INLINE EDITING IN QFQ

Individuelle Praktische Arbeit

Pascal Rössler

Übersicht

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- Planen
  - Klassendiagramm
  - Sequenzdiagramme
- Entscheiden
  - Design Patterns
- Realisieren
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  - Page Load
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  - Update Record
  - Logging
- Kontrollieren
  - Unit Test Beispiel
- Auswerten:
  - Zeitplanung Soll/Ist
  - Fazit & Schlusswort

Informieren

Ist-Situation

Ist-Situation

QFQ-Report-Backend

1

```
form={{form:SE}}
10{
  sql = SELECT CONCAT('p:{{pageSlug:T}}?form=Person&r=',id,'|b|s|E') AS _link
              , firstName
              , lastName
              , address
        FROM Person LIMIT 5

  head = <table class="qfq-table-50">
           <thead>
               <tr>
               <th>{{'p:{{pageSlug:T}}?form=Person&r=0|s|N' AS _link}}</th>
               <th>First Name</th>
               <th>Last Name</th>
               <th>Address</th>
             </tr>
           </thead>
           <tbody>
  rbeg = <tr>
  fbeg = <td>
  fend = </td>
  rend = </tr>
  tail = </tbody></table>
}
```

QFQ-Report-Frontend

2

	First Name	Last Name	Address
✎	Pascal	Meier	Strasse 2
✎	Sebastian	Muster	Weg 3
✎	Ludwig	Keller	Gasse 5
✎	Sarah	Kuster	Tunnel 7
✎	Nina	Tester	Strasse 5

