

Building SAP Fiori Apps with SAP Screen Personas

CGE362

Exercises / Solutions
Sebastian Steinhauer,
Peter Spielvogel,
Tobias Queck,
Sushant Priyadarshi,
Pradeep Kumar Balasubramanyam
SAP

TABLE OF CONTENTS

INTRODUCTION	3
EXERCISE 1	4
EXERCISE 2	22
EXERCISE 3	26

INTRODUCTION

In this session, you will create mobile flavors for the Create Purchase Requisition (ME51N) transaction. The goal is to provide a simplified, mobile device-friendly interface to your users, who can enter basic information and successfully post a document. In addition, the customized flavors should take advantage of native device capabilities, such as barcode scanning and taking a photo with the camera.

If a user has access to the barcode of a material they want to order, they can simply scan the barcode instead of having to type it in or search for it via a search help. For example, this could be useful if a bin for office supplies is empty, but the corresponding barcode is on the bin.

Taking a photo is useful if the user doesn't know or cannot find out exactly what the material number for the item is, but they describe it in words. To help the purchasing department create a purchase order, they can attach a photo of the item to the requisition, explaining where they need the part and what it looks like, if they have an example. A photo may also help to explain why someone creates a requisition, even if the material number is known.

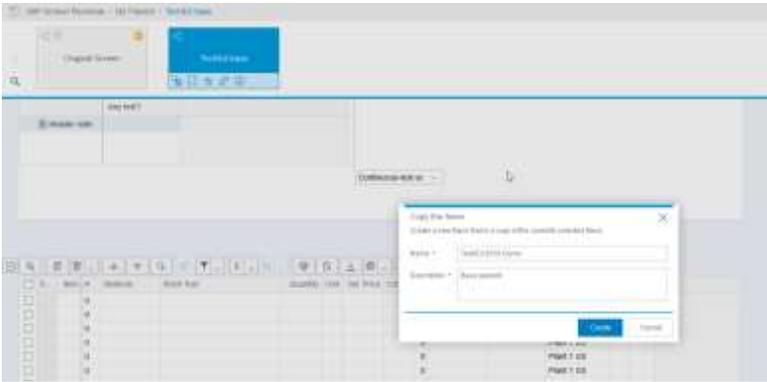
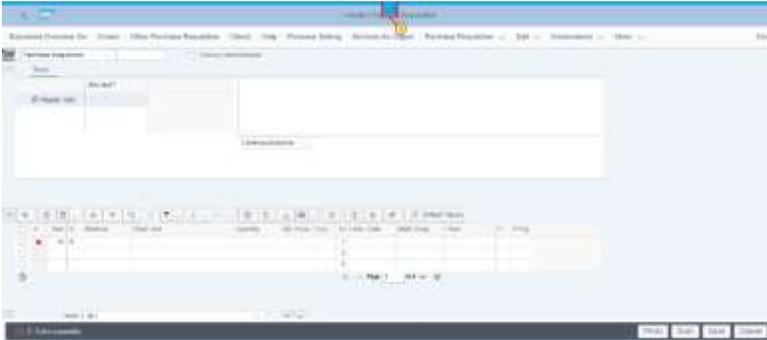
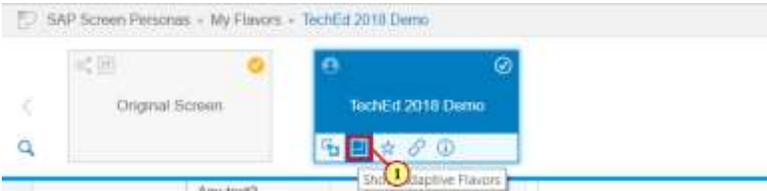
To run flavors on your phone or tablet using native device features, you must log on via the SAP Fiori client. Download it from the Apple AppStore or the Google Play store.

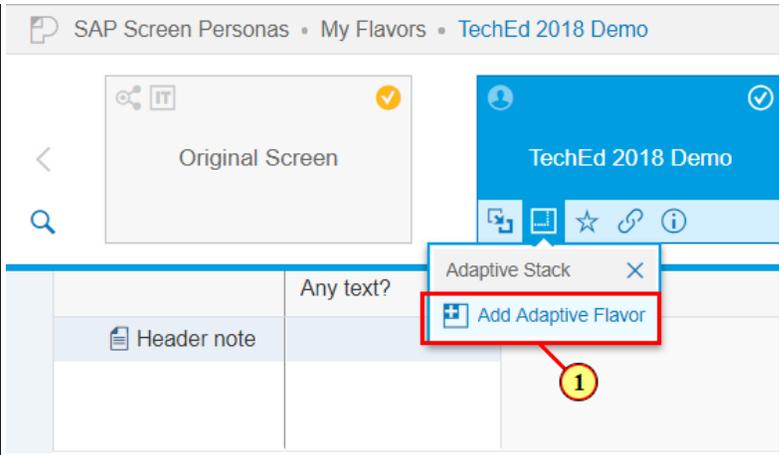
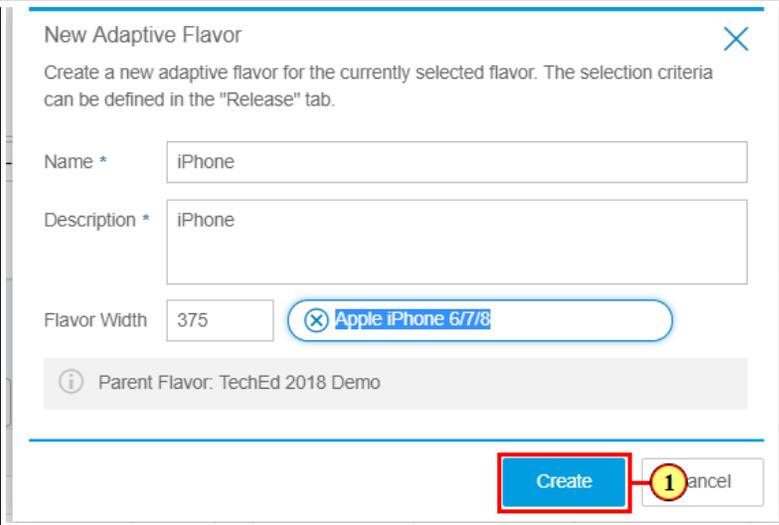
<https://itunes.apple.com/us/app/sap-fiori-client/id824997258>

