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# Step by Step on how to use the SAPUI5 file upload feature

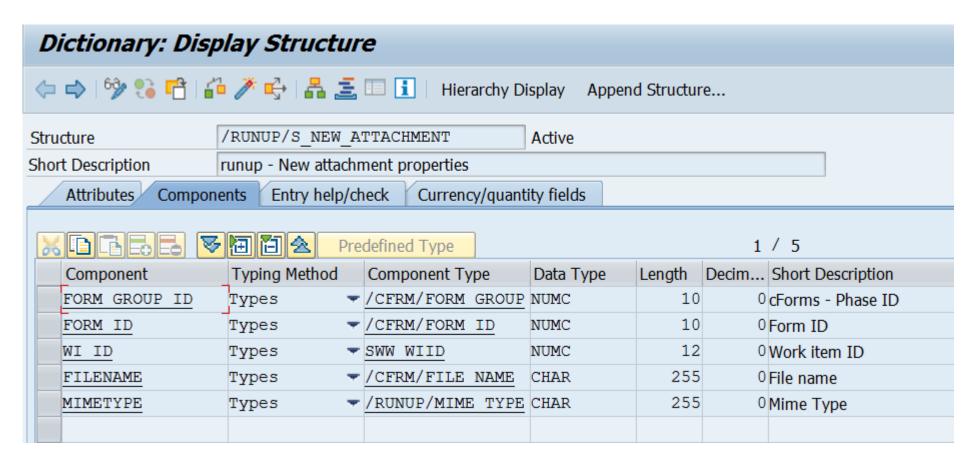


### Introduction

This document will give you in details all the necessary steps (Backend and Frontend) to use easily the file upload feature in your SAP SAPUI5 apps.

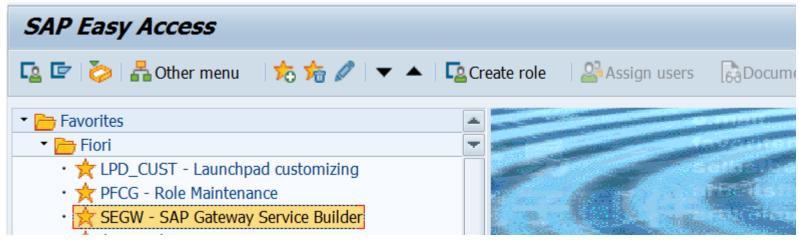
## **ABAP Back End preparation**

Use the Data Dictionary tool (SE11) to prepare a new DD structure for the entity type to be created for uploading files

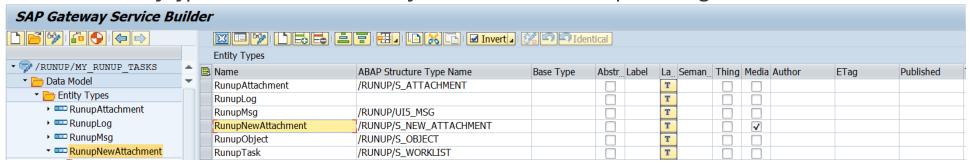


The Goal in the given example is to upload a file for workflow task and the workitem ID is used as one of the keys for the new file

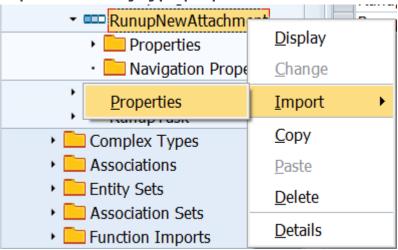
### Call the Gateway Services Builder (SEGW)

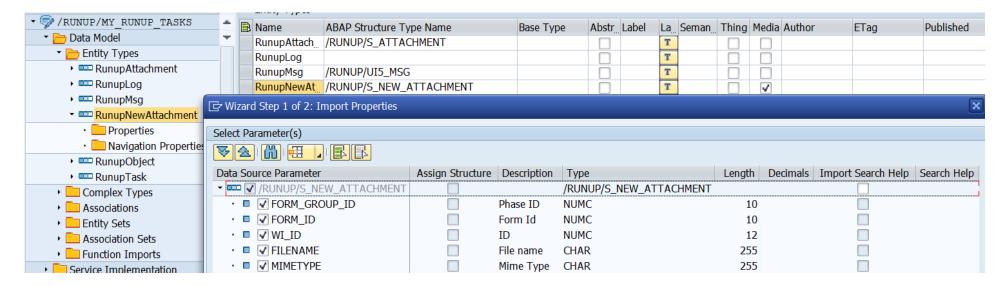


Create a new entity type that refers the dictionary structure created in step 1 and flag the media checkbox

