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How to upload Excel to SAP(using ABAP)

Posted on: December 30, 2019 | By: [Pawan Kesari](#) – [24 Comments](#)

ABAP code to upload XLSX file to SAP using ABAP. The method shown in the blog will work in SAP GUI and Webgui (program launched from Fiori Launchpad). This approach will also work with OData.

Code is based on class CL_FDT_XL_SPREADSHEET which can be instantiated using the file name and excel file in XSTRING variable. This processing of file as XSTRING is particularly useful in case of Fiori Apps, OData CREATE_STREAM method pass uploaded file already in XSTRING which can be simply passed on to class CL_FDT_XL_SPREADSHEET constructor.

After instantiating the class get list of worksheets in the file using IF_FDT_DOC_SPREADSHEET~GET_WORKSHEET_NAMES. Method GET_WORKSHEET_NAMES returns internal table. In most of the case, you would read the first worksheet name and call method IF_FDT_DOC_SPREADSHEET~GET_ITAB_FROM_WORKSHEET with worksheet name to get data in a dynamic internal table. However, if you have data over multiple worksheets then you would have to call method GET_ITAB_FROM_WORKSHEET in the loop for each worksheet.

There are some function modules (TEXT_CONVERT_XLS_TO_SAP) available in SAP which can help you read data from XLS/XLSX file but these are based on Office Integration and requires MS Office

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installed on your PC. Also, this Office Integration solution (*along with a range of other features*) is not supported in WebGUI. In other words, these FMs will only work when you are running your program in SAP WebGUI.

I have structured the logic in standalone SE38 program so you can copy-paste and have it ready for testing in your system. Obviously, you would have to adapt the code to use it in your application but you get the idea of how it works.

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```

1  *-----*
2  * Report ZPW_EXCELUPLOAD
3  *-----*
4  REPORT zpw_excelupload.
5
6  FIELD-SYMBOLS : <gt_data>          TYPE STANDARD TABLE .
7
8  SELECTION-SCREEN BEGIN OF BLOCK b1 WITH FRAME .
9      PARAMETERS : p_file TYPE ibiparms-path OBLIGATORY,
10                  p_ncol TYPE i OBLIGATORY DEFAULT 10.
11  SELECTION-SCREEN END OF BLOCK b1 .
12
13  *-----*
14  * at selection screen
15  *-----*
16  AT SELECTION-SCREEN ON VALUE-REQUEST FOR p_file.
17
18      DATA: lv_rc TYPE i.
19      DATA: lt_file_table TYPE filetable,
20              ls_file_table TYPE file_table.
21
22      CALL METHOD cl_gui_frontend_services=>file_open_dialog
23          EXPORTING
24              window_title = 'Select a file'
25          CHANGING
26              file_table   = lt_file_table
27              rc           = lv_rc.
28      IF sy-subrc = 0.
29          READ TABLE lt_file_table INTO ls_file_table INDEX 1.
30          p_file = ls_file_table-filename.
31      ENDIF.
32
33  START-OF-SELECTION .
34

```

```

35  PERFORM read_file .
36  PERFORM process_file.
37
38  *-----*
39  * Form READ_FILE
40  *-----*
41  FORM read_file .
42
43      DATA : lv_filename      TYPE string,
44             lt_records       TYPE solix_tab,
45             lv_headerxstring TYPE xstring,
46             lv_filelength    TYPE i.
47
48      lv_filename = p_file.
49
50      CALL FUNCTION 'GUI_UPLOAD'
51          EXPORTING
52              filename           = lv_filename
53              filetype           = 'BIN'
54          IMPORTING
55              filelength         = lv_filelength
56              header             = lv_headerxstring
57          TABLES
58              data_tab           = lt_records
59          EXCEPTIONS
60              file_open_error    = 1
61              file_read_error    = 2
62              no_batch           = 3
63              gui_refuse_filetransfer = 4
64              invalid_type       = 5
65              no_authority       = 6
66              unknown_error      = 7
67              bad_data_format    = 8
68              header_not_allowed = 9
69              separator_not_allowed = 10
70              header_too_long    = 11
71              unknown_dp_error   = 12
72              access_denied      = 13
73              dp_out_of_memory   = 14
74              disk_full          = 15
75              dp_timeout        = 16
76          OTHERS                = 17.
77
78      "convert binary data to xstring
79      "if you are using cl_fdt_xl_spreadsheet in odata then skips this step
80      "as excel file will already be in xstring
81      CALL FUNCTION 'SCMS_BINARY_TO_XSTRING'
82          EXPORTING

```