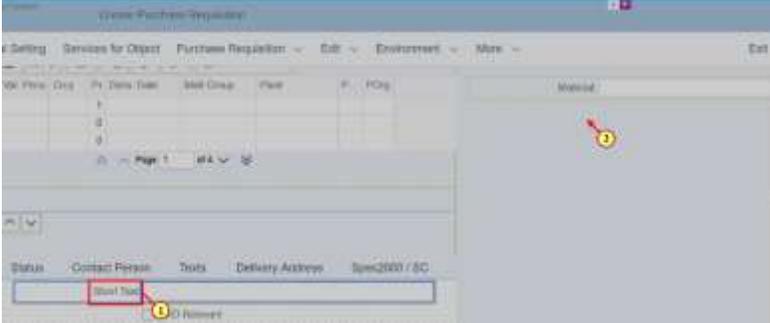
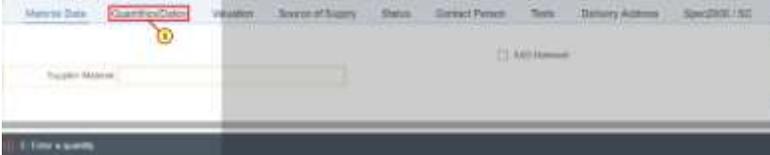
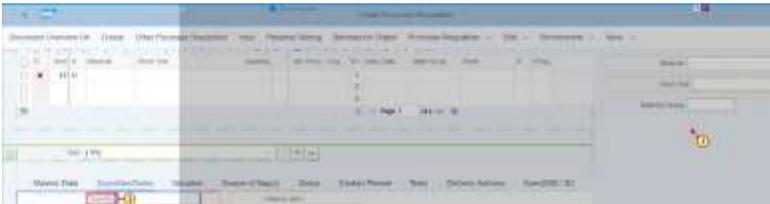
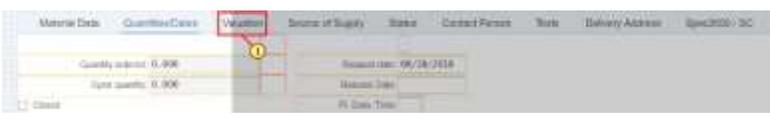
<https://play.google.com/store/apps/details?id=com.sap.fiori.client>

EXERCISE 1

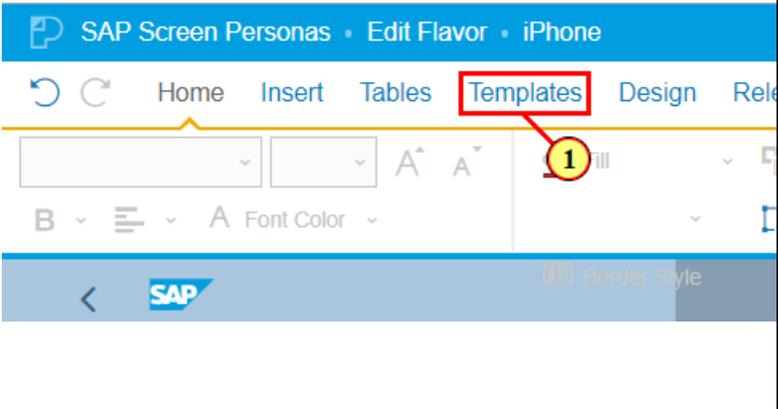
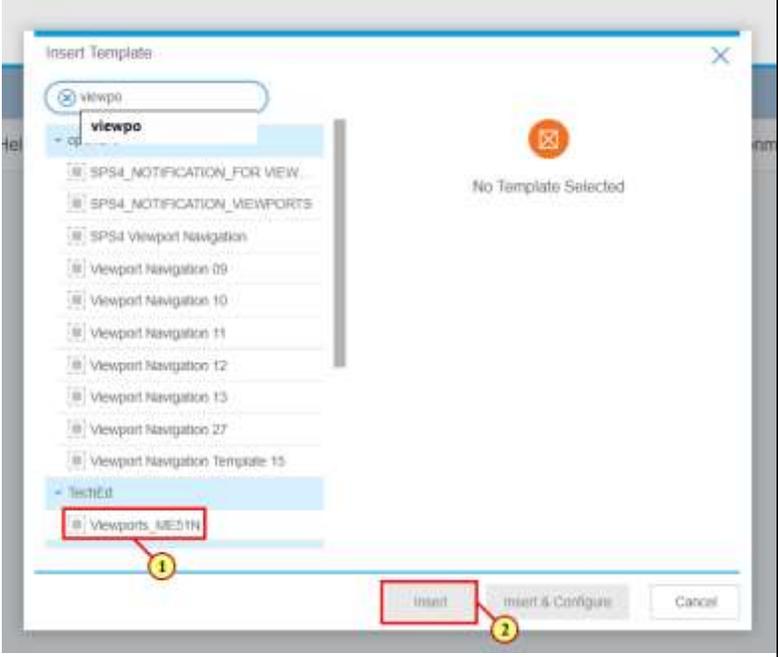
The first task is creating a flavor for a mobile phone. You can copy a base flavor to start. The flavor is named “TechEd base” and its ID is 0050568476371ED8AB9E0AD79765C0AB. The base flavor contains several scripts that will give you a head start, as well as provide a reference in sections where you will need to write your own scripts.

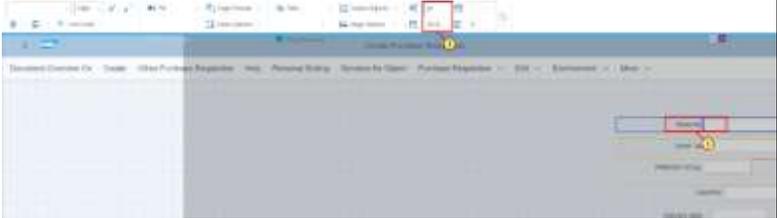
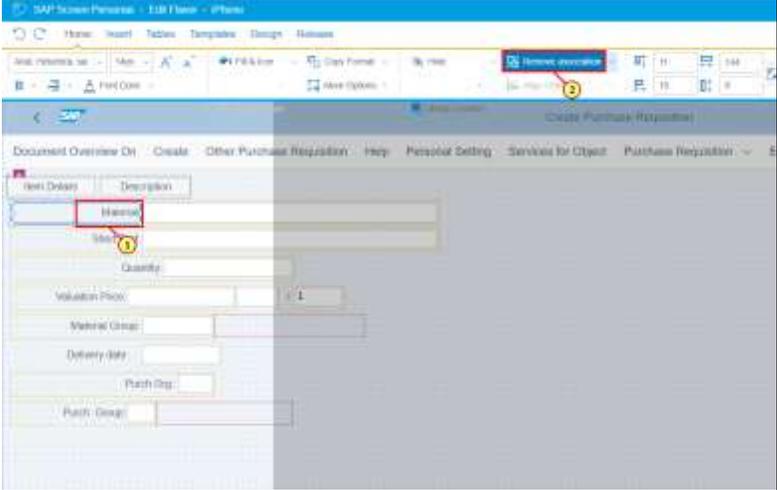
Explanation	Screenshot
<p>TechEd Demo 2018</p> <p>Start transaction ME51N, and the Flavor Editor.</p>  <p>Click . Select the “TechEd base” flavor and create your own copy. Use the flavor name TechEd GR-XX, where XX is your group number. The flavor description should also be the same.</p> <p>Assign this flavor as your default for the transaction by clicking the check mark in the upper right corner of the flavor tile.</p>	
<p>Now create your first adaptive flavor for a mobile phone.</p>  <p>(1) Click .</p>	
<p>(1) Click .</p>	

