

FormUtil

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Description

- `org.joget.apps.form.service.FormUtil`
- Under `wflow-core` module
- Utility methods for the Form module.

Code Sample

```
import org.joget.apps.app.dao.FormDefinitionDao;
import org.joget.apps.app.model.FormDefinition;
import org.joget.apps.app.model.AppDefinition;
import org.joget.apps.app.service.AppUtil;
import org.joget.apps.form.model.Form;
import org.joget.apps.form.service.FormService;
import org.joget.apps.form.service.FormUtil;

AppService appService = (AppService) AppUtil.getApplicationContext().getBean("appService");
FormDefinitionDao formDefinitionDao = (FormDefinitionDao) AppUtil.getApplicationContext().getBean(
    "formDefinitionDao");
FormService formService = (FormService) AppUtil.getApplicationContext().getBean("formService");

String id = "crm_account";
String appId = "crm";
Long appVersion = appService.getPublishedVersion(appId);

AppDefinition appDef = appService.getAppDefinition(appId, appVersion.toString());
FormDefinition formDef = formDefinitionDao.loadById(formId, appDef);
if (formDef != null) {
    //create the form
    Form form = (Form) formService.createElementFromJson(formDef.getJson(), true);

    //Find an element by field id
    Element e = FormUtil.findElement("accountName", form, null);
}
```

Fields

`FORM_BUILDER_ACTIVE`

```
public static final java.lang.String FORM_BUILDER_ACTIVE = "formBuilderActive";
```

Key used to sets the request attribute to indicate the current request is from form builder.

`FORM_ERRORS_PARAM`

```
public static final java.lang.String FORM_ERRORS_PARAM = "_FORM_ERRORS";
```

Key used to passes the form errors to the next submission for comparison.

FORM_META_ORIGINAL_ID

```
public static final java.lang.String FORM_META_ORIGINAL_ID = "_FORM_META_ORIGINAL_ID";
```

Key used to stores the form record id in a hidden field of a form

FORM_RESULT_LOAD_ALL_DATA

```
public static final java.lang.String FORM_RESULT_LOAD_ALL_DATA = "FORM_RESULT_LOAD_ALL_DATA";
```

Key used by Multi Paged Form to loads all the data from child forms.

PROPERTY_CLASS_NAME

```
public static final java.lang.String PROPERTY_CLASS_NAME = "className";
```

Key used to retrieves class name from properties

PROPERTY_CUSTOM_PROPERTIES

```
public static final java.lang.String PROPERTY_CUSTOM_PROPERTIES = "customProperties";
```

Prefix for a form id used to builds Hibernate Query (HQL) conditions

PROPERTY_DATE_CREATED

```
public static final java.lang.String PROPERTY_DATE_CREATED = "dateCreated";
```

Key used to stores created data of a record

PROPERTY_DATE_MODIFIED

```
public static final java.lang.String PROPERTY_DATE_MODIFIED = "dateModified";
```

Key used to stores modified data of a record

PROPERTY_ELEMENT_UNIQUE_KEY

```
public static final java.lang.String PROPERTY_ELEMENT_UNIQUE_KEY = "elementUniqueKey";
```

Key used to to store a unique running number for element in properties

PROPERTY_ELEMENTS

```
public static final java.lang.String PROPERTY_ELEMENTS = "elements";
```

Key used to retrieves child elements for an element in json

PROPERTY_FORM_DEF_ID

```
public static final java.lang.String PROPERTY_FORM_DEF_ID = "formdefid";
```

Key used to retrieves form definition id from properties

PROPERTY_GROUPING

```
public static final java.lang.String PROPERTY_GROUPING = "grouping";
```

Key used to retrieves grouping from properties

PROPERTY_ID

```
public static final java.lang.String PROPERTY_ID = "id";
```

Key used to retrieves id from properties

PROPERTY_LABEL

```
public static final java.lang.String PROPERTY_LABEL = "label";
```