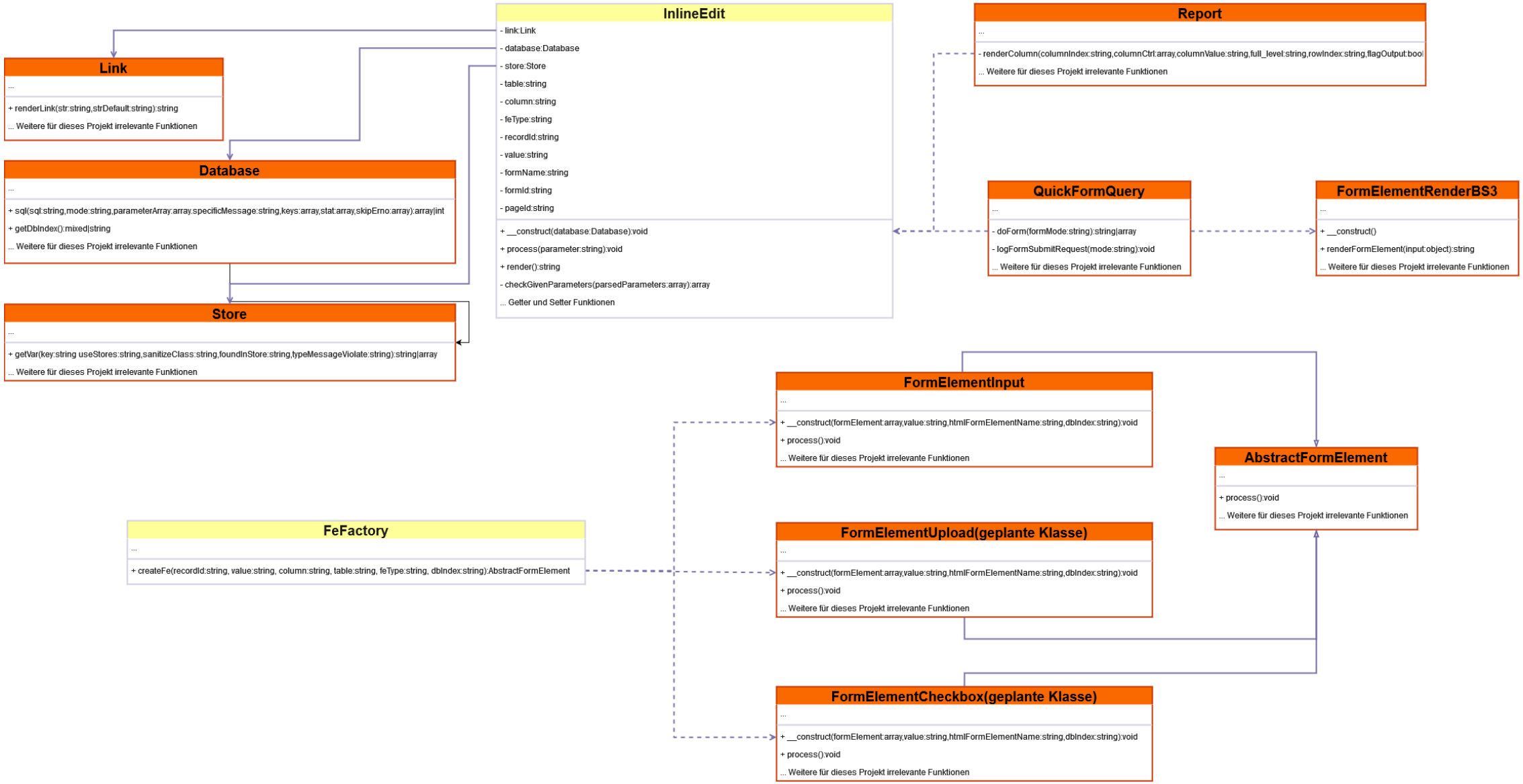
Separate Bearbeitungsschicht

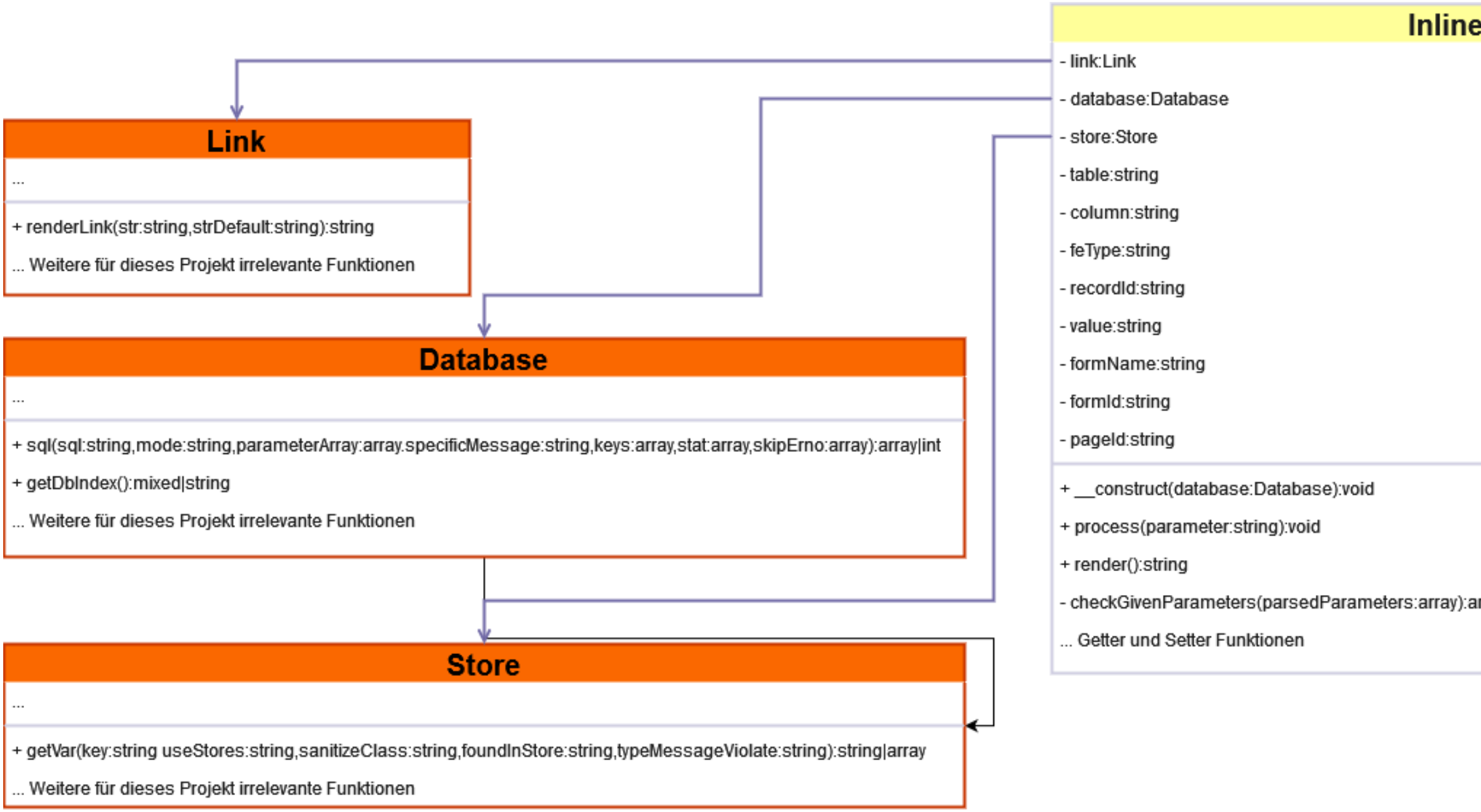
3

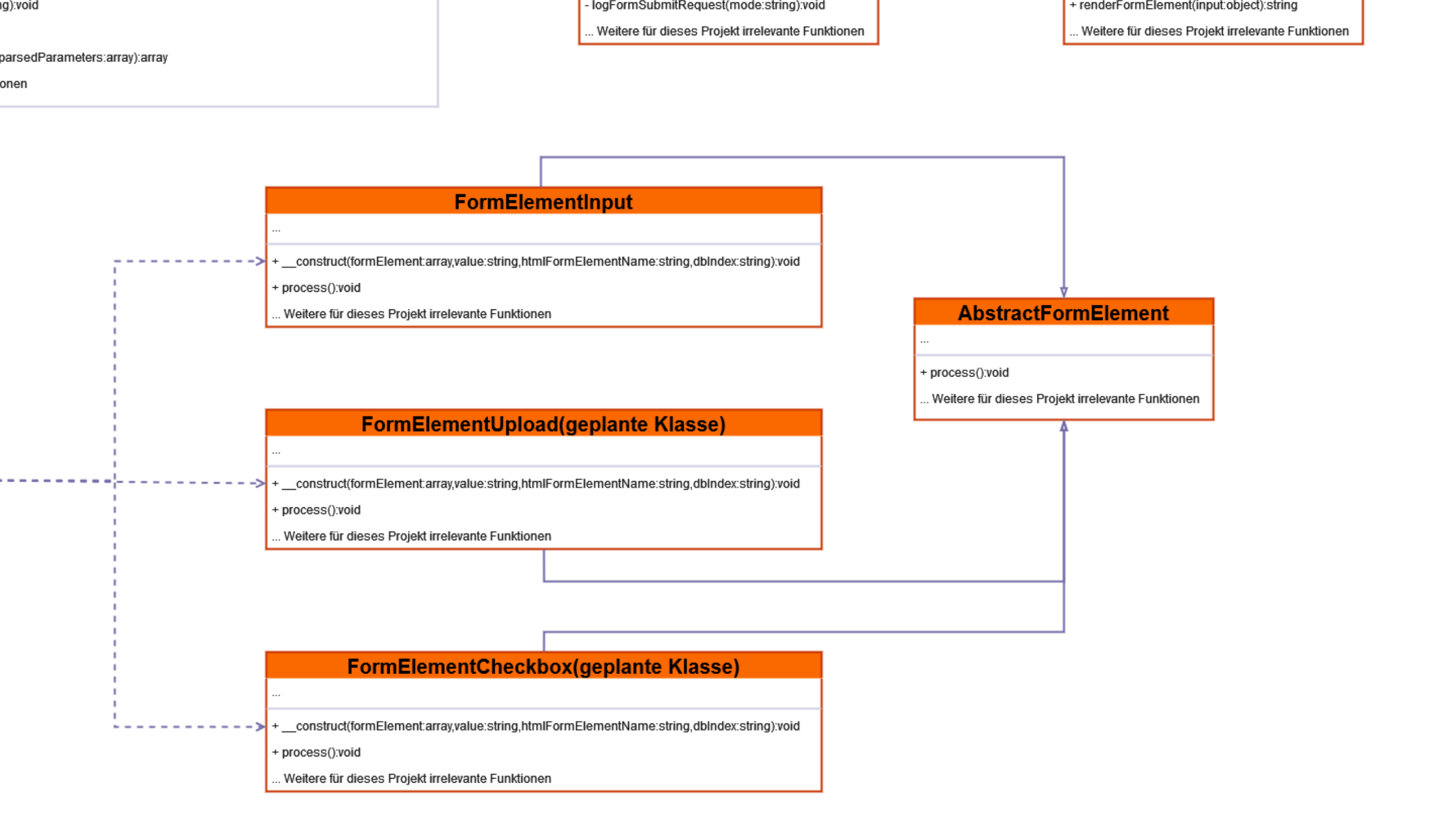
Planen

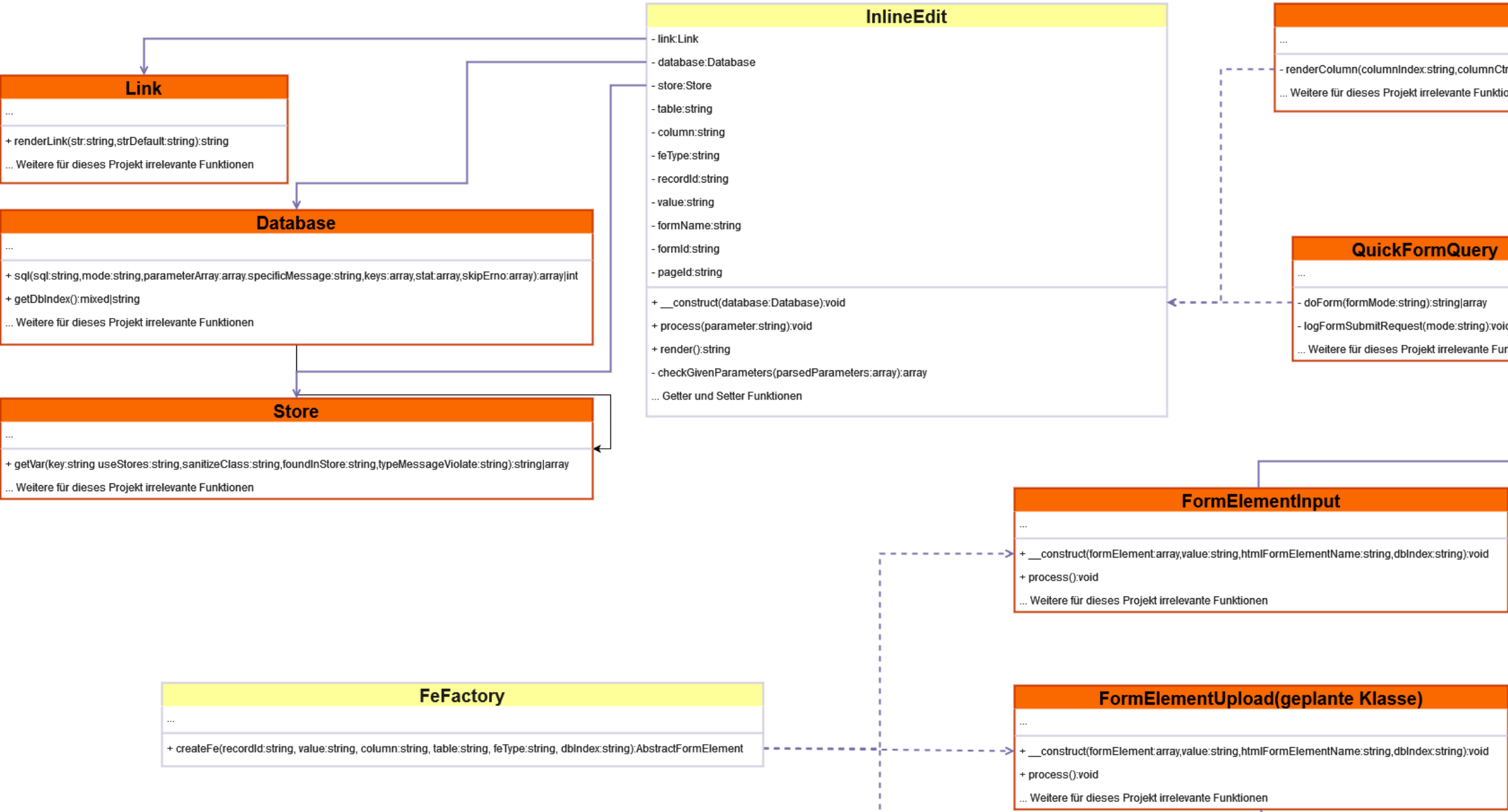
Klassendiagramm & Sequenzdiagramme

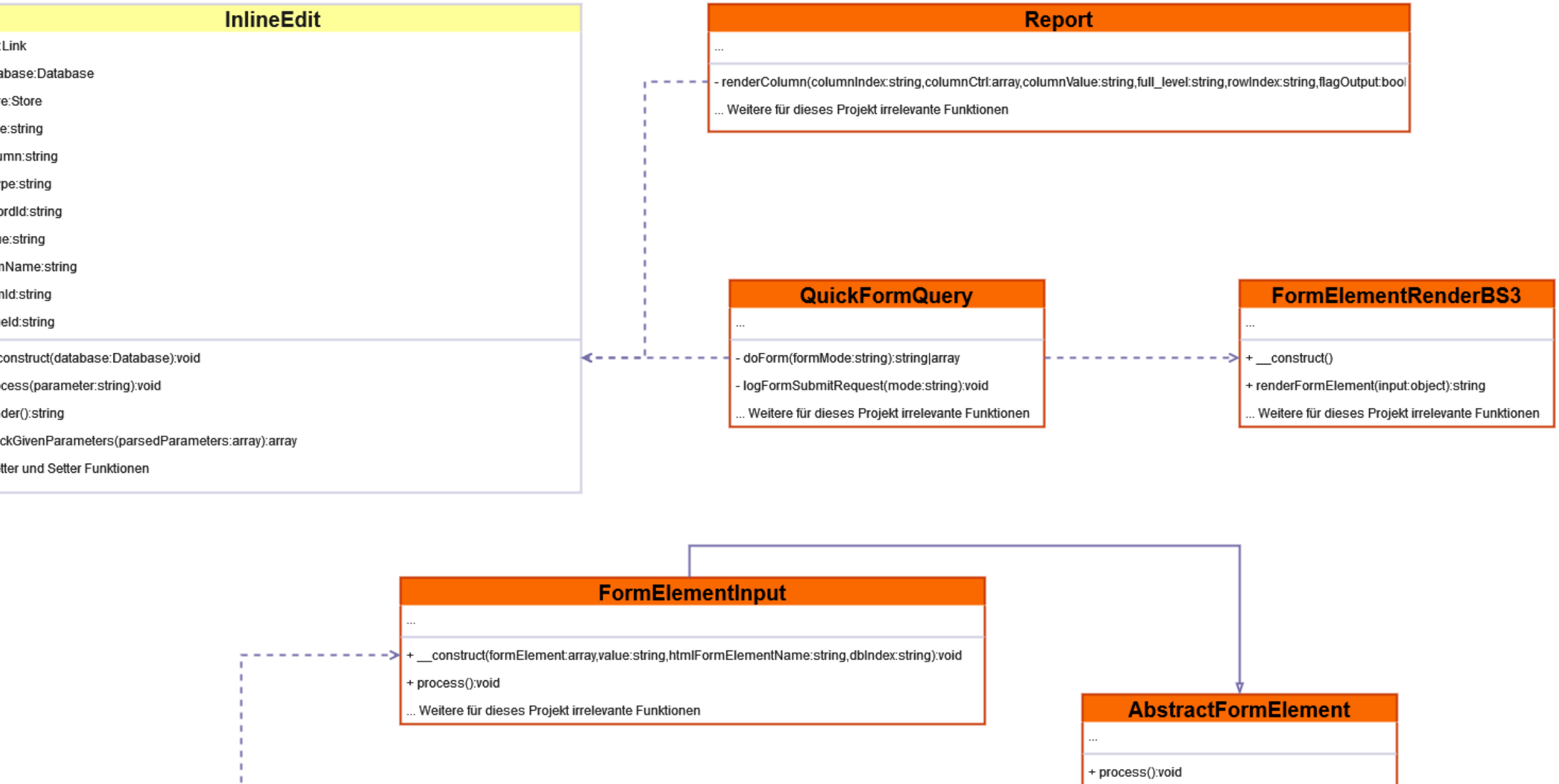
Klassendiagramm



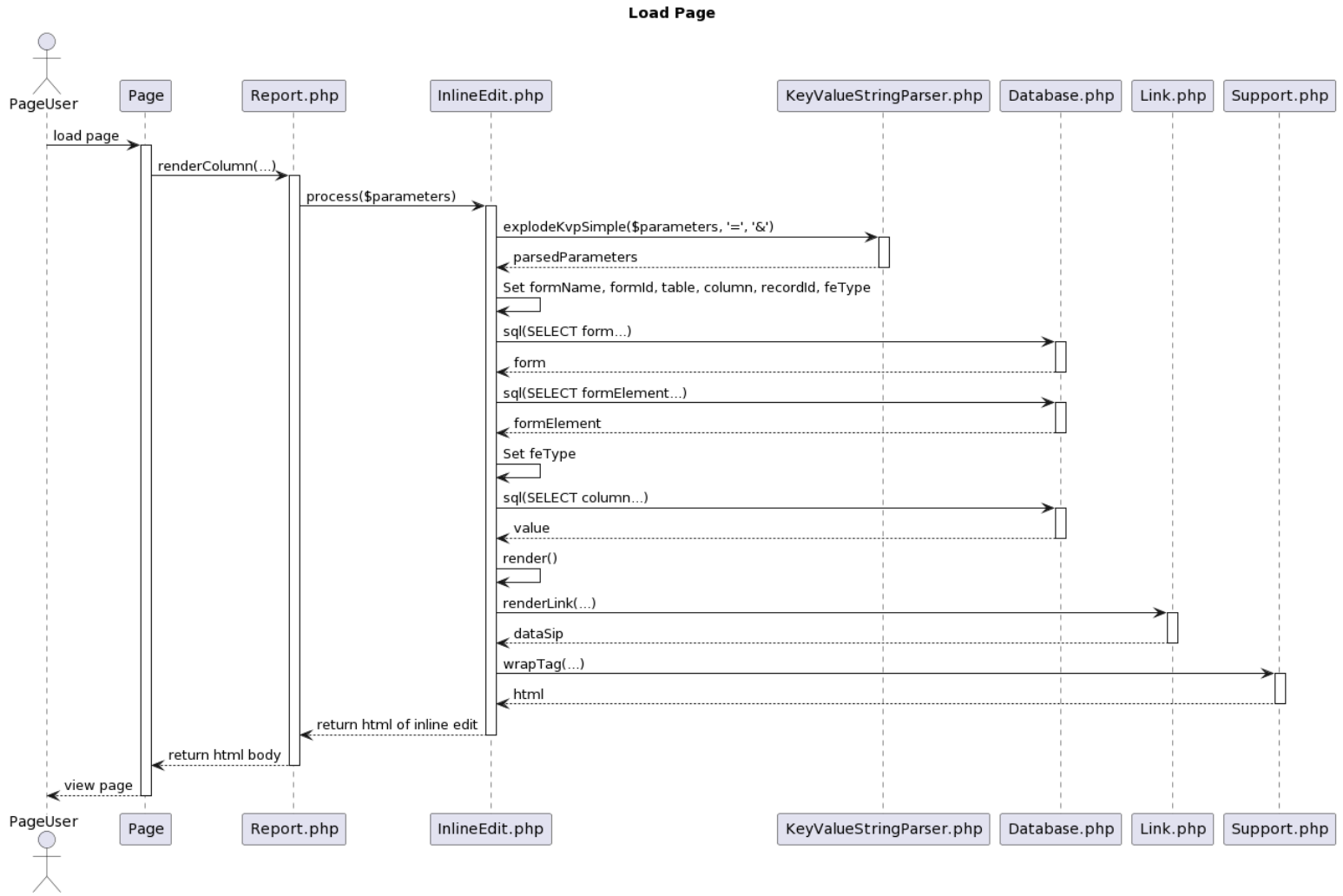

Inline
- link:Link
- database:Database
- store:Store
- table:string
- column:string
- feType:string
- recordId:string
- value:string
- formName:string
- formId:string
- pageId:string
+ __construct(database:Database):void
+ process(parameter:string):void
+ render():string
- checkGivenParameters(parsedParameters:array):ar
... Getter und Setter Funktionen
Link
...