```

83     input_length = lv_filelength
84     IMPORTING
85     buffer      = lv_headerxstring
86     TABLES
87     binary_tab  = lt_records
88     EXCEPTIONS
89     failed      = 1
90     OTHERS      = 2.
91
92     IF sy-subrc <> 0.
93         "Implement suitable error handling here
94     ENDIF.
95
96     DATA : lo_excel_ref TYPE REF TO cl_fdt_xl_spreadsheet .
97
98     TRY .
99         lo_excel_ref = NEW cl_fdt_xl_spreadsheet(
100             document_name = lv_filename
101             xdocument      = lv_headerxstring ) .
102     CATCH cx_fdt_excel_core.
103         "Implement suitable error handling here
104     ENDTRY .
105
106     "Get List of Worksheets
107     lo_excel_ref->if_fdt_doc_spreadsheet~get_worksheet_names(
108         IMPORTING
109         worksheet_names = DATA(lt_worksheets) ).
110
111     IF NOT lt_worksheets IS INITIAL.
112         READ TABLE lt_worksheets INTO DATA(lv_woksheetname) INDEX 1.
113
114         DATA(lo_data_ref) = lo_excel_ref->if_fdt_doc_spreadsheet~get_itab_from
115             lv_woksheetname ).
116         "now you have excel work sheet data in dyanmic internal table
117         ASSIGN lo_data_ref->* TO <gt;data>.
118     ENDIF.
119
120     ENDFORM.
121
122     *-----*
123     * Form PROCESS_FILE
124     *-----*
125     FORM process_file .
126
127     DATA : lv_numberofcolumns TYPE i,
128             lv_date_string     TYPE string,
129             lv_target_date_field TYPE datum.
130

```

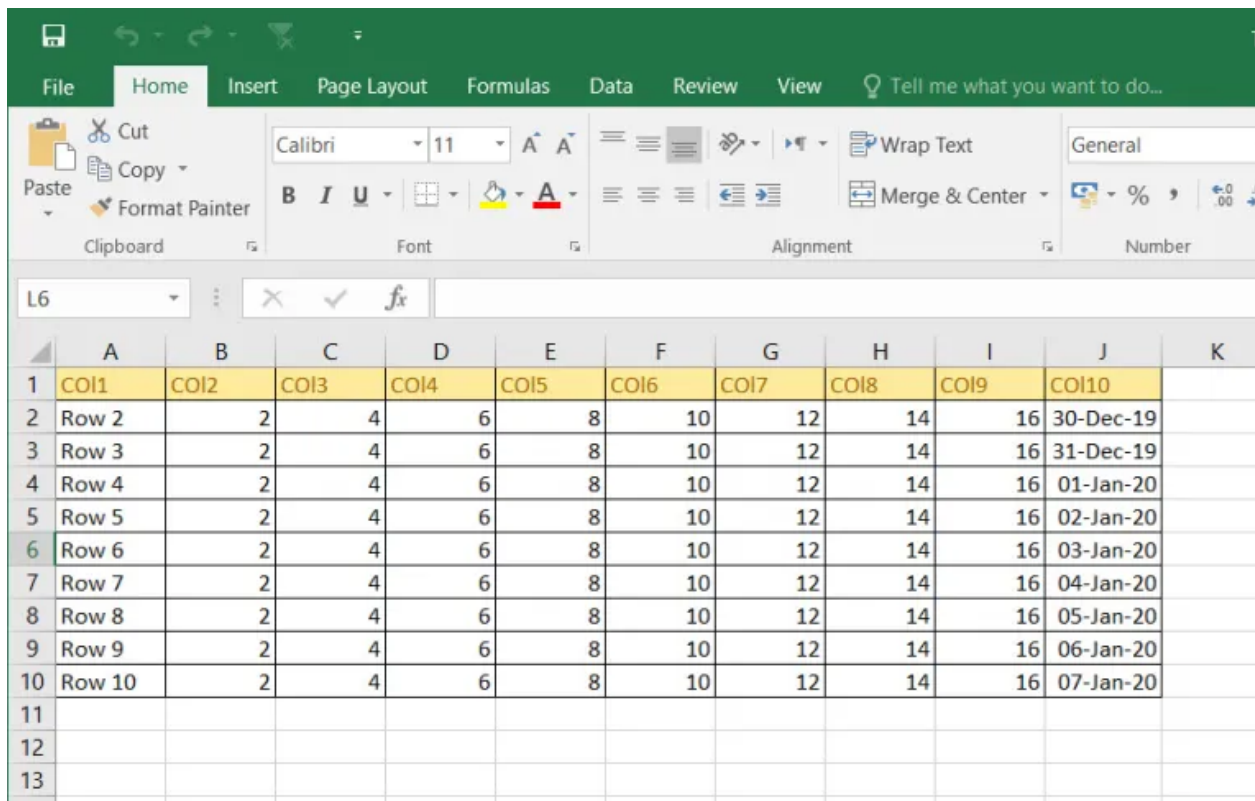
```