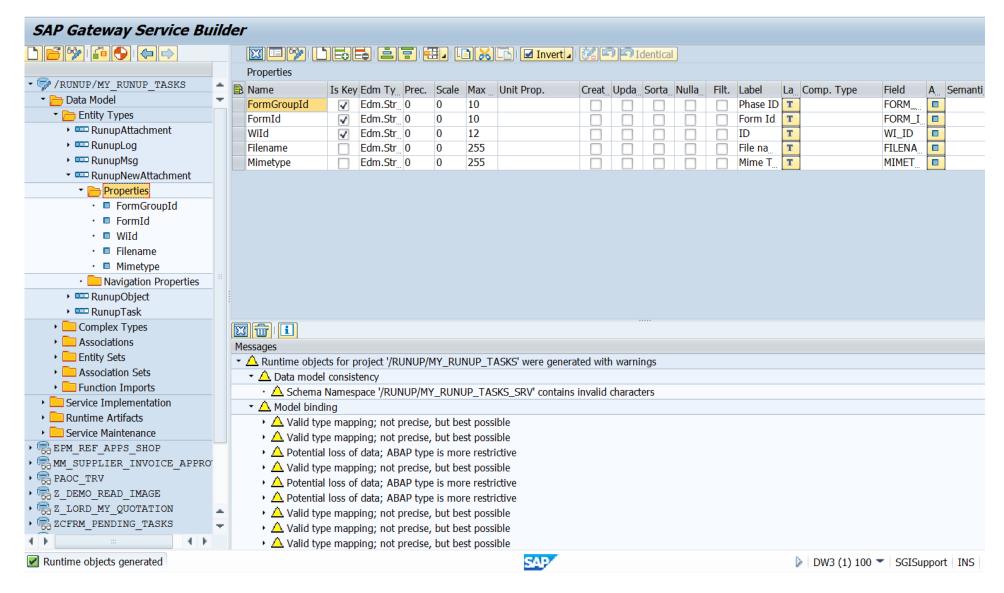


Import the entity type properties from the dictionary structure if not done during entity type creation