+ renderLink(str:string,strDefault:string):string
... Weitere für dieses Projekt irrelevante Funktionen
Database
...
+ sql(sql:string,mode:string,parameterArray:array.specificMessage:string,keys:array,stat:array,skipErno:array):array|int
+ getDbIndex():mixed|string
... Weitere für dieses Projekt irrelevante Funktionen
Store
...
+ getVar(key:string useStores:string,sanitizeClass:string,foundInStore:string,typeMessageViolate:string):string|array
... Weitere für dieses Projekt irrelevante Funktionen


g):void
parsedParameters:array):array
onen
- logFormSubmitRequest(mode:string):void
... Weitere für dieses Projekt irrelevante Funktionen
+ renderFormElement(input:object):string
... Weitere für dieses Projekt irrelevante Funktionen
FormElementInput
...
+ __construct(formElement:array,value:string,htmlFormElementName:string,dblndex:string):void
+ process():void
... Weitere für dieses Projekt irrelevante Funktionen
AbstractFormElement
...
+ process():void
... Weitere für dieses Projekt irrelevante Funktionen
FormElementUpload(geplante Klasse)
...
+ __construct(formElement:array,value:string,htmlFormElementName:string,dblndex:string):void
+ process():void
... Weitere für dieses Projekt irrelevante Funktionen
FormElementCheckbox(geplante Klasse)
...
+ __construct(formElement:array,value:string,htmlFormElementName:string,dblndex:string):void
+ process():void
... Weitere für dieses Projekt irrelevante Funktionen

