(int sex) {

int oldSex = this.sex;

this.sex = sex;

changeSupport.firePropertyChange("sex", oldSex, sex);

}

public void **setMaritalStatus**(int maritalStatus) {

int oldMaritalStatus = this.maritalStatus;

this.maritalStatus = maritalStatus;

changeSupport.firePropertyChange("maritalStatus", oldMaritalStatus, maritalStatus);

}

public static Client **createTestClient**() {

Client client = new Client();

client.setFirstName("George");

client.setSurname("Foo");

client.setNickname("Juraj");

client.setAge(30);

client.setEmail("g.foo@foo.org");

client.setWeb("https://beansbinding.dev.java.net");

client.setIm("ICQ: 53 25 89 76");

client.setSex(1);

client.setMaritalStatus(2);

return client;

}

}

**LoggingBindingListener.java**

package clienteditor;

import javax.swing.JLabel;

import org.jdesktop.beansbinding.AbstractBindingListener;

import org.jdesktop.beansbinding.Binding;

import org.jdesktop.beansbinding.Binding.SyncFailure;

public class **LoggingBindingListener** extends AbstractBindingListener {

private JLabel outputLabel;

**LoggingBindingListener**(JLabel outputLabel) {

if (outputLabel == null) throw new IllegalArgumentException();

this.outputLabel = outputLabel;

}

@Override

public void **syncFailed**(Binding binding, SyncFailure fail) {

String description;

if ((fail != null) && (fail.getType() == Binding.SyncFailureType.VALIDATION\_FAILED)) {

description = fail.getValidationResult().getDescription();

} else {

description = "Sync failed!";

}

String msg = "[" + binding.getName() + "] " + description;

System.out.println(msg);

outputLabel.setText(msg);

}

@Override

public void **synced**(Binding binding) {

String bindName = binding.getName();

String msg = "[" + bindName + "] Synced";

System.out.println(msg);

outputLabel.setText("");

}

}

**AgeConverter.java**

package clienteditor;

import org.jdesktop.beansbinding.Converter;

public class **AgeConverter** extends Converter<Integer, String> {

public String **convertForward**(Integer arg) {

return String.valueOf(arg);

}

public Integer **convertReverse**(String arg) {

int value;

try {

value = (arg == null) ? 0 : Integer.parseInt(arg);

} catch (NumberFormatException ex) {

value = 0;

}

return value;

}

}

**AgeValidator.java**

package clienteditor;

import org.jdesktop.beansbinding.Validator;

public class **AgeValidator** extends Validator<Integer> {

public Validator.Result **validate**(Integer arg) {

if ((arg < 1) || (arg > 199)) {

return new Result(null, "Age range is 1-199");

}

return null;

}

}

**EmailValidator.java**

package clienteditor;

import org.jdesktop.beansbinding.Validator;

public class **EmailValidator** extends Validator<String> {

public Validator.Result **validate**(String arg) {

if ((arg.length() < 4) || !arg.contains("@") || !arg.contains(".")) {

return new Result(null, "Please enter a valid email");

}

return null;

}

}

**MaritalStatusConverter.java**

package clienteditor;

import org.jdesktop.beansbinding.Converter;

public class **MaritalStatusConverter** extends Converter<Integer, String> {

public String **convertForward**(Integer arg) {

String value = null;

switch (arg) {

case 0: value="Single"; break;

case 1: value="Married"; break;

case 2: value="Separated"; break;

case 3: value="Divorced"; break;

}

return value;

}

public Integer **convertReverse**(String arg) {

int value = 0;

if ("Single".equals(arg)) {

value = 0;

} else if ("Married".equals(arg)) {

value = 1;

} else if ("Separated".equals(arg)) {

value = 2;

} else if ("Divorced".equals(arg)) {

value = 3;

}

return value;

}

}

**RequiredStringValidator.java**

package clienteditor;

import org.jdesktop.beansbinding.Validator;

public class **RequiredStringValidator** extends Validator<String> {

public Validator.Result **validate**(String arg) {

if ((arg == null) || (arg.length() == 0)) {

return new Validator.Result(null, "Empty value");

}

return null;

}

}