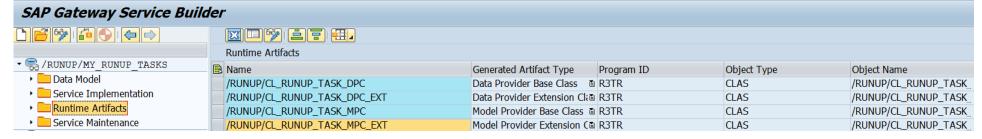


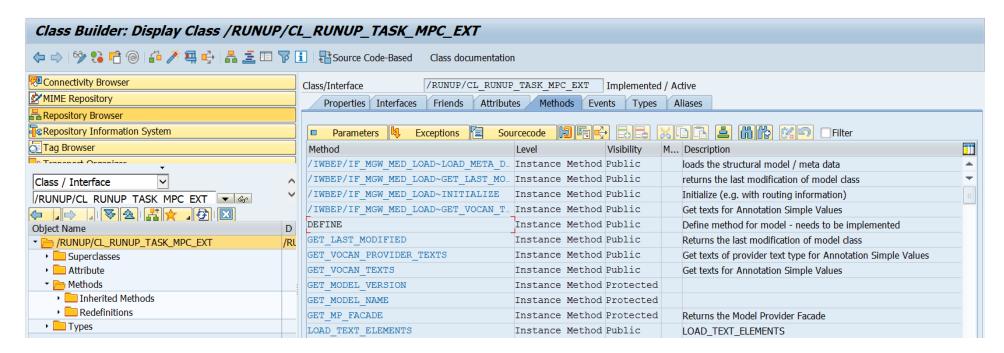


Save and generate

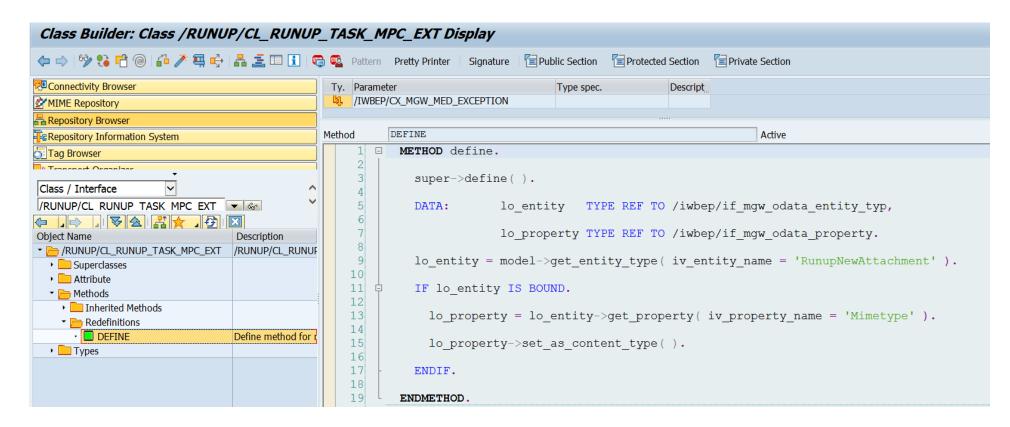


### Update the data model definition using the MPC\_EXT generated class





Redefine the standard method called DEFINE as below to declare your mime type property as content type for the new entity. In this provided example the property is called "Mimetype"

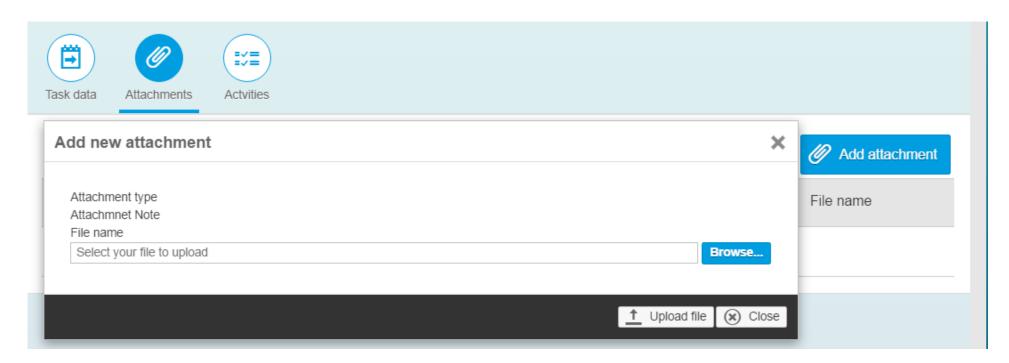


Frontend preparation

XML fragment for uploading your file

```
<core:FragmentDefinition xmlns:core="sap.ui.core" xmlns="sap.m">
 <Dialog
     xmlns:b="sap.suite.ui.commons"
     xmlns:m="sap.m" xmlns="sap.ui.commons"
     xmlns:u="sap.ui.unified"
     xmlns:1="sap.ui.layout.form"
     title="{i18n>TIT ADD NW ATTACHMENT}"
     resizable="false"
     draggable="false"
     showHeader="false"
     horizontalScrolling="false"
     ContentWidth="850px">
    <content>
     <1:SimpleForm editable="true">
     <1:content>
      <m:VBox>
      <Label id="AttachFile" text="{i18n&gt;LBL ATTACH FILE}" />
     <u:FileUploader
       id="AttachUploader" width="700px"
       sameFilenameAllowed="false"
       placeholder="Select your file to upload" style="Emphasized">
     </u:FileUploader>
     </m:VBox>
    </l:content>
    </l:SimpleForm>
    </content>
    <buttons>
     <Button icon="sap-icon://upload" id="ButAttachUpload"</pre>
                                                                     press="OnAttachUpload" text="{i18n>LBL BUT UPLOAD}" type="Emphasized"/>
     <Button icon="sap-icon://sys-cancel" id="ButCloseAttachDialog" press="OnCloseAttachDialog" text="{i18n&gt;LBL BUT CLOSE}" type="Emphasized"/>
    </buttons>
  </Dialog>
</core:FragmentDefinition>
```

For reuse purposes, you can define a dialog in a XML fragment to be called from the view