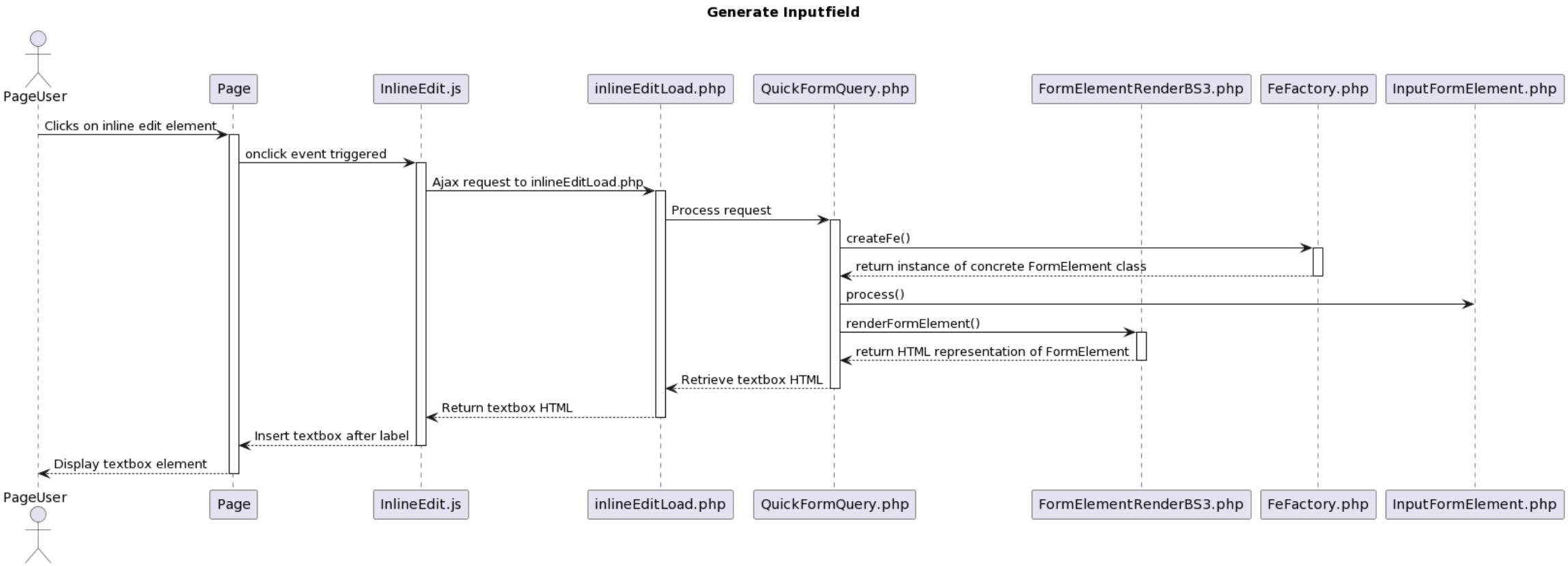

InlineEdit
- link:Link
- database:Database
- store:Store
- table:string
- column:string
- feType:string
- recordId:string
- value:string
- formName:string
- formId:string
- pageId:string
+ __construct(database:Database):void
+ process(parameter:string):void
+ render():string
- checkGivenParameters(parsedParameters:array):array
... Getter und Setter Funktionen
Link
...
+ renderLink(str:string,strDefault:string):string
... Weitere für dieses Projekt irrelevante Funktionen
Database
...
+ sql(sql:string,mode:string,parameterArray:array.specificMessage:string,keys:array,stat:array,skipErno:array):array|int
+ getDbIndex():mixed|string
... Weitere für dieses Projekt irrelevante Funktionen
Store
...
+ getVar(key:string useStores:string,sanitizeClass:string,foundInStore:string,typeMessageViolate:string):string|array
... Weitere für dieses Projekt irrelevante Funktionen
...
- renderColumn(columnIndex:string,columnCtr
... Weitere für dieses Projekt irrelevante Funktio
QuickFormQuery
...
- doForm(formMode:string):string|array
- logFormSubmitRequest(mode:string):voi
... Weitere für dieses Projekt irrelevante Fur
FormElementInput
...
+ __construct(formElement:array,value:string,htmlFormElementName:string,dbIndex:string):void
+ process():void
... Weitere für dieses Projekt irrelevante Funktionen
FeFactory
...
+ createFe(recordId:string, value:string, column:string, table:string, feType:string, dbIndex:string):AbstractFormElement
FormElementUpload(geplante Klasse)
...
+ __construct(formElement:array,value:string,htmlFormElementName:string,dbIndex:string):void
+ process():void
... Weitere für dieses Projekt irrelevante Funktionen


InlineEdit
:Link
abase:Database
e:Store
e:string
umn:string
pe:string
ordId:string
e:string
nName:string
nId:string
eId:string
construct(database:Database):void
cess(parameter:string):void
der():string
ckGivenParameters(parsedParameters:array):array
tter und Setter Funktionen
Report
...
- renderColumn(columnIndex:string,columnCtrl:array,columnValue:string,full_level:string,rowIndex:string,flagOutput:bool
... Weitere für dieses Projekt irrelevante Funktionen
QuickFormQuery
...
- doForm(formMode:string):string|array
- logFormSubmitRequest(mode:string):void
... Weitere für dieses Projekt irrelevante Funktionen
FormElementRenderBS3
...
+ __construct()
+ renderFormElement(input:object):string
... Weitere für dieses Projekt irrelevante Funktionen
FormElementInput
...
+ __construct(formElement:array,value:string,htmlFormElementName:string,dbIndex:string):void
+ process():void
... Weitere für dieses Projekt irrelevante Funktionen
AbstractFormElement
...
+ process():void