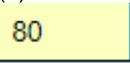
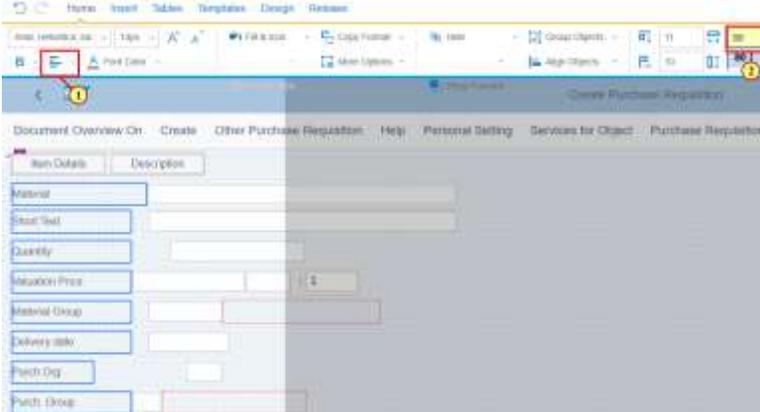
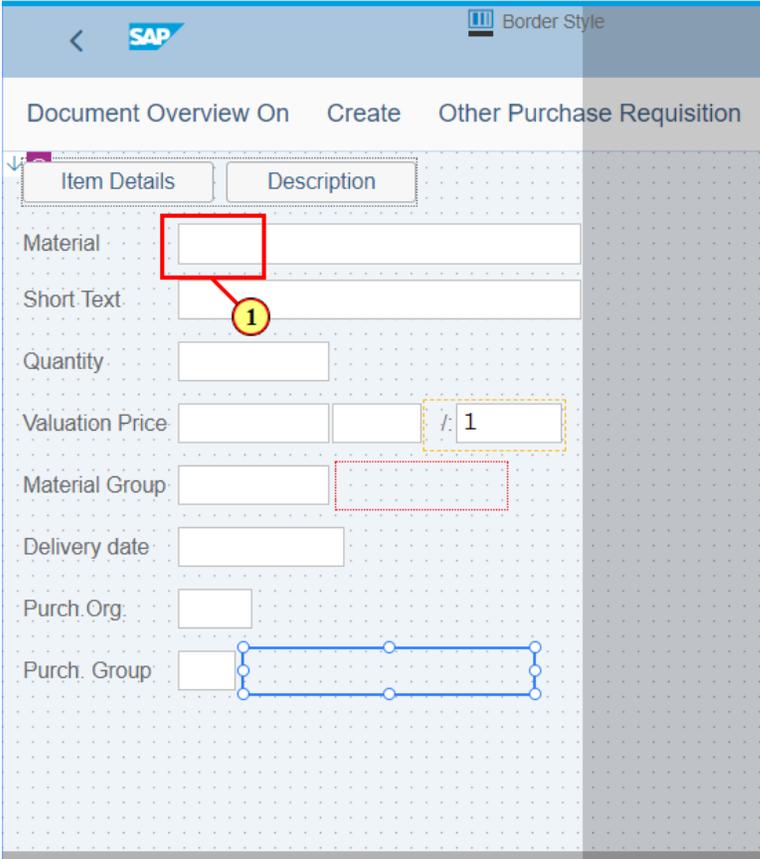
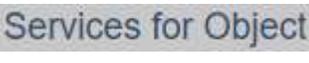
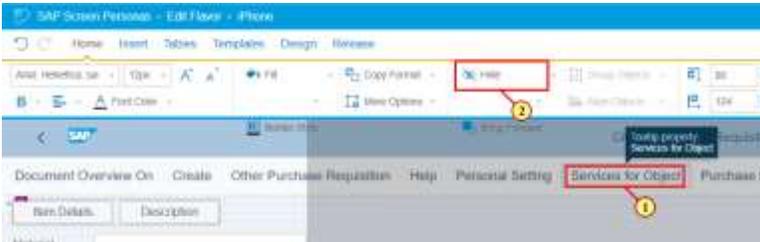
Explanation	Screenshot
<p>(1) Click</p> 	
<p>(1) Fill out the Name and Description fields and select either iPhone 6/7/8 or your own device type to set your flavor width.</p>  <p>Click</p>	
<p>(1) Click within the large area on the left to select the "Container control".</p> <p>Enter 1000 for the width of the container. This will free up some room on the right, where you can store objects you need via drag and drop.</p>	
<p>(1) Drag the Material label and description outside the resized Container control.</p> <p>(2) Drop them anywhere outside the Container.</p>	

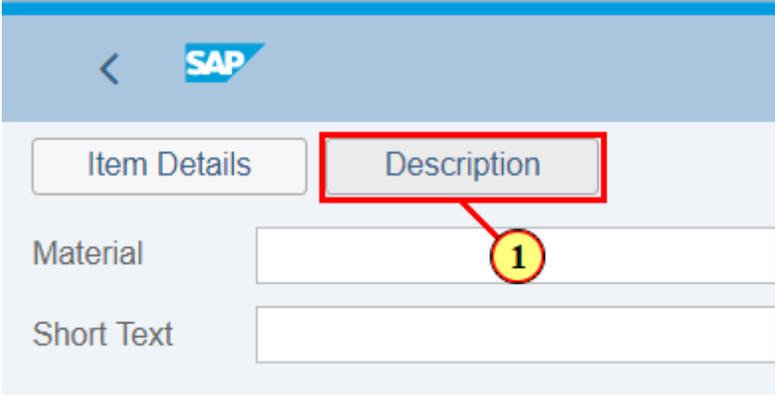
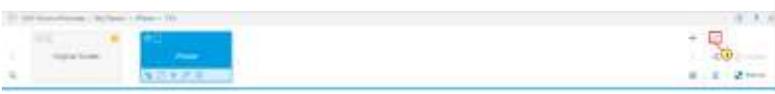
Explanation	Screenshot
<p>Short Text</p> <p>(1) Drag the Short Text label and description outside the Container.</p> <p>(2) Drop them anywhere outside the Container.</p>	
<p>Material Group</p> <p>(1) Drag the Material Group label and description outside the container.</p> <p>(2) Drop them anywhere outside the container.</p>	
<p>(1) Double click the Quantities/Dates tab.</p>	
<p>(1) Drag the Quantity label, input field and unit of measure outside the container.</p> <p>(2) Drop them anywhere outside the container.</p>	
<p>(1) Drag the Delivery date label and date field outside the container.</p> <p>(2) Drop them anywhere outside the container.</p>	
<p>(1) Double click the Valuation tab.</p>	