Key used to retrieves label from properties

PROPERTY_OPTIONS

```
public static final java.lang.String PROPERTY_OPTIONS = "options";
```

Key used to retrieves options from properties

PROPERTY_OPTIONS_DELIMITER

```
public static final java.lang.String PROPERTY_OPTIONS_DELIMITER = ";";
```

Delimiter used to separate options

```
PROPERTY_POST_PROCESSOR
```

```
public static final java.lang.String PROPERTY_POST_PROCESSOR = "postProcessor";
```

Key used to retrieves post processor tool from properties

```
PROPERTY_POST_PROCESSOR_RUN_ON
```

```
public static final java.lang.String PROPERTY_POST_PROCESSOR_RUN_ON = "postProcessorRunOn";
```

Key used to retrieves running mode of a post processor from properties

```
PROPERTY_PROPERTIES
```

```
public static final java.lang.String PROPERTY_PROPERTIES = "properties";
```

Key used to retrieves element properties from json

```
PROPERTY_READONLY
```

```
public static final java.lang.String PROPERTY_READONLY = "readonly";
```

Key used to retrieves readonly from properties

```
PROPERTY_READONLY_LABEL
```

```
public static final java.lang.String PROPERTY_READONLY_LABEL = "readonlyLabel";
```

Key used to retrieves display readonly as label from properties

```
PROPERTY_SELECTED
```

```
public static final java.lang.String PROPERTY_SELECTED = "selected";
```

Key used to retrieves selected from properties

```
PROPERTY_TABLE_NAME
```

```
public static final java.lang.String PROPERTY_TABLE_NAME = "tableName";
```

Key used to retrieves table name from json

```
PROPERTY_TEMP_FILE_PATH
```

```
public static final java.lang.String PROPERTY_TEMP_FILE_PATH = "_tempFilePathMap";
```

Key used to stores the paths of uploaded temporary files

```
PROPERTY_VALIDATOR
```

```
public static final java.lang.String PROPERTY_VALIDATOR = "validator";
```

Key used to retrieves validator from json

```
PROPERTY_VALUE
```

```
public static final java.lang.String PROPERTY_VALUE = "value";
```

Key used to retrieves value from properties

Methods

```
clearProcessedFormJson
```

```
public static void clearProcessedFormJson()
```

Used by system to clears the current processing form json in current thread

```
executeActions
```

```
public static org.joget.apps.form.model.FormData executeActions(org.joget.apps.form.model.Form form, org.joget.apps.form.model.Element element, org.joget.apps.form.model.FormData formData)
```

Utility method to recursively find and invoke actions starting from an element.

executeElementFormatData

```
public static org.joget.apps.form.model.FormData executeElementFormatData(org.joget.apps.form.model.Element element, org.joget.apps.form.model.FormData formData)
```

Utility method to recursively find and invoke the formatData method starting from an element.

Return a java.util.Map mapping a binder to FormRowSets containing formatted values from all elements.

executeElementFormatDataForValidation

```
public static org.joget.apps.form.model.FormData executeElementFormatDataForValidation(org.joget.apps.form.model.Element element, org.joget.apps.form.model.FormData formData)
```

Utility method to recursively find and invoke the formatDataForValidation method starting from an element.

executeLoadBinders

```
public static org.joget.apps.form.model.FormData executeLoadBinders(org.joget.apps.form.model.Element element, org.joget.apps.form.model.FormData formData)
```

Utility method to recursively traverse and invoke load binders starting from an element.

executeOptionBinders

```
public static org.joget.apps.form.model.FormData executeOptionBinders(org.joget.apps.form.model.Element element, org.joget.apps.form.model.FormData formData)
```

Utility method to recursively find and invoke option binders starting from an element.

executePostFormSubmissionProcessor

```
public static void executePostFormSubmissionProcessor(org.joget.apps.form.model.Form form, org.joget.apps.form.model.FormData formData)
```