131
132 FIELD-SYMBOLS : <ls_data> TYPE any,
133                 <lv_field> TYPE any.
134
135 "you could find out number of columns dynamically from table <gt_data>
136 lv_numberofcolumns = p_ncol .
137
138 LOOP AT <gt_data> ASSIGNING <ls_data> FROM 2 .
139
140     "processing columns
141     DO lv_numberofcolumns TIMES.
142         ASSIGN COMPONENT sy-index OF STRUCTURE <ls_data> TO <lv_field> .
143         IF sy-subrc = 0 .
144             CASE sy-index .
145 *             when 1 .
146 *             when 2 .
147             WHEN 10 .
148                 lv_date_string = <lv_field> .
149                 PERFORM date_convert USING lv_date_string CHANGING lv_target_d
150                 WRITE lv_target_date_field .
151             WHEN OTHERS.
152                 WRITE : <lv_field> .
153             ENDCASE .
154         ENDIF.
155     ENDDO .
156     NEW-LINE .
157 ENDLOOP .
158 ENDFORM.
159
160 *-----*
161 * Form DATE_CONVERT
162 *-----*
163 FORM date_convert USING iv_date_string TYPE string CHANGING cv_date TYPE d
164
165     DATA: lv_convert_date(10) TYPE c.
166
167     lv_convert_date = iv_date_string .
168
169     "date format YYYY/MM/DD
170     FIND REGEX '^\\d{4}[/|-]\\d{1,2}[/|-]\\d{1,2}$' IN lv_convert_date.
171     IF sy-subrc = 0.
172         CALL FUNCTION '/SAPDMC/LSM_DATE_CONVERT'
173             EXPORTING
174                 date_in          = lv_convert_date
175                 date_format_in   = 'DYMD'
176                 to_output_format = ' '
177                 to_internal_format = 'X'
178             IMPORTING

```

