Agenda

- **Tag 1 – Einführung**
  - Installation
  - Erste Anwendung
  - Architektur
- **Tag 2 – Entwicklung**
  - Models
  - Darstellung
  - Formulare
  - Ajax
- **Tag 3 – Fortgeschrittene Themen**
  - Tests
  - Security & Deployment
  - Lokalisierung & Internationalisierung
  - Performance
  - Best Practices

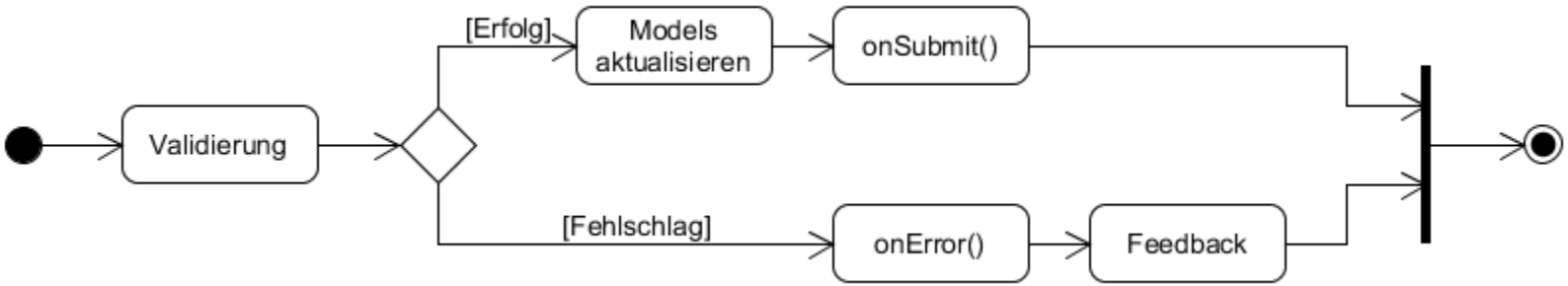
Formulare

Formulare

Grundlagen

- Eigene Komponenten
- Handler auf Serverseite
  - onSubmit()
  - onError()

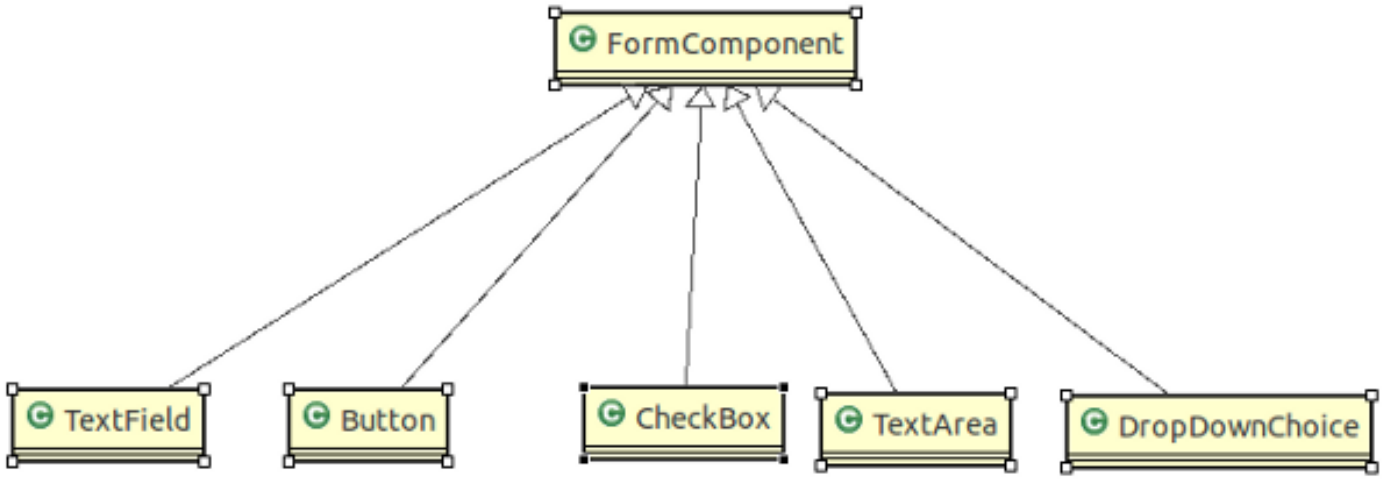
- Verarbeitung



Formulare

Grundlagen

- Vorgefertigte Eingabekomponenten
  - Textfelder
  - CheckBoxen
  - DropDowns
  - Buttons
  - …



Formulare

Grundlagen

- HTML: Page

```
<html>

<head><title>Person</title></head>

<body>

<form id="personForm" method="get" wicket:id="personForm">
  <span>Name: </span><input wicket:id="name" type="text" id="name"/>
  <span>Nachname: </span><input wicket:id="surname" type="text" id="surname"/>
  <input type="submit" name="Save" value="Speichern"/>
</form>

</body>

</html>
```

Hinweis: Markup des Forms möglichst ebenfalls auslagern!