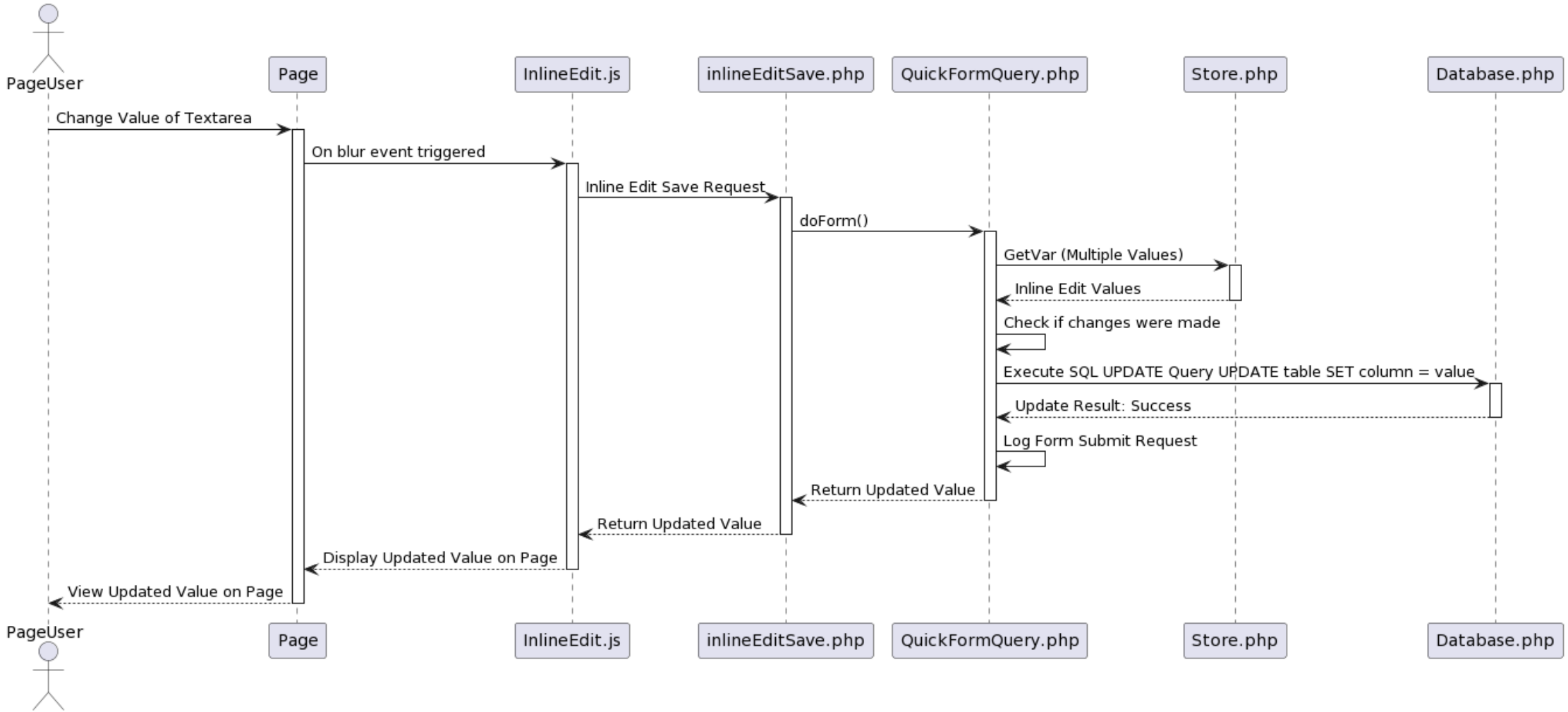
Sequenzdiagram 1 – Page Load



Sequenzdiagram 2 – Generate Textarea



Sequenzdiagram 3 – Update Record

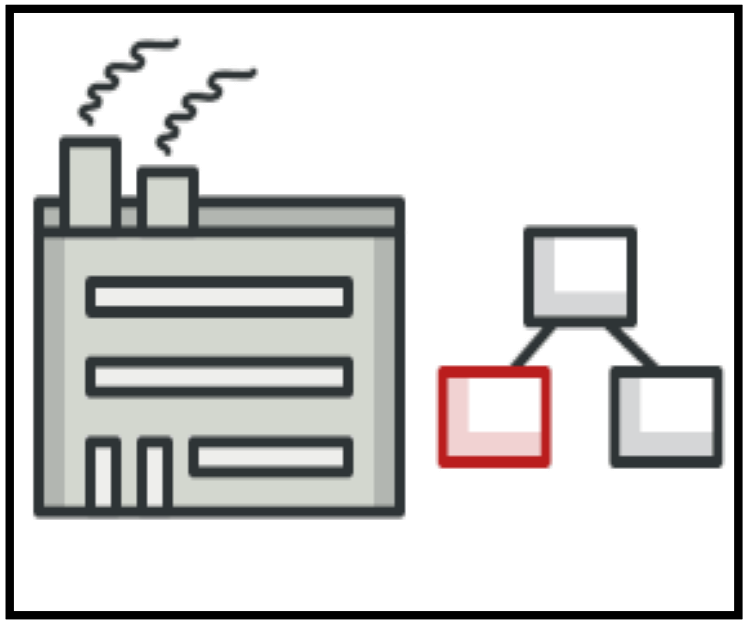


Entscheiden

Factory Pattern & Triple A Pattern

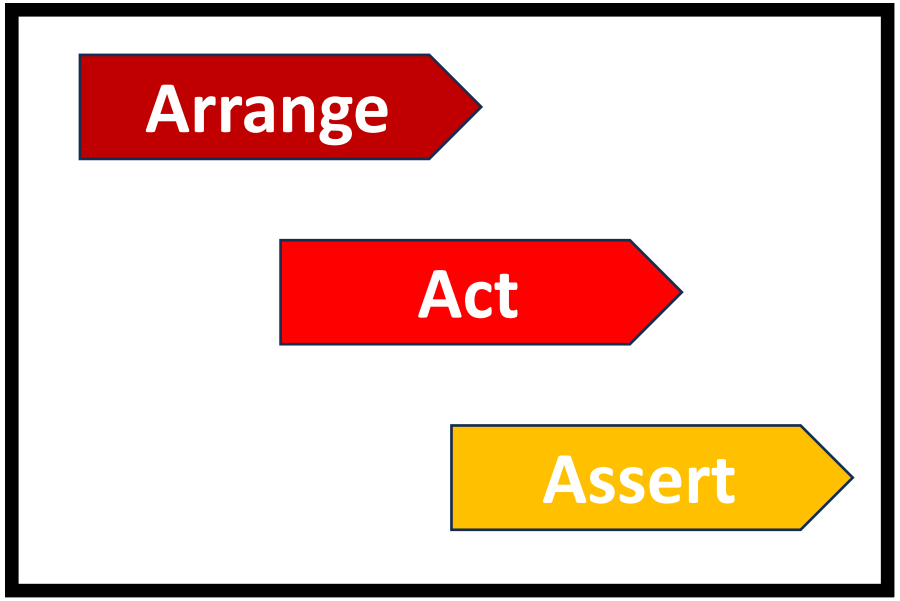
Design Patterns

Factory Pattern



- Erweiterbar
- Single Responsibility Principle
- Einfach zu testen

Triple A Testing Pattern



- Übersichtlich
- Klare Struktur
- Einfach zu verstehen

Realisieren

Inline Editing, Fehlerbehandlung & Logging

Typo3 Backend

Special Column Name _edit

```
10 {
    sql = SELECT CONCAT('form=ipa&fe=text1&r=',id) AS _edit
                ,CONCAT('table=Dummy&column=text2&type=text&r=',id) AS _edit
                ,CONCAT('table=Dummy&column=text3&type=text&r=',id) AS _edit
          FROM Dummy LIMIT 5

    head = <table><thead><tr><th>text1</th><th>text2</th><th>text3</th></tr></thead><tbody>
    tail = </tbody></table>
    rbeg = <tr>
    rend = </td>
    fbeg = <td>
    fend = </td>
}
```

Variante 1 Referenz

- form (QFQ-Form Name)
- fe (QFQ-FormElement Name)
- r (Record Id)

Variante 2 Direkt

- table (Tabellen Name)
- column (Spalten Name)
- type (Eingabe Typ)
- r (Record Id)

Fehlerbehandlung

1

```
    // Error handling missing or invalid parameters
} else {
    $error = $this->checkGivenParameters($parsedParameters);
    throw new \UserReportException ($error[INLINE_EDIT_ERROR_MESSAGE], $error[INLINE_EDIT_ERROR_CODE]);
}
```

2

2023.06.07 14:37:32 +0200, Reference: 64807a0c9b693

Record with id "999" for table "Dummy" does not exist.

Debug

toUser	Record with id "999" for table "Dummy" does not exist.
Report level key	10
messageDebug	
Type	User Report Exception

3

2023.06.07 14:33:25 +0200, Reference: 64807915dc6e4

Missing parameters for special column name "_edit": column, type

Debug

toUser	Missing parameters for special column name "_edit": column, type
Report level key	10
messageDebug	
Type	User Report Exception

- Falsche Angabe der Parameter
- Fehlende Angabe eines Parameters
- Datensatz existiert nicht
- Tabelle oder Spalte existiert nicht
- Form oder Form Element existiert nicht

Page Load

3

```
<div class="qfq-inline-edit" data-sip="64899c1f4efb1">
  <div class="qfq-inline-edit-label">Test Wert</div>
</div>
```

Elements

- Container (qfq-inline-edit)
- Label (qfq-inline-edit-label)

1

```
case COLUMN_INLINE_EDIT:
    // Process given parameters and render inline edit container and label
    $inlineEdit = new InlineEdit($this->dbArr[$this->dbIndexData]);
    $inlineEdit->process($columnValue);