```
179         date_out          = lv_convert_date
180     EXCEPTIONS
181         illegal_date       = 1
182         illegal_date_format = 2
183         no_user_date_format = 3
184         OTHERS             = 4.
185 ELSE.
186
187     " date format DD/MM/YYYY
188     FIND REGEX '^d{1,2}[/-]d{1,2}[/-]d{4}$' IN lv_convert_date.
189     IF sy-subrc = 0.
190         CALL FUNCTION '/SAPDMC/LSM_DATE_CONVERT'
191             EXPORTING
192                 date_in          = lv_convert_date
193                 date_format_in   = 'DDMY'
194                 to_output_format = ''
195                 to_internal_format = 'X'
196             IMPORTING
197                 date_out          = lv_convert_date
198             EXCEPTIONS
199                 illegal_date       = 1
200                 illegal_date_format = 2
201                 no_user_date_format = 3
202                 OTHERS             = 4.
203     ENDIF.
204
205 ENDIF.
206
207 IF sy-subrc = 0.
208     cv_date = lv_convert_date .
209 ENDIF.
210
211 ENDFORM .
```

Uploaded this excel file.



	A	B	C	D	E	F	G	H	I	J	K
1	COI1	COI2	COI3	COI4	COI5	COI6	COI7	COI8	COI9	COI10	
2	Row 2	2	4	6	8	10	12	14	16	30-Dec-19	
3	Row 3	2	4	6	8	10	12	14	16	31-Dec-19	
4	Row 4	2	4	6	8	10	12	14	16	01-Jan-20	
5	Row 5	2	4	6	8	10	12	14	16	02-Jan-20	
6	Row 6	2	4	6	8	10	12	14	16	03-Jan-20	
7	Row 7	2	4	6	8	10	12	14	16	04-Jan-20	
8	Row 8	2	4	6	8	10	12	14	16	05-Jan-20	
9	Row 9	2	4	6	8	10	12	14	16	06-Jan-20	
10	Row 10	2	4	6	8	10	12	14	16	07-Jan-20	
11											
12											
13											

Below results from SAP GUI and WebGUI.

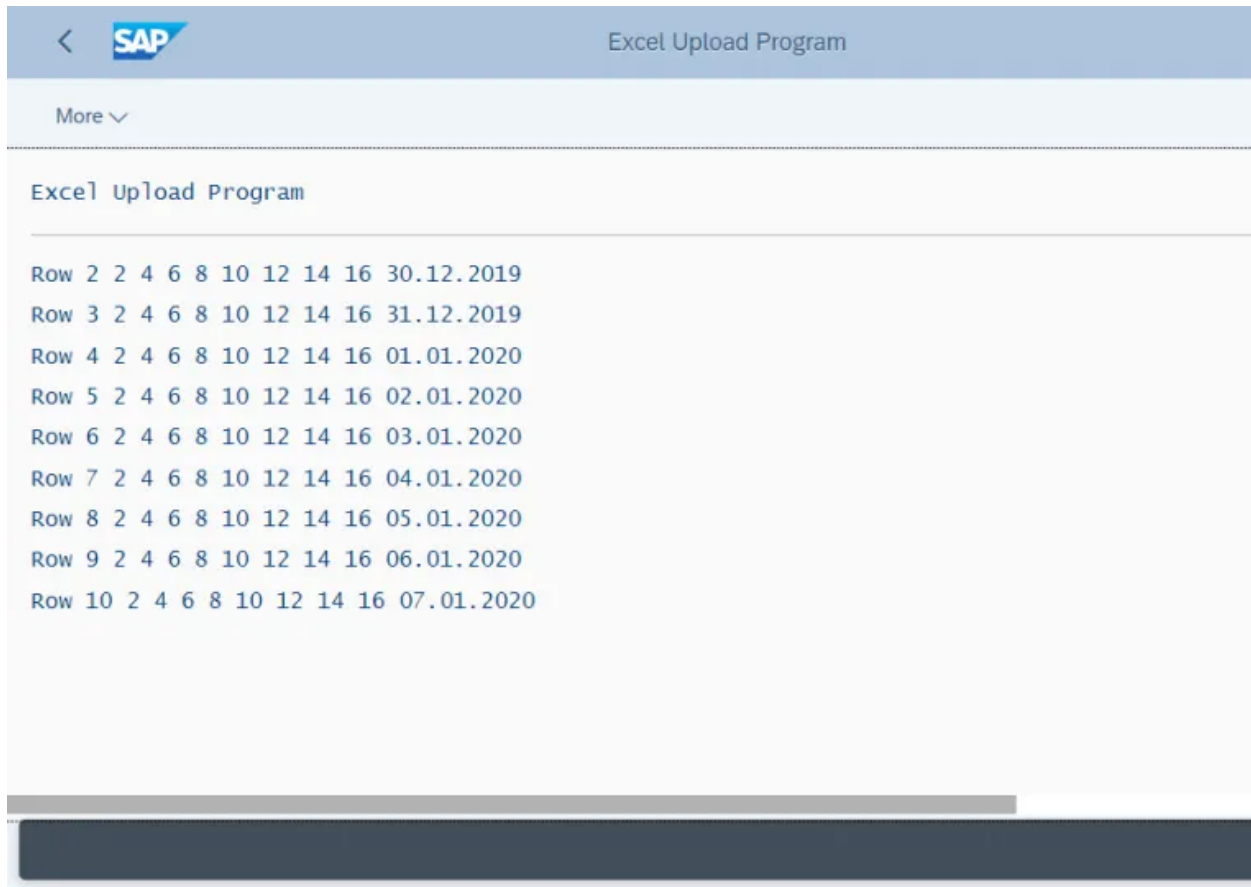
File List Edit Goto System Help

✓ [] << << >> >> ✖ Print H H+ Upload Download Refresh

Excel Upload Program

Excel Upload Program

Row 2	2	4	6	8	10	12	14	16	30.12.2019
Row 3	2	4	6	8	10	12	14	16	31.12.2019
Row 4	2	4	6	8	10	12	14	16	01.01.2020
Row 5	2	4	6	8	10	12	14	16	02.01.2020
Row 6	2	4	6	8	10	12	14	16	03.01.2020
Row 7	2	4	6	8	10	12	14	16	04.01.2020
Row 8	2	4	6	8	10	12	14	16	05.01.2020
Row 9	2	4	6	8	10	12	14	16	06.01.2020
Row 10	2	4	6	8	10	12	14	16	07.01.2020



The screenshot shows the SAP 'Excel Upload Program' interface. At the top is a blue header bar with a back arrow, the SAP logo, and the title 'Excel Upload Program'. Below the header is a light blue bar with a 'More' dropdown arrow. The main content area has a title 'Excel Upload Program' and a list of 10 rows. Each row contains a sequence of even numbers from 2 to 16, followed by a date. The rows are numbered 2 through 10. At the bottom of the interface, there is a grey progress bar and a dark blue footer bar.

Excel Upload Program	
Row 2	2 4 6 8 10 12 14 16 30.12.2019
Row 3	2 4 6 8 10 12 14 16 31.12.2019
Row 4	2 4 6 8 10 12 14 16 01.01.2020
Row 5	2 4 6 8 10 12 14 16 02.01.2020
Row 6	2 4 6 8 10 12 14 16 03.01.2020