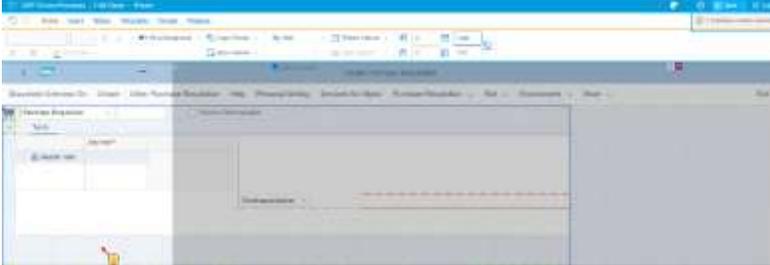
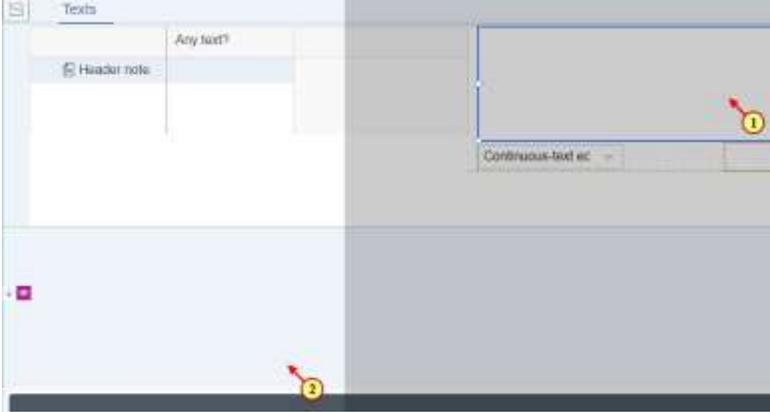
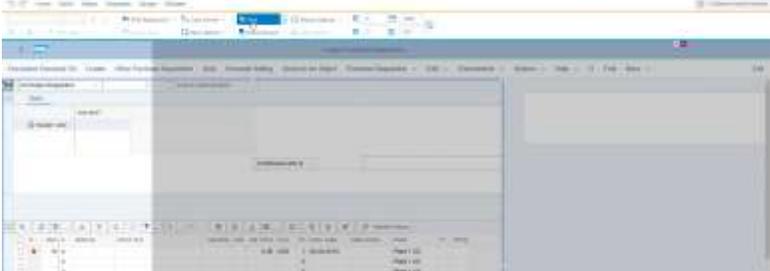
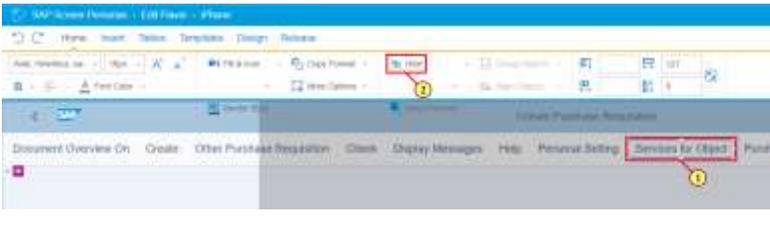
Explanation	Screenshot
<p>(1) Drag the Valuation Price label and all the associated fields (highlighted) to move them outside the container.</p> <p>(2) Drop them anywhere outside the container.</p>	
<p>(1) Double click Source of Supply tab.</p>	
<p>(1) Drag the Purch.Org label and input field outside the container.</p> <p>(2) Drop them anywhere outside the container.</p>	
<p>(1) Double click the Contact Person tab.</p>	
<p>(1) Drag the Purch. Group label, input field and description outside the container.</p> <p>(2) Drop them anywhere outside the container.</p>	
<p>(1) Hide everything on the screen, except for the fields that you pulled out of the Container. Click into the Container control to select the whole container.</p> <p>(2) Click Hide.</p>	

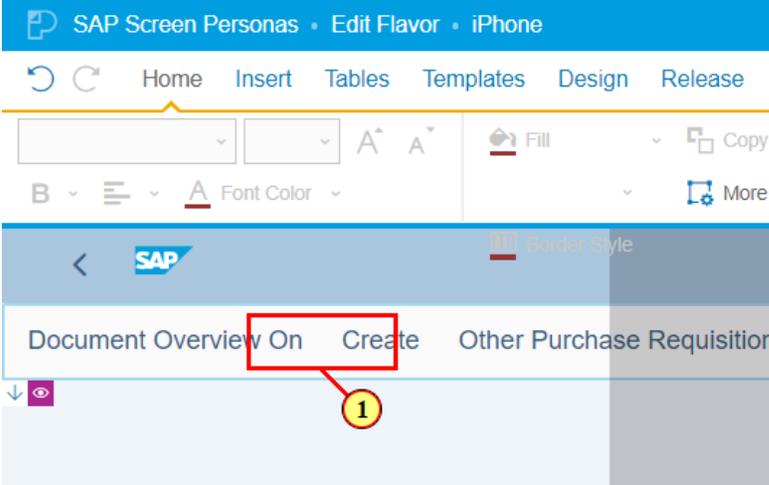
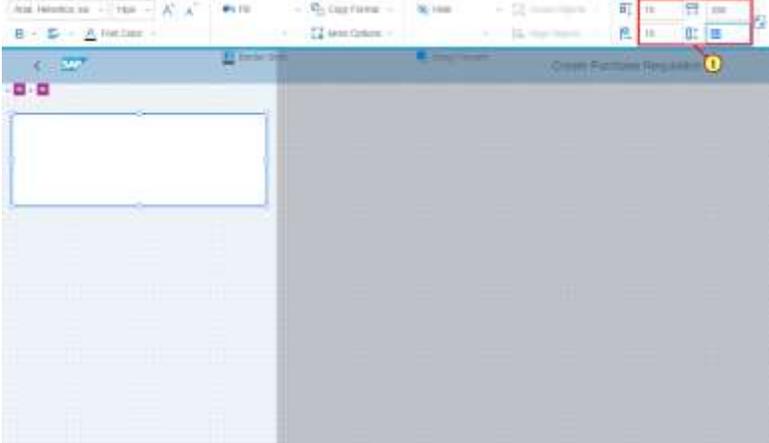
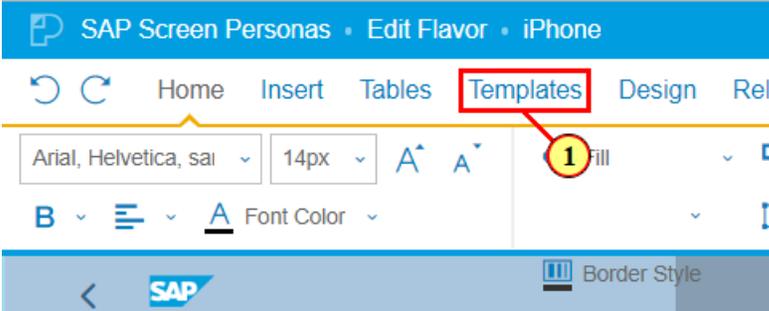
Explanation	Screenshot
<p>With this, you now have all the fields you need for a requisition for a single item. However, you now want to split the underlying screen, so that you can switch between two separate views: one with the majority of the labels and fields you rearranged and the other with the long text description field. For this, you will use viewports.</p> <p>There is already a template containing the necessary navigation buttons and associated scripts, so you can use it for this flavor.</p> <p>(1) Click  .</p>	
<p>(1) Click  Insert Template</p>	
<p>(1) Click  Viewports_ME51N</p> <p>(2) Click  .</p> <p>This will position the navigation template to the upper left corner.</p>	