    $content .= $inlineEdit->render();
    break;
```

2

```
$dataSip = $this->link->renderLink( str: 'p:&r='. $this->record
    .'&table='.$this->table
    .'&column='.$this->column
    .'&feType='.$this->feType
    .'&value='. $this->value
    .'&pageId='. ($this->pageId ?? (strval($this->store->getVar(
    .'&formName='. ($this->formName ?? 'noForm')
    .'&formId='.strval($this->formId)
    .'|s|r:8'
);
```

Generate Textarea

```
case FORM_INLINE_EDIT_LOAD:
    $renderer = new FormElementRenderBS3();
    // Create formElement based on variables stored in STORE_SIP
    $fe = FeFactory::createFe($this->store::getVar( key: INLINE_EDIT_RECORD_ID, useStores: STORE_SIP),
        $this->store::getVar( key: FE_VALUE, useStores: STORE_SIP),
        $this->store::getVar( key: INLINE_EDIT_COLUMN, useStores: STORE_SIP),
        $this->store::getVar( key: INLINE_EDIT_TABLE, useStores: STORE_SIP),
        $this->store::getVar( key: INLINE_EDIT_FE_TYPE, useStores: STORE_SIP),
        $this->dbIndexData
    );
    // Prepare feAttributes for rendering
    $fe->process()
    // Generate HTML representation of formEl
    $data = $renderer->renderFormElement($fe);
    break;
```

1

2

3

Update Record

```
case FORM_INLINE_EDIT_SAVE:
    // Get all necessary values for the update
    $table = $this->store->getVar( key: INLINE_EDIT_TABLE, useStores: STORE_SIP);
    $column = $this->store->getVar( key: INLINE_EDIT_COLUMN, useStores: STORE_SIP);
    $recordId = $this->store->getVar( key: INLINE_EDIT_RECORD_ID, useStores: STORE_SIP);
    $updatedValue = $this->store->getVar( key: INLINE_EDIT_UPDATED_VALUE, useStores: STORE_CLIENT . STORE_ZERO
        , sanitizeClass: SANITIZE_ALLOW_ALL);
    $oldValue = $this->store->getVar( key: FE_VALUE, useStores: STORE_SIP, sanitizeClass: SANITIZE_ALLOW_ALL);
    // Check if changes were made
    if($updatedValue !== $oldValue){
        // Update the record with the new value
        $this->dbArray[$this->dbIndexQfq]->sql( sql: "UPDATE $table SET $column = ? WHERE `id` = ?"
            , mode: ROW_EXPECT_1,[$updatedValue,$recordId]);
        $data = $updatedValue;
        // Prepare formSpec for logging
        $this->formSpec[F_DO_NOT_LOG_COLUMN] = '';
        $this->formSpec[F_ID] = $this->store->getVar( key: FE_FORM_ID, useStores: STORE_SIP) ?? '0';
        $this->formSpec[F_NAME] = $this->store->getVar( key: INLINE_EDIT_FORM_NAME, useStores: STORE_SIP);
        // Log to formSubmitLog table
        $this->logFormSubmitRequest( mode: FORM_INLINE_EDIT_LOAD);
    } else {
        $data = $oldValue;
    }
    break;
```