Row 7	2 4 6 8 10 12 14 16 04.01.2020
Row 8	2 4 6 8 10 12 14 16 05.01.2020
Row 9	2 4 6 8 10 12 14 16 06.01.2020
Row 10	2 4 6 8 10 12 14 16 07.01.2020

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24 REPLIES TO “HOW TO UPLOAD EXCEL TO SAP(USING ABAP)”




Venu pallerla

February 8, 2020 at 5:10 pm

Pawan!!!! hope your remember me,, This is Venu from ATOS, you saved my day, exactly looking for something like this..

REPLY




Pawan Kesari

AUTHOR February 8, 2020 at 8:50 pm

Hi Venu, how you doing? Glad this helped you. I have used this recently in one of Fiori App we did.

REPLY



JJ

April 24, 2020 at 6:28 am

Easily coded and very useful. The simplest XLSX upload implementation I have found on the web. Nice job! Thanks for sharing, you have been really helpful!

REPLY





Derek Coward April 24, 2020 at 8:43 am

Hi there, my business partner found out that there is a limit to the number of worksheets than can be uploaded. If you are just uploading one or two spreadsheets then this is a good tool.

REPLY



Pawan Kesari AUTHOR April 24, 2020 at 9:44 am

Hi, thank you for letting us know. Did you managed to find out the limit? I think this class is used in Data Migration Cockpit and I would imagine limit would be more than one or two.

I have just uploaded a spreadsheet with 10 worksheets and I can see 10 worksheets in internal table lt_worksheets (line 111).

REPLY



Derek Coward April 24, 2020 at 10:30 am

Hi Pawan, I think the worksheet limit is 32. We have 10 business objects in our SAP PM master data tool and task lists have 16 worksheets. I am going to try CL_XLSX_DOCUMENT next, I will keep you posted, regards Derek

If you are interested, please take a look at our product dMax

<https://cdesignengineers.com/services/products/>

REPLY



Pawan Kesari AUTHOR April 24, 2020 at 10:37 am

Thank you!



REPLY**Prince Agarwal** August 5, 2021 at 8:49 pm

what you have done to upload file via Fiori launchpad? I am getting Z drive filepath which doesnot exist. can you tell me what code you adapted to use it in your application

REPLY**ncya** April 25, 2022 at 1:50 am

Did you solve the issue with Fiori launchpad Z drive path?

REPLY**Naveen Atal** June 26, 2020 at 6:51 am

Thanks you! Its very useful

REPLY**Petr KAMENÍK** August 13, 2020 at 7:43 am

Hello, does this upload method allow the excel file to be open on workstation when uploading to gui?

REPLY**julie** September 10, 2020 at 4:37 pm

Very helpful. thanks!



REPLY**Julie** September 10, 2020 at 4:38 pm

Do you have sample for Notepad?

REPLY**Murthy** February 23, 2021 at 3:06 am

Hi Pawan,

The above code is very helpful for .xlsx files. Do you have similar code for .xls file with multiple worksheets also should work for Macro enabled workbook.