Utility methods to execute tool after form submission

executeValidators

```
public static boolean executeValidators(org.joget.apps.form.model.Element element, org.joget.apps.form.model.FormData formData)
```

Utility method to recursively find and invoke validators starting from an element.

findAndParseElement

```
public static org.joget.apps.form.model.Element findAndParseElement(java.lang.String json, java.lang.String fieldId)
```

Finds and parses the form field element from form json by field id

findAndParseElementFromJsonObject

```
public static org.joget.apps.form.model.Element findAndParseElementFromJsonObject(org.json.JSONObject obj, java.lang.String fieldId) throws java.lang.Exception
```

Finds and parses the form field element from form json object by field id

findElement

```
public static org.joget.apps.form.model.Element findElement(java.lang.String id, org.joget.apps.form.model.Element rootElement, org.joget.apps.form.model.FormData formData)
```

Utility method to recursively find an element by ID.

findElement

```
public static org.joget.apps.form.model.Element findElement(java.lang.String id, org.joget.apps.form.model.Element rootElement, org.joget.apps.form.model.FormData formData, java.lang.Boolean includeSubForm)
```

Utility method to recursively find an element by ID.

findLoadBinder

```
public static org.joget.apps.form.model.FormLoadBinder findLoadBinder(org.joget.apps.form.model.Element element)
```

Utility method to recursively find the nearest ancestor load binder for an element.

findOptionsBinder

```
public static org.joget.apps.form.model.FormLoadBinder findOptionsBinder(org.joget.apps.form.model.Element element)
```

Utility method to recursively find the nearest ancestor options binder for an element.

findRootForm

```
public static org.joget.apps.form.model.Form findRootForm(org.joget.apps.form.model.Element element)
```

Utility method to recursively find the parent Form for an element.

findStoreBinder

```
public static org.joget.apps.form.model.FormStoreBinder findStoreBinder(org.joget.apps.form.model.Element element)
```

Utility method to recursively find the nearest ancestor store binder for an element.

generateDefaultForm

```
public static java.lang.String generateDefaultForm(java.lang.String formId, org.joget.apps.app.model.FormDefinition formDef)
```

Utility method used to creates a new form definition json

generateDefaultForm

```
public static java.lang.String generateDefaultForm(java.lang.String formId, org.joget.apps.app.model.FormDefinition formDef, org.joget.apps.app.model.FormDefinition copyFormDef)
```

Utility method used to creates a new form definition json based on another form definition

generateDefaultTemplateDataModel

```
public static java.util.Map generateDefaultTemplateDataModel(org.joget.apps.form.model.Element element, org.joget.apps.form.model.FormData formData)
```

Generates a standard map of data to be used within an element template.

generateElementHtml

```
public static java.lang.String generateElementHtml(final org.joget.apps.form.model.Element element, final org.joget.apps.form.model.FormData formData, final java.lang.String templatePath, java.util.Map dataModel)
```

Generates HTML output using a FreeMarker template.

generateElementJson

```
public static java.lang.String generateElementJson(org.joget.apps.form.model.Element element) throws java.lang.Exception
```

Generates JSON representing an element.

generateElementJsonObject

```
public static org.json.JSONObject generateElementJsonObject(org.joget.apps.form.model.Element element) throws java.lang.Exception
```

Generates a JSONObject to represent an element

generateElementMetaData

```
public static java.lang.String generateElementMetaData(org.joget.apps.form.model.Element element)
```

Generates the HTML tag meta data for the element that is used by the form builder.

generateElementPropertyJson

```
public static java.lang.String generateElementPropertyJson(org.joget.apps.form.model.Element element)
```

Generates JSON representing the properties of an element.

generateElementPropertyValues

```
public static java.lang.String generateElementPropertyValues(java.lang.String[] values)
```

Generates a delimited string from an array of Strings.

generatePropertyJsonObject

```
public static org.json.JSONObject generatePropertyJsonObject(Map<java.lang.String, java.lang.Object>
properties) throws org.json.JSONException
```