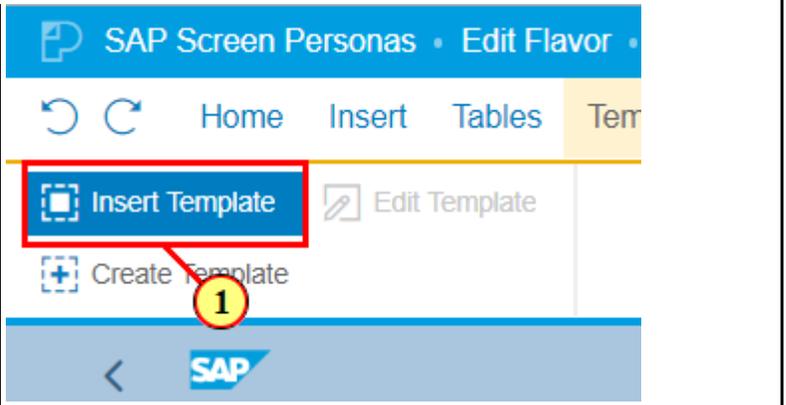
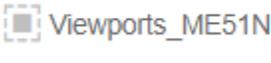
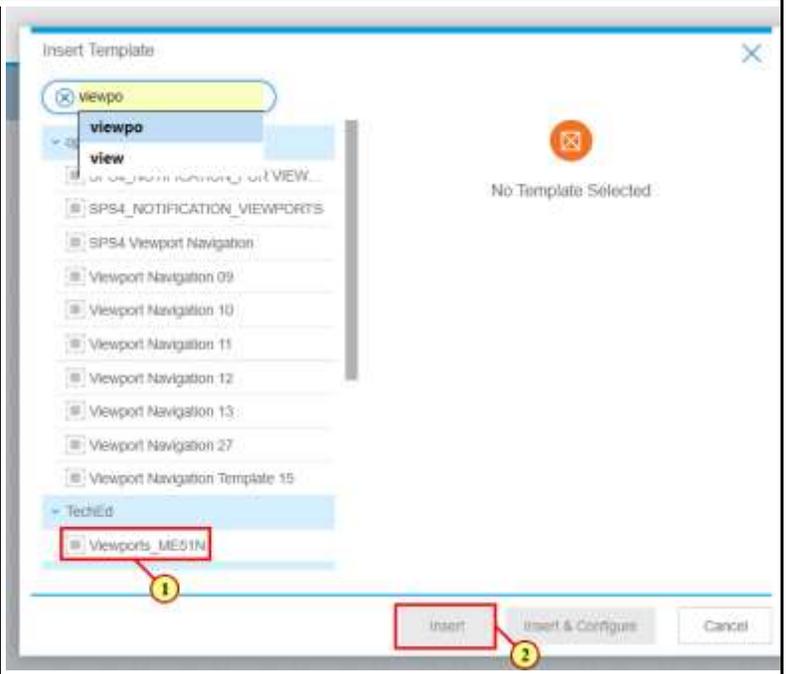
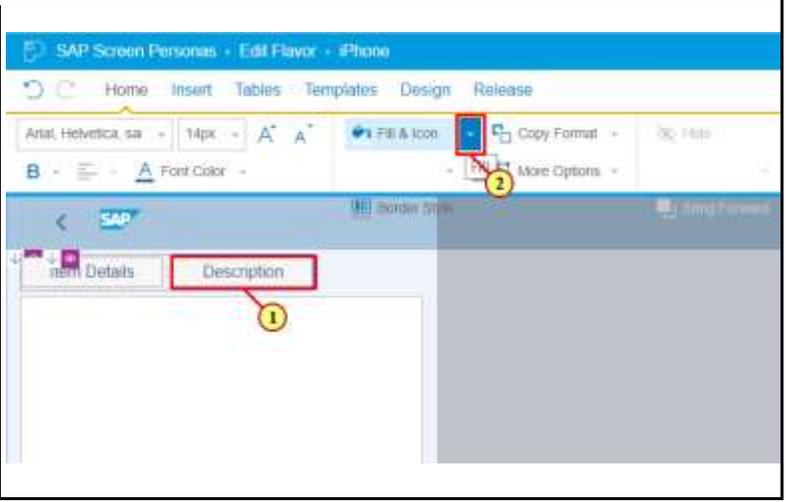
Explanation	Screenshot
<p>To finalize the layout of the screen, you will need to rearrange the various controls you collected from the different tabs.</p> <p>Start with the first label, then follow the steps with the others.</p> <p>(1) Click .</p> <p>(2) Align the selected label and field: Down 10. Left 10.</p> <p> Move all the other labels and text field and align them using these coordinates:</p> <ul style="list-style-type: none"> - Short Text Down: 20 Left:10 - Quantity: Down: 30 Left: 10 - Valuation Price: Down: 40 Left: 10 - Material Group: Down: 50 Left: 10 - Delivery Date: Down: 60 Left: 10 - Purch Org: Down: 70 Left: 10 - Purch Group: Down: 80 Left: 10 	
<p>(1) Click .</p> <p>(2) Click .</p> <p> Repeat this process for every label:</p> <ul style="list-style-type: none"> - Short Text - Quantity - Valuation Price - Material Group - Delivery Date - Purch Org - Purch Group 	
<p>Now position the navigation template.</p> <p>(1) Click .</p> <p>(2) Align the selected template: Down 1, Left 10.</p>	

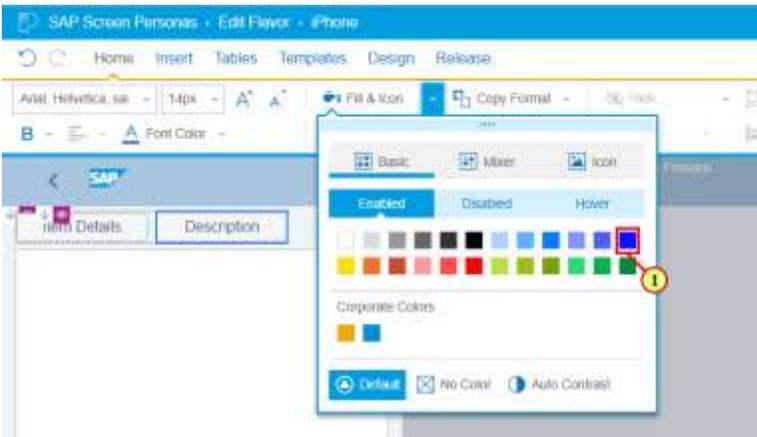
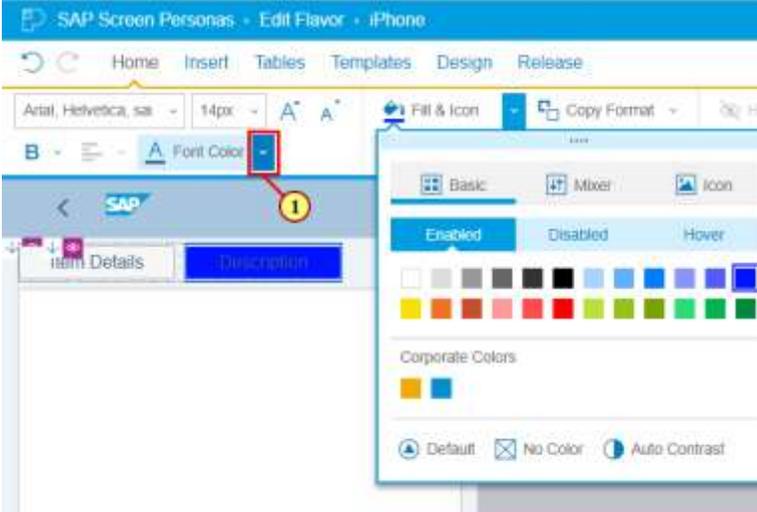
Explanation	Screenshot
<p>(1) Click  to align the labels left.</p> <p>(2) Make the width of all the labels 80.</p> <p></p>	 <p>The screenshot shows the SAP mobile app design tool interface. The top menu bar includes 'Home', 'Insert', 'Tables', 'Templates', 'Design', and 'Release'. Below the menu, there are various toolbars for text, alignment, and layout. The main workspace displays a mobile app screen for 'Create Purchase Requisition'. The form fields are being edited, with a red box highlighting the 'Material' label and a yellow box highlighting the '80' width setting.</p>
<p>(1) Align all the text fields and size them to fit the screen.</p> <p></p> <p>(2) Click  Save.</p>	 <p>The screenshot shows the SAP mobile app design tool interface. The top menu bar includes 'SAP' and 'Border Style'. Below the menu, there are various toolbars for text, alignment, and layout. The main workspace displays a mobile app screen for 'Create Other Purchase Requisition'. The form fields are being edited, with a red box highlighting the 'Material' label and a yellow box highlighting the '1' width setting. A blue box highlights the 'Save' button.</p>
<p>Now you are going to hide the entire menu bar in the phone flavor. The "Services for Object" button has a special handling on mobile devices, so this needs to be hidden individually.</p> <p>(1) Click </p>	 <p>The screenshot shows the SAP mobile app design tool interface. The top menu bar includes 'SAP Screen Personalize - Edit Flavor - iPhone'. Below the menu, there are various toolbars for text, alignment, and layout. The main workspace displays a mobile app screen for 'Create Other Purchase Requisition'. The form fields are being edited, with a red box highlighting the 'Services for Object' button and a yellow box highlighting the '1' width setting.</p>