I have a requirement where i have to read the macro enabled excel file (.xls) with multiple worksheets.

Thanks

Murthy

REPLY**Sebastian** March 2, 2021 at 8:38 am

Hi Pawan,

I'm currently facing a weird problem with Method CONVERT_DEC_TIME_TO_HHMMSS in CL_FDT_XL_SPREADSHEET.

I have time-formatted values (e.g. 10:45:03) in my Excel and by uploading them into SAP-tables some values get changed by the above method.

I found that the method return invalid seconds (> 59) and sometimes (really! no pattern in behavior) swapped them (e.g. from "02" to "20").

I'm at SAP_BASIS/SAP_ABA 750 and wondering, if you have a solution?



Thanks
Sebastian

REPLY



Sebastian March 2, 2021 at 11:47 am

Just to add to the above:

A workaround would be to add a "T" before the timestamp, e.g. "T10:45:03". Seems to me, that the SAP-method will handle the values then correctly.

But unfortunately I didn't find a way to change the value during export (using your coding via CL_SALV_EXPORT_TOOL_ATS_XLS to export any table to XLSX), since the structure is bound to a SAP-datafield type with a length of only 6 chars (HHMMSS), thus I can't add a "T" w/o cutting the last digit.

Any ideas?

REPLY



priyanka August 31, 2021 at 3:06 pm

Hello Pawan, I tried to use cl_gui_frontend_services=>file_open_dialog from WEBGUI but it is throwing dump.

REPLY



Diego Meo October 21, 2021 at 7:38 pm

Hi Pawan,

I have tried your method and it is wonderful, thanks very much for sharing!

REPLY





HG Kim November 1, 2021 at 7:38 am

Hi Pawan,

I tried running your example, but only returned the message
'File "_rels/.rels" not found in package'.

Can you help me with this?

regard.

Kim.

REPLY



Siva November 8, 2021 at 3:19 pm

Hi Pawan, It was nice really nice blog that helped me. Can you please also upload
code for Download data from SAP to Excel multiple tabs.

We did using OLE object coding but it work from SAP GUI and not work from
FIORI.

Please help this is really urgent.

REPLY



Siva November 9, 2021 at 11:12 am

Hi Pawan, Nice blog and very helpful. Please also share how to download SAP
internal tables data to Excel multiple sheets. We did using OLE concepts but that
not working when run from Fiori.

Can you please help with any links or code as this is bit urgent.

REPLY



Lucy January 4, 2022 at 8:05 pm



Thank you so much! That was exactly what I needed.

REPLY



Mike February 23, 2022 at 2:22 pm

Any reason why you are using BIN parameter in GUI_UPLOAD and convert the binary data into xstring on the next step instead of using ASC parameter and have xstring directly after GUI_UPLOAD?

REPLY



Francisco J. Molina O. - FJMO June 2, 2022 at 12:18 am

Excellent solution for upload from excel directly.

Thanks a lot.

Best regards.

REPLY

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