Generates a org.json.JSONObject to represent the properties of an element

getAjaxOptionsBinderData

```
public static org.joget.apps.form.model.FormRowSet getAjaxOptionsBinderData(java.lang.String
dependencyValue, org.joget.apps.app.model.AppDefinition appDef, java.lang.String nonce, java.lang.String
binderData)
```

Gets data from Options Binder for AJAX call

getApplicationContext

```
public static org.springframework.context.ApplicationContext getApplicationContext()
```

Utility method to retrieve the ApplicationContext of the system

getElementError

```
public static java.lang.String getElementError(org.joget.apps.form.model.Element element, org.joget.apps.
form.model.FormData formData)
```

Retrieve the error attached to the element

getElementParameterName

```
public static java.lang.String getElementParameterName(org.joget.apps.form.model.Element element)
```

Returns the parameter name for the element.

getElementProcessedJson

```
public static java.lang.String getElementProcessedJson(org.joget.apps.form.model.Element element)
```

Utility method to convert an element to json

getElementPropertyOptionsMap

```
public static java.util.Collection<java.util.Map> getElementPropertyOptionsMap(org.joget.apps.form.model.
Element element, org.joget.apps.form.model.FormData formData)
```

Retrieves the property options for an element, first from the element's options binder. If no binder is available, the default options are used.

getElementPropertyValue

```
public static java.lang.String getElementPropertyValue(org.joget.apps.form.model.Element element, org.joget.
apps.form.model.FormData formData)
```

Retrieves the property value for an element, first from the element's load binder. If no binder is available, the default value is used.

Overrides the binder/default value when value from request parameter is available.

getElementPropertyValues

```
public static java.lang.String[] getElementPropertyValues(org.joget.apps.form.model.Element element, org.
joget.apps.form.model.FormData formData)
```

Retrieves the property value for an element, first from the element's load binder. If no binder is available, the default value is used.

Overrides the binder/default value when value from request parameter is available.

This method supports multiple values for a property.

getElementValidatorDecoration

```
public static java.lang.String getElementValidatorDecoration(org.joget.apps.form.model.Element element, org.
joget.apps.form.model.FormData formData)
```

Retrieve a decoration on an element by any attached validator, e.g. marking a required field.

getFormColumns

```
public static java.util.Collection<java.util.Map<java.lang.String, java.lang.String>> getFormColumns(org.
joget.apps.app.model.AppDefinition appDef, java.lang.String formId)
```

Retrieve all form fields id & label in form data table

getProcessedFormJson

```
public static java.lang.String getProcessedFormJson()
```

Used by system to gets the current processing form json in current thread

getRequestParameter

```
public static java.lang.String getRequestParameter(org.joget.apps.form.model.Element element, org.joget.apps.form.model.FormData formData)
```

Returns the request parameter value for an element

getRequestParameterValues

```
public static java.lang.String[] getRequestParameterValues(org.joget.apps.form.model.Element element, org.joget.apps.form.model.FormData formData)
```

Returns the request parameter value for an element

getUniqueKey

```
public static java.lang.String getUniqueKey()
```

Gets a running number a unique key

isAjaxOptionsSupported

```
public static boolean isAjaxOptionsSupported(org.joget.apps.form.model.Element element, org.joget.apps.form.model.FormData formData)
```

Check the element is using Ajax to load options

isElementPropertyValuesChanges

```
public static boolean isElementPropertyValuesChanges(org.joget.apps.form.model.Element element, org.joget.apps.form.model.FormData formData, java.lang.String[] updatedValues)
```

Utility methods to check the value of an element is changed

isFormBuilderActive

```
public static boolean isFormBuilderActive()
```

Check whether request is currently in the form builder.

isFormSubmitted

```
public static boolean isFormSubmitted(org.joget.apps.form.model.Element element, org.joget.apps.form.model.FormData formData)
```

Check a form is submitted or not

isReadOnly

```
public static boolean isReadOnly(org.joget.apps.form.model.Element element, org.joget.apps.form.model.FormData formData)
```

Check an element is readonly or not

loadFormData

```
public static java.util.Map<java.lang.String, java.lang.Object> loadFormData(final java.lang.String appId, final java.lang.String appVersion, final java.lang.String formDefId, final java.lang.String primaryKeyValue, final boolean includeSubformData, final boolean includeReferenceElements, final boolean flatten, final org.joget.workflow.model.WorkflowAssignment assignment)
```

Utility method to fetch submitted form data values including data from subforms, and reference fields.