Formulare

Grundlagen

- Java: Page

```
public class PersonPage extends WebPage {

    public PersonPage() {
        super();

        add(new PersonForm("personForm"));
    }
}
```

Formulare

Grundlagen

- Java: Formular

```
public class PersonForm extends Form {

    private TextField nameField;
    private TextField surnameField;

    public PersonForm(String id) {
        super(id);

        nameField = new TextField("name", Model.of(""));
        surnameField = new TextField("surname", Model.of(""));

        add(nameField);
        add(surnameField);
    }

    public final void onSubmit() {
        String name = (String) nameField.getDefaultModelObject();
        String surname = (String) surnameField.getDefaultModelObject();

        System.out.println("Hello " + name + " " + surname);
    }
}
```

Formulare

Validierung

- Interface *IValidator*
- Vorgefertigte Validatoren
  - EmailAddressValidator
  - URLValidator
  - DateValidator
  - RangeValidator
  - …

Formulare

Validierung

- Eigene Validatoren

```
public class AgeValidator implements IValidator<Integer> {

    public void validate(IValidatable<Integer> validatable) {
        int age = validatable.getValue();

        if(age < 18 || age > 100){
            ValidationError error = new ValidationError(this);
            validatable.error(error);
        }
    }
}
```

Formulare

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JSR 303

- Definiert Annotationen zur Bean-Validierung
  - @Range
  - @Past
  - @NotNull
  - @Pattern
  - …
- Nutzung in Wicket
  - Einbindung der *el-api*
  - Einbindung einer Validation Engine (z.B. *hibernate-validator*)
  - Annotation der Beans
  - Aktivierung in Application-Klasse
  - Hinzufügen von PropertyValidator zu Feldern

Formulare

JSR 303

- Bean

```
public class Person implements Serializable {

    @NotNull
    private String name;

    @Pattern(regexp = "^...$")
    private String email;

    @Range(min = 18, max = 150)
    private int age;

    @Past @NotNull
    private Date birthDay;

    @NotNull
    private Address address;
}
```

Formulare

JSR 303

- Application-Klasse

```
@Override
public void init(){
    super.init();

    new BeanValidationConfiguration().configure(this);
}
```

- PropertyValidator

```
Form<Person> form = new Form<>("personForm");

form.add(new TextField("name").add(new PropertyValidator()));
form.add(new TextField("email").add(new PropertyValidator()));
form.add(new TextField("age").add(new PropertyValidator()));
```

Formulare

Feedback

- Rückmeldung an den Nutzer
- Überschreibbare Standardtexte
- Internationalisierung
- Speicherung in Resource Bundles

Formulare

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Feedback Panel

- Auflistung von Messages
- Interface *IFeedbackMessageFilter*

- HTML

```
<div wicket:id="successMessage" ></div>
<div wicket:id="feedbackMessage" ></div>
```

- Java

```
add(new FeedbackPanel("feedbackMessage",
new ExactErrorLevelFilter(FeedbackMessage.ERROR)));

add(new FeedbackPanel("successMessage",
new ExactErrorLevelFilter(FeedbackMessage.SUCCESS)));
```

Formulare

Flash Messages

- Nachrichten von Komponenten
- Levels (vgl. Logging)
  - debug
  - info
  - success
  - warn
  - error
  - fatal
- Definition eigener FeedbackMessageFilter

Flash Messages

```
public class CustomFeedbackMessageFilter implements IFeedbackMessageFilter {

    private int errorLevel;

    public CustomFeedbackMessageFilter(int errorLevel){
        this.errorLevel = errorLevel;
    }

    public boolean accept(FeedbackMessage message) {
        boolean accept = false;

        // Überprüfen, ob eine Message ausgegeben werden soll...

        return accept;
    }


   // Eventuell Berücksichtigung weiterer Level
}
```