Instantiating the XML fragment in the view (js) and closing the dialog

```
// Event handler for Opening the attachmnet dialog
 onAddAttachment: function(oEvent) {
   if (! this.oAttachDialog) {
   this.oAttachDialog = sap.ui.xmlfragment("runup tasks.AddAttachment",this.getView().getController());
   this.oAttachDialog.setModel(this.getView().getModel());
   this.getView().addDependent(this.oAttachDialog);
   this.oAttachDialog.setResizable(false);
   this.oAttachDialog.open();
  },
// Event handler for closing the attachment dialog
 OnCloseAttachDialog: function(oEvent) {
   if (! this.oAttachDialog) {
   this.oAttachDialog = sap.ui.xmlfragment("runup_tasks.AddAttachment",this.getView().getController());
   var oFileUploader = sap.ui.getCore().byId("AttachUploader");
   oFileUploader.setValue("");
   this.oAttachDialog.close();
  },
```

Code to POST the file binary content to back end

```
OnAttachUpload: function(oEvent) {
      var oFileUploader = sap.ui.getCore().byId("AttachUploader");
          sFileName = oFileUploader.getValue();
         if (!oFileUploader.getValue()) {
             sap.m.MessageToast.show("Choose a file first");
             return;
      var file = jQuery.sap.domById(oFileUploader.getId() + "-fu").files[0];
      var base64 marker = 'data:' + file.type + ';base64,';
      var reader = new FileReader();
 // On load
   reader.onload = (function(theFile) {
     return function(evt) {
    // Locate base64 content
    var base64Index = evt.target.result.index0f(base64 marker)
           + base64 marker.length;
    // Get base64 content
    var base64 = evt.target.result.substring(base64Index);
    var sTasksService = window.location.origin
      + "/sap/opu/odata/RUNUP/MY RUNUP TASKS SRV/RunupTasks";
    var sAttachService = window.location.origin
      + "/sap/opu/odata/RUNUP/MY RUNUP TASKS SRV/RunupNewAttachments";
    var oViewModel = oView.getModel();
    var oContext = oView.getBindingContext();
    var oRunupTask = oViewModel.getProperty(oContext.getPath());
    var oDataModel = sap.ui.getCore().getModel();
       sWorkitemId = JSON.stringify(oRunupTask.WiId);
       var service url = sAttachService;
```

```
$.ajaxSetup({ cache: false });
     jQuery.ajax({
      url : service url,
      async : false,
      dataType : 'json',
      cache : false,
      data: base64,
      type : "POST",
      beforeSend : function(xhr) {
        xhr.setRequestHeader("X-CSRF-Token", token);
        xhr.setRequestHeader("Content-Type", file.type);
        xhr.setRequestHeader("slug", sFileName);
        xhr.setRequestHeader("WorkitemId", oRunupTask.WiId);
      },
      success : function(odata) {
          sap.m.MessageToast.show("File successfully uploaded");
          oFileUploader.setValue("");
      },
      error : function(odata) {
        sap.m.MessageToast.show("File Upload error");
    });
  };
}) (file);
// Read file
reader.readAsDataURL(file);
oView = this.getView();
oAttachDataModel = this.oDataModel;
 },
```

# CREATE\_STREAM method redefinition

After preparing all the frontend elements, you need to redefine the method CREATE\_STREAM Of the generated class DPC\_EXT