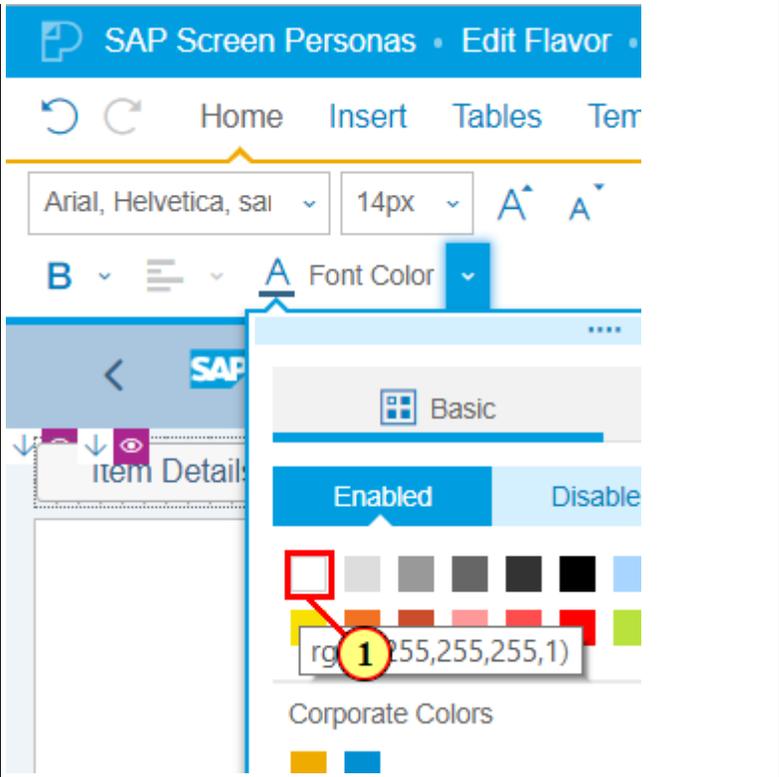
Explanation	Screenshot
<p>(2) Click .</p>	
<p>Now hide the standard menu bar:</p> <p>(1) Click inside the menu bar to select the GuiToolbar.</p> <p>(2) Click .</p>	
<p>(1) Click .</p> <p>(2) Click .</p> <p>At this point, you will see how your phone flavor looks in runtime mode.</p>	
<p>(1) Click .</p> <p>There are already scripts attached to this template. Clicking the “Description” button will generate a viewport for this flavor. A viewport is a virtual screen, based on the Original Screen layout.</p> <p>The script attached to the button will activate viewport 9000, which is the virtual screen number for our long text view. The “Item Details” button simply resets this virtual screen number to the standard screen in the backend.</p> <p>You can look at the embedded scripts in the template using the template editor. They are very simple, 1-line scripts.</p>	
<p>Now you will need to edit this layout, so that it only contains the Header Note long text, without additional fields that wouldn't fit all on the screen.</p> <p>(1) Click .</p>	
<p>(1) Click  to edit the viewport layout.</p>	

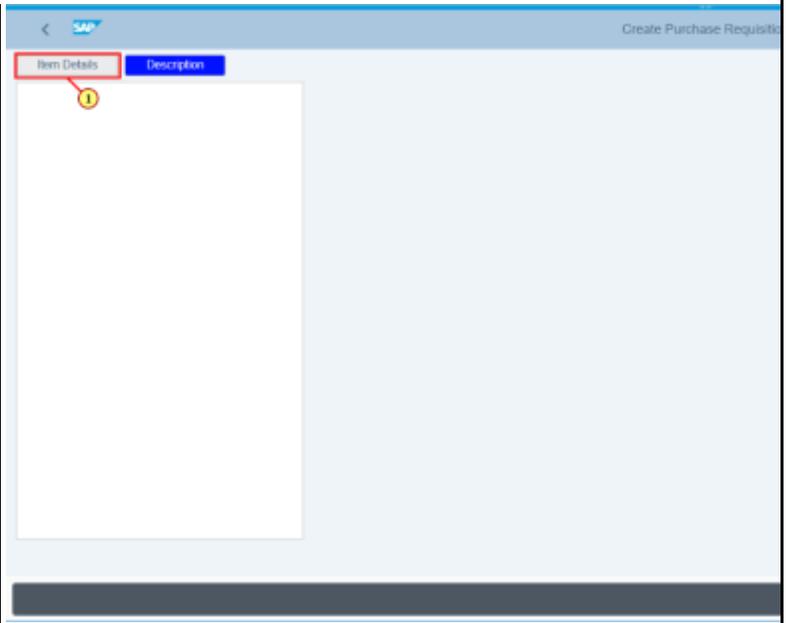
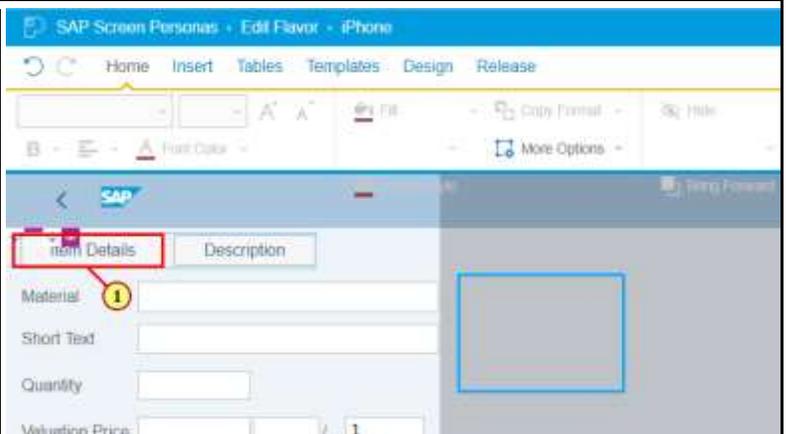
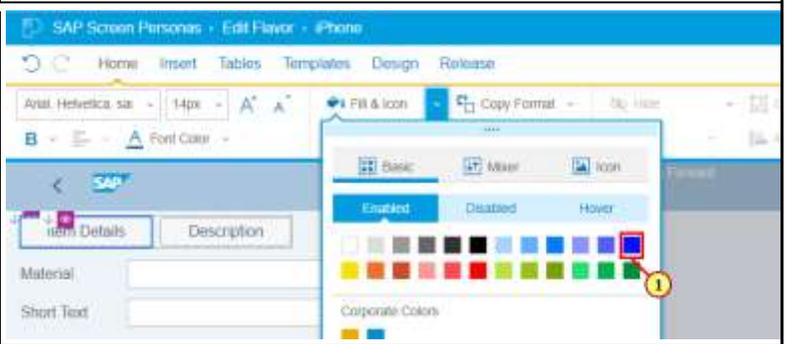
Explanation	Screenshot
<p>Once again, select the large Container control and decrease its width to free up space on the right, like you did earlier.</p> <p>Enter 1000 for the width of the container.</p>	
<p>(1) Drag the text editor to move it out of the container.</p> <p>(2) Drop the TextEdit control anywhere on the right, outside the container.</p>	
<p>Click inside the Container control to select the whole container:</p>  <p>Click .</p>	
<p>Once again, hide the menu bar:</p> <p>(1) Click </p> <p>(2) Click .</p>	