1

2

3

Logging

1

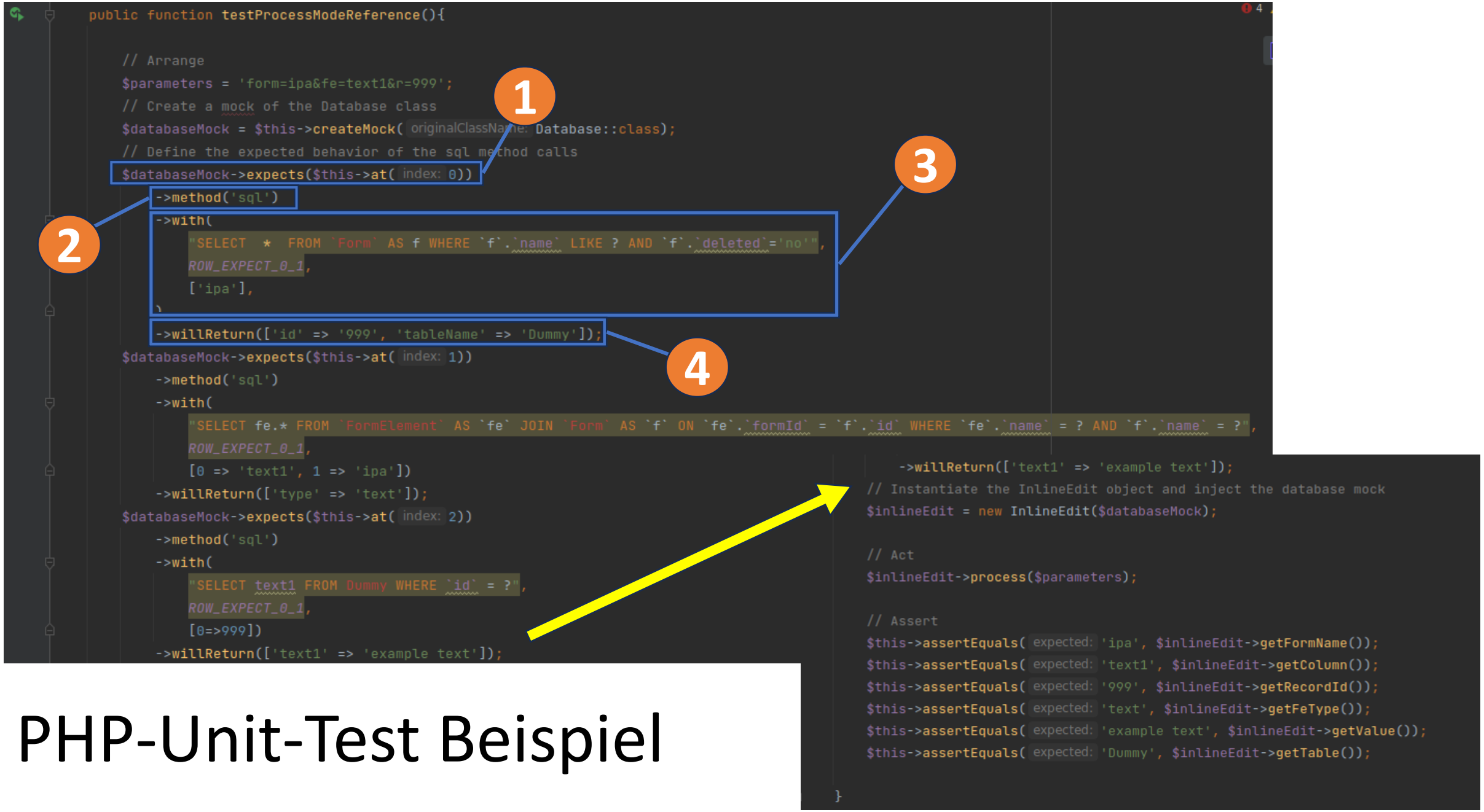
Es wird nur dann ein Log-Eintrag erstellt, wenn auch Daten gespeichert wurden.

Wer? -> feUser, clientIp
Wann? -> created
Wo? -> pageId
Wie? -> mode
Was? -> formData, sipData

2

Kontrollieren

PHP-Unit-Test Beispiel



PHP-Unit-Test Beispiel

Auswerten

Zeitplanung Soll/Ist & Fazit/Schlusswort

Zeitplanung Soll/Ist

Projektphasen	Total				FR 26.05.23	DI 30.05.23	MI 31.05.23	DO 01.06.23	FR 02.06.23	MO 05.06.23	DI 06.06.23	MI 07.06.23	DO 08.06.23	FR 09.06.23
	Soll		Ist											
	Stunden	Prozent	Stunden	Prozent										
Projektzeit	80	100%	80	100%										
Informieren	3	3.75%	3	3.75%										
Detaillierte Aufgabenstellung studieren	1	1.25%	1	1.25%										
Kriterienkatalog/QV-Leitfaden studiere	1	1.25%	1	1.25%										
Recherche zum Thema Inline-Editing	1	1.25%	1	1.25%										
Planen	7	8.75%	8	10%										
Zeitplan erstellen	2	2.5%	1	1.25%										
Use Case Diagramm erstellen	1	1.25%	1	1.25%										
Klassen Diagramm erstellen	2	2.5%	3	3.75%										
Sequenz Diagramm erstellen	2	2.5%	3	3.75%										
Entscheiden	1	1.25%	1	1.25%										
Design Pattern definieren	1	1.25%	1	1.25%										
Realisieren	36	45%	29	36.25%										
InlineEdit.php Klasse implementieren	20	25%	14	17.5%										
API/Schnitstelle erstellen	2	2.5%	4	5%										
JavaScript implementieren	6	7.5%	3	3.75%										
Fehlerbehandlung implementieren	2	2.5%	2	2.5%										
Logging implementieren	5	6.25%	5	6.25%										
Benutzeranleitung schreiben (QFQ-Do	1	1.25%	1	1.25%										
Kontrollieren	7	8.8%	4	5%										
Testkonzept erarbeiten	1	1.25%	1	1.25%										
Unit-Test erstellen	4	5%	3	3.75%										
Integrations-Test erstellen	2	2.5%	1	1.25%										
Auswerten	2	2.5%	2	2.5%										
Zeitplanung SOLL/IST abgleichen	1	1.25%	1	1.25%										
Reflexion und Schlusswort schreiben	1	1.25%	1	1.25%										
Dokumentation & Organisation	24	30%	33	41.25%										
Gespräch mit Experten	2	2.5%	2	2.5%										
Dokumentation Struktur erstellen	1	1.25%	1	1.25%										
Dokumentation/Tagesjournal schreibe	19	23.75%	30	37.5%										
Reserve	2	2.5%	0	0%										

Fazit & Schlusswort

+ Praktische Arbeit
+ nützliches Feature
+ PHP-Unit-Test
- Dokumentation schreiben

THE END