Class/Interface /RUNUP/CL_RUNUP_TASK_DPC_EXT Implemented / Active  Properties Interfaces Friends Attributes Methods Events Types Aliases							
Parameters 🤼 Exceptions 🖺 Sourcecode 🔀 🔄 🛶		<b>K</b>			🌠 🧐 🗌 Filter		
Method	Level		Visibility	М	Description		
/IWBEP/IF_MGW_APPL_SRV_RUNTIME~CREATE_ENTITY	Instance	Method	Public		Execute a CREATE request (CreateRUD)		
/IWBEP/IF_MGW_APPL_SRV_RUNTIME~CREATE_DEEP_ENTITY		Method	Public		Execute a deep insert CREATE request (C		
/IWBEP/IF_MGW_APPL_SRV_RUNTIME~DELETE_ENTITY		Method	Public		Execute a DELETE request (CRUDelete)		
/IWBEP/IF_MGW_APPL_SRV_RUNTIME~GET_ENTITYSET		Method	Public		Execute a READ request (CReadUD) - FE		
/IWBEP/IF_MGW_APPL_SRV_RUNTIME~GET_ENTITYSET_DELTA	Instance	Method	Public		Execute a READ request (CReadUD) - FE		
/IWBEP/IF_MGW_APPL_SRV_RUNTIME~GET_EXPANDED_ENTITYS.	Instance	Method	Public		Execute a READ request (CReadUD) - FE		
/IWBEP/IF_MGW_APPL_SRV_RUNTIME~GET_EXPANDED_ENTITY		Method	Public		Execute a READ request (CReadUD) - EN		
/IWBEP/IF_MGW_APPL_SRV_RUNTIME~UPDATE_STREAM		Method	Public		Executes an UPDATE		
/IWBEP/IF_MGW_APPL_SRV_RUNTIME~CREATE_STREAM		Method	Public		Execute a CREATE		
/IWBEP/IF MGW APPL SRV RUNTIME~DELETE STREAM		Method	Public		Execute a DELETE		
/IWBEP/IF_MGW_APPL_SRV_RUNTIME~CHANGESET_BEGIN		Method	Public		Begin of a changeset		
/IWBEP/IF_MGW_APPL_SRV_RUNTIME~CHANGESET_END	Instance	Method	Public		End of a changeset		
/IWBEP/IF_MGW_APPL_SRV_RUNTIME~CHANGESET_PROCESS	Instance	Method	Public		Process all changeset operations at once		
/IWBEP/IF_MGW_APPL_SRV_RUNTIME~GET_IS_CONDITIONAL_I.	Instance	Method	Public		Get flag if conditional handling is done b		
/IWBEP/IF_MGW_APPL_SRV_RUNTIME~GET_IS_CONDI_IMPLE_F.	Instance	Method	Public		Get flag if conditional handling is done for		
/IWBEP/IF_SB_DPC_COMM_SERVICES~GET_GENERATION_STRAT.	Instance	Method	Public		Get generation strategy		
/IWBEP/IF_SB_DPC_COMM_SERVICES~RFC_EXCEPTION_HANDLI.	Instance	Method	Public		RFC call exception handling		
/IWBEP/IF_SB_DPC_COMM_SERVICES~RFC_SAVE_LOG	Instance	Method	Public		Save the RFC call log in the application Ic		
/IWBEP/IF_SB_DPC_COMM_SERVICES~SET_INJECTION	Instance	Method	Public		SET DPC injection		
/IWBEP/IF SB DPC COMM SERVICES~LOG MESSAGE	Instance	Method	Public		Log message in the logger		

```
Method
        /IWBEP/IF MGW APPL SRV RUNTIME~CREATE STREAM
                                                          Active
   28
   29
            DATA: 1s attachment
                                   TYPE
                                          /cfrm/s wf attach.
   30
            DATA: 1s attach type
                                   TYPE
                                          /cfrm/s attach type.
   31
   32
            DATA: ls hdr param
                                   TYPE
                                          ihttpnvp.
   33
            DATA: ls step
                                          /cfrm/steps.
                                   TYPE
   34
            DATA: ls workflowdata
                                   TYPE
                                          /cfrm/workflow data.
   35
           36
   37
   38
   39
   40
            DATA: lo facade TYPE REF TO /iwbep/if mgw dp int facade.
   41
   42
            REFRESH: 1t hdr params, 1t attachments.
   43
           lo facade ?= /iwbep/if mgw conv srv runtime~get dp facade().
   44
            lt hdr params = lo facade->get request header().
   45
   46
   47
            READ TABLE 1t hdr params INTO 1s hdr param WITH KEY name = 'workitemid'.
   48
           IF sy-subrc = 0.
   49
             lv wiid = ls hdr param-value.
   50
            ENDIF.
   51
   52
           IF lv wiid IS INITIAL.
      中
              RAISE /iwbep/cx mgw busi exception.
   53
   54
            ENDIF.
   55
```

The above code will allow you to read the parameters sent in the request header (like workitemid in the provided example)

After you can decode the base64 content to a xstring data and handle your content as you wish. In the provided example, I am using a home made function to transform the base64 to a xstring to be stored in SAP DMS later.

```
WHEN gc_entity_types-runupnewattachment.

lv_file_name = iv_slug.

* Convert Base64 encoded data

CALL FUNCTION '/RUNUP/DECODE_BASE64'

EXPORTING

iv_base64 = is_media_resource-value

IMPORTING

ev_file_data = lv_file_data.
```

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By Former Member, Apr 24, 2015

#### 8 Comments

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November 8, 2016 at 5:15 am

Great, But we already have sap controls to upload file, I appreciate your idea. But I would be grateful if you could reuse the existing controls.