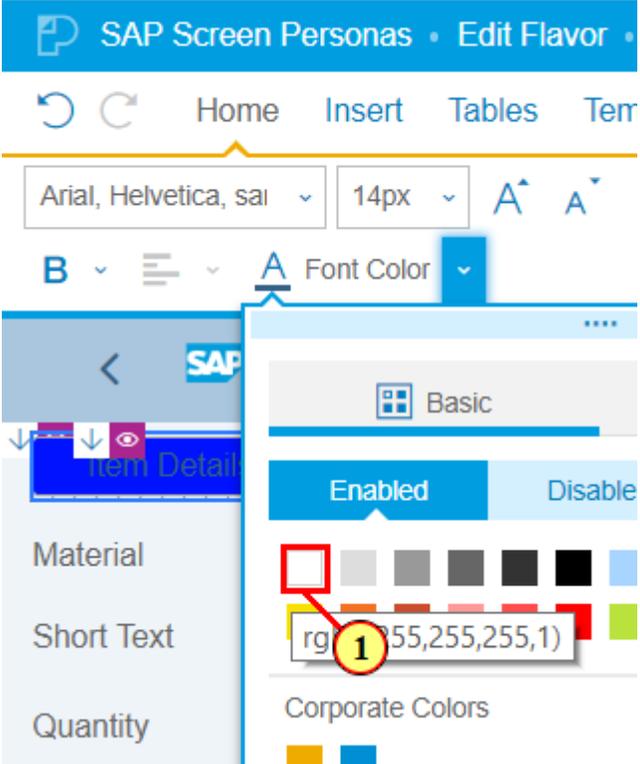
Explanation	Screenshot
<p>(1) Click inside the menu bar to select the GuiToolbar.</p> <p>(2) Click  Hide.</p>	
<p>(1) Align the comment box. Its height should be 120.</p>	
<p>Similar to the previous view, you now need to add the navigation template so that users can switch between the long text viewport and the item screen.</p> <p>(1) Click .</p>	

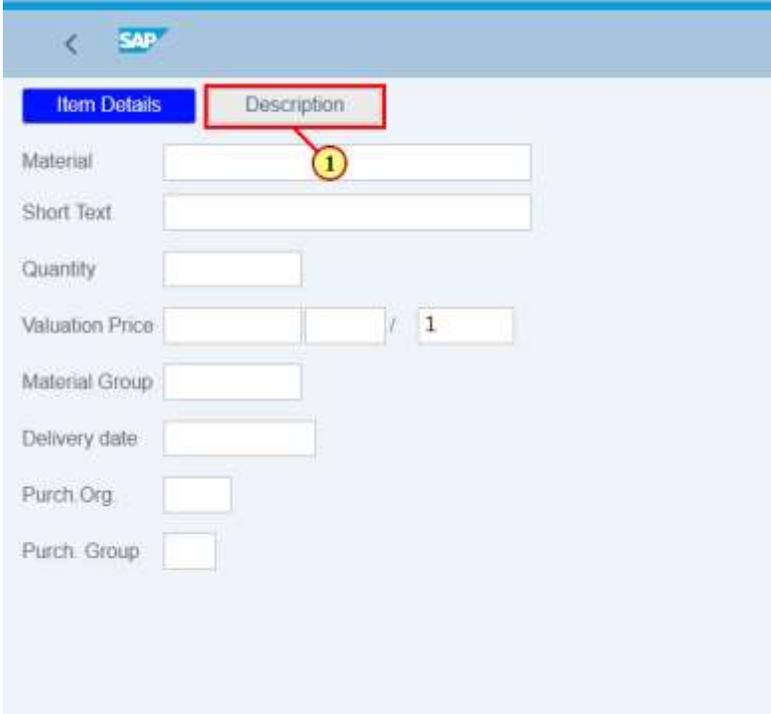
Explanation	Screenshot
<p>(1) Click </p>	
<p>(1) Click </p> <p>(2) Click </p>	
<p>Align the template on top of the comment field: Down 1, Left 10 .</p> <p>Next, indicate that the Description view of the screen is now active. You can do this by highlighting the corresponding button.</p> <p>This happens by filling the button with a different color and changing the text color to improve legibility.</p> <p>(1) Click the Description button.</p> <p>(2) Click </p>	