Returns a key-value pair (optionally flattened) for all the data that is part of a form submission.

The returned data includes top level form data, subform data (including recursive subforms), and data pointed by reference fields (like SelectBox pointing to a datalist item)

Parameters

includeSubformData - true to recursively include subform data

includeReferenceElements - true to include data from reference elements e.g. selectbox, etc.

flatten - true to flatten data into a one level key-value map

assignment - Optional workflow assignment (for assignment hash variables)

Return a java.util.Map<java.lang.String, Object> representing the form data. The key is the element ID, and the value is either a java.lang.String for an element value, java.util.Map<java.lang.String, Object> representing subform data, or java.util.Collection<java.util.Map<java.lang.String, Object>> for reference fields.

loadFormDataJson

```
public static java.lang.String loadFormDataJson(java.lang.String appId, java.lang.String appVersion, java.lang.String formDefId, java.lang.String primaryKeyValue, boolean includeSubformData, boolean includeReferenceElements, boolean flatten, org.joget.workflow.model.WorkflowAssignment assignment) throws org.json.JSONException
```

Similar to loadFormData, returns results in JSON format.

parseBinderFromJsonObject

```
public static org.joget.apps.form.model.FormBinder parseBinderFromJsonObject(org.json.JSONObject obj, org.joget.apps.form.model.Element element, java.lang.String binderType) throws java.lang.Exception
```

Parse binder object from element json object

parseChildElementsFromJsonObject

```
public static void parseChildElementsFromJsonObject(org.json.JSONObject obj, org.joget.apps.form.model.Element parent) throws java.lang.Exception
```

Parse child elements from element json object

parseElementFromJson

```
public static org.joget.apps.form.model.Element parseElementFromJson(java.lang.String json) throws java.lang.Exception
```

Parses form field element from the element json string

parseElementFromJsonObject

```
public static org.joget.apps.form.model.Element parseElementFromJsonObject(org.json.JSONObject obj, org.joget.apps.form.model.Element parent) throws java.lang.Exception
```

Parses form field element from the element json object

parsePropertyFromJsonObject

```
public static java.util.Map<java.lang.String, java.lang.Object> parsePropertyFromJsonObject(org.json.JSONObject obj) throws org.json.JSONException
```

Parses the properties attribute from a JSON object into a Map

parseValidatorFromJsonObject

```
public static org.joget.apps.form.model.Validator parseValidatorFromJsonObject(org.json.JSONObject obj) throws java.lang.Exception
```

Parse validator object from element json object

setAjaxOptionsElementProperties

```
public static void setAjaxOptionsElementProperties(org.joget.apps.form.model.Element element, org.joget.apps.form.model.FormData formData)
```

Sets security data for multi options element which using Ajax call to load options

setFormBuilderActive

```
public static void setFormBuilderActive(java.lang.Boolean active)
```

Sets flag in request to indicate whether is currently in the form builder.

setProcessedFormJson

```
public static void setProcessedFormJson(java.lang.String json)
```

Used by system to sets the current processing form json in current thread

setReadOnlyProperty

```
public static void setReadOnlyProperty(org.joget.apps.form.model.Element element)
```

Recursively set the readonly property for all descendent elements.

setReadOnlyProperty

```
public static void setReadOnlyProperty(org.joget.apps.form.model.Element element, java.lang.Boolean readonly, java.lang.Boolean label)
```

Recursively set the readonly property for all descendent elements.