Like(3)



November 8, 2016 at 5:25 pm

Great experience but I agree with Karthik, SAP Fiori Design Guidelines recommends this component since version 1.26: https://experience.sap.com/fiori-design-web/ui-components/upload-collection/

Like(1)



Prasenjit Singh Bist

August 5, 2019 at 3:58 pm

This is actually reinventing in a typical way kudos for effort but not required.

Like(0)



March 14, 2017 at 7:06 pm

That is what i was looking for, Thanks Jalil Benthami for this details.

Because it is more easy to understand than the SAPUI5 sap.m.UploadCollection which i faced a lot of issues with it specially when binding attachments and adding attachment to previous bounded ones and other issues.....

So I just used a simple sap.m.List with custom list item template and binding my attachment model to it then I can add / remove / edit the model without missing up the UI. and a custom method for upload that use your simple organized ajax call.

Like(0)



June 2, 2017 at 2:26 pm

Thanks Jalil Benthami,

But I would like to ask something,

In the final step, How can I upload the file in SAP DMS, after get the file as base64?

Like(0)



Former Member

July 3, 2017 at 11:18 am

As i am new to sapui5 trying to upload a file from ui part.i follwed the blog still i am facing an issue.can anyone explain me why it is not working.

var token;

var Service1;

var oView;

```
var sFileName;
var oAttachDataModel;
sap.ui.define([
"sap/ui/core/mvc/Controller"
], function(Controller) {
"use strict";
return Controller.extend("namespace.controller.fileup_View1", {
handleUploadPress: function(evnt) {
//alert("hello");
var oFileUploader = this.byld("fileUploader");
sFileName = oFileUploader.getValue();
if (sFileName === "") {
sap.m.MessageToast.show("Please select a File to Upload");
return;
} else {
// sap.m.MessageToast.show("File selected");
var oView = this.getView();
var oUploader = oView.byld("fileUploader");
var oFileUploader = this.getView().byld("fileUploader");
var file = jQuery.sap.domById(oFileUploader.getId() + "-fu").files[0];
var base64_marker = "data:" + file.type + ";base64,";
var filename = file.name;
var reader = new FileReader();
//on load
reader.onLoad = (function(file) {
return function(evt) {
//locate base64 content
var base64Index = evt.target.result.indexOf(base64_marker) + base64_marker.lenght;
// get base64 content
var base64 = evt.target.result.substring(base64Index);
var sTasksService = "http://sapserver2.us.xxxxxx.net.8001/sap/opu/odata/sap/ZOD_FILEATTACH_CRUD_SRV/fileSet('TextFileUpload')/$value";
```

```
var sService2 = "http://sapserver2.us.xxxxxx.net.8001/sap/opu/odata/sap/ZOD_FILEATTACH_CRUD_SRV/ATTACHUPLOADSet";
var oViewModel = oView.getModel();
var oContext = oView.getBindingContext();
var oTask = oViewModel.getProperty(oContext.getPath());
var oDataModel = sap.ui.getCore.getModel();
var sWorkitemId = JSON.stringify(oTask.wild);
var service_url = sService2;
$.ajaxsetup({
cache: false
});
jQuery.ajax({
url: service_url,
asyn: false,
datatype: "json",
cache: false,
data: base64.
type: "post",
beforeSend: function(xhr) {
xhr.setRequestHeader("x-csrf-Token", token);
xhr.setRequestHeader("content-Type", file.type);
xhr.setRequestHeader("slug", sFileName);
xhr.setRequestHeader("WorkitemId", oTask.Wild);
success: function(odata) {
sap.m.MessageToast.show("file successfully uploaded");
oFileUploader.setValue("");
error: function(odata) {
sap.m.MessageToast.show("file Upload error");
});
})(file);
```

```
reader.readAsDataURL(file);
return;
// oView = this.getView();
// oAttachDataModel = this.oDataModel;
}
});
Like(0)
```



Former Member

December 9, 2017 at 9:08 pm

Please supply the code for decoding base64 sir.

Thank you in advance

Like(0)



sagar u

February 16, 2018 at 12:47 pm

Please provide the backend code for conversion of the 64bit encoded data to xstring and store it in database. /RUNUP/DECODEBASE64.

Like(0)

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