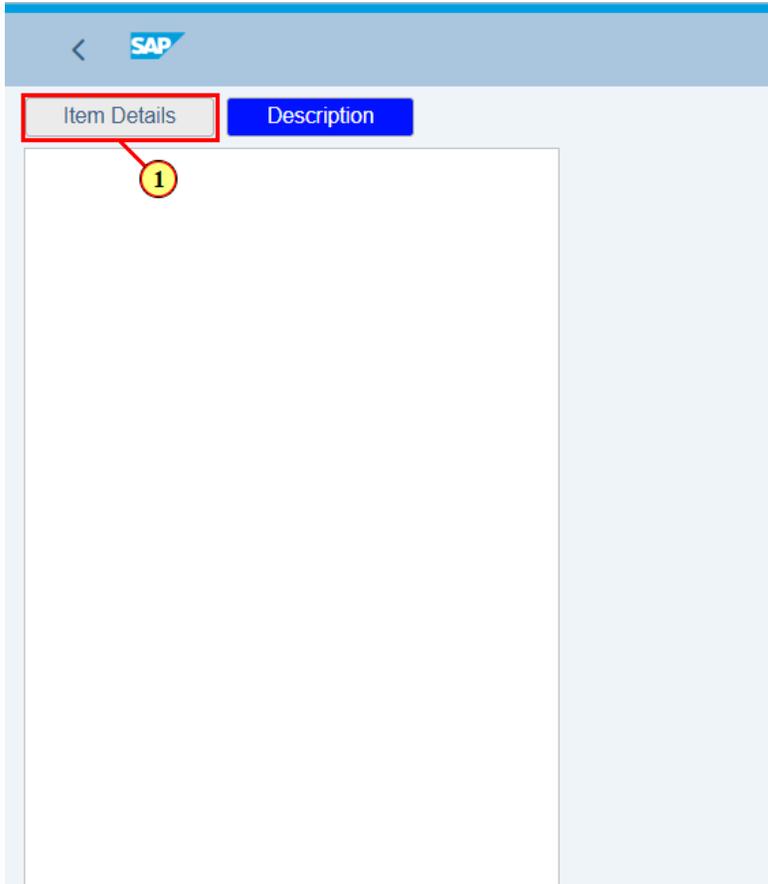
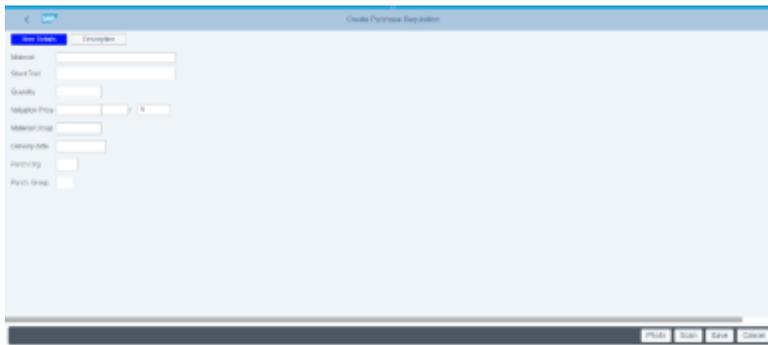
Explanation	Screenshot
<p>(1) Click .</p>	
<p>(1) Click .</p>	

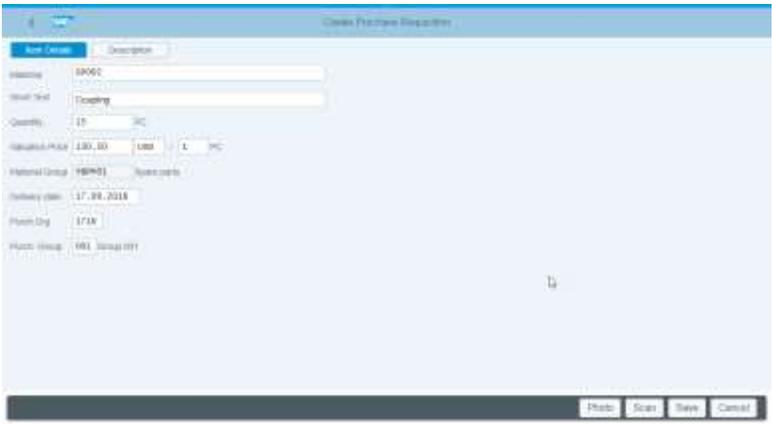
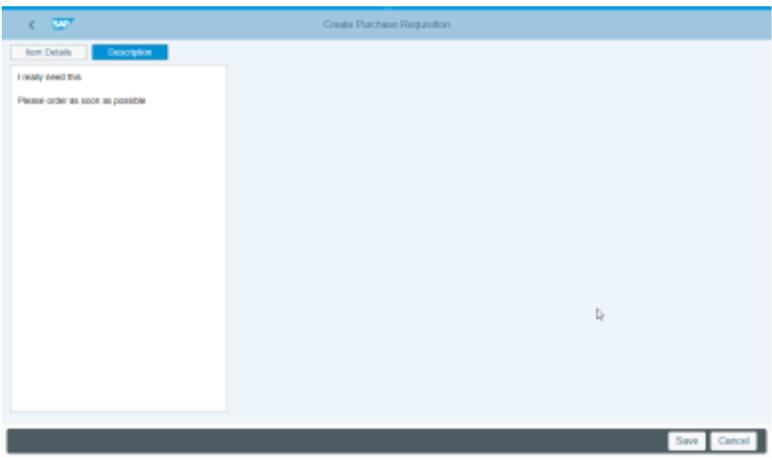
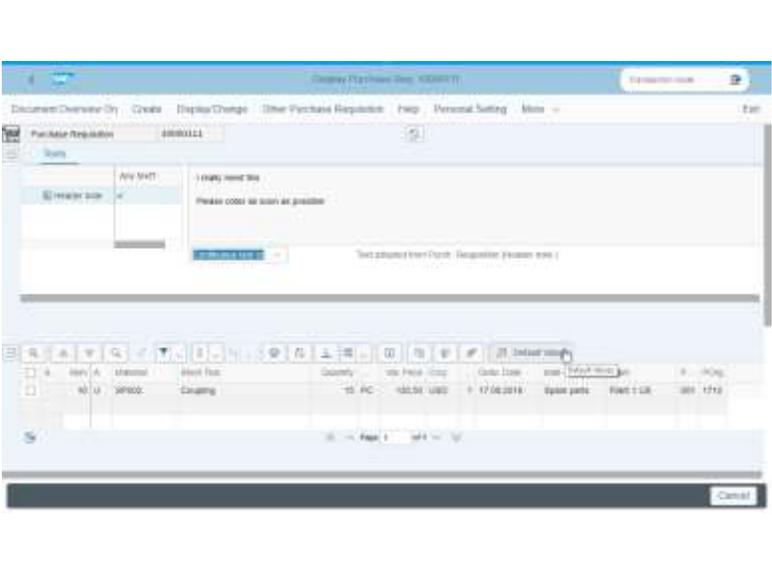
Explanation	Screenshot
<p>(1) Select <input type="text" value=""/> for white font.</p>	
<p>(1) Click  Save.</p> <p>(2) Click  Exit.</p>	

Explanation	Screenshot
<p>Now the screen is on the Description viewport.</p> <p>Next, format the Item Details button so that it will appear highlighted when you return to the earlier view of this screen.</p> <p>(1) Click .</p>	
<p>(1) Edit the Item Details Button.</p> <p>Click .</p>	
<p>(1) Select a blue fill color Click .</p>	

Explanation	Screenshot
<p>(1) Select a white text color. Click .</p>	
<p>(1) Click .</p> <p>(2) Click .</p>	

Explanation	Screenshot
<p>Now test your navigation buttons.</p> <p>(1) Click </p>	 <p>The screenshot shows the SAP 'Item Details' screen. At the top, there are two tabs: 'Item Details' (active) and 'Description'. The 'Description' tab is highlighted with a red box, and a yellow circle with the number '1' is connected to it by a red line, pointing to the 'Material' input field. Below the tabs, there are several input fields: 'Material', 'Short Text', 'Quantity', 'Valuation Price' (with a unit '1'), 'Material Group', 'Delivery date', 'Purch. Org.', and 'Purch. Group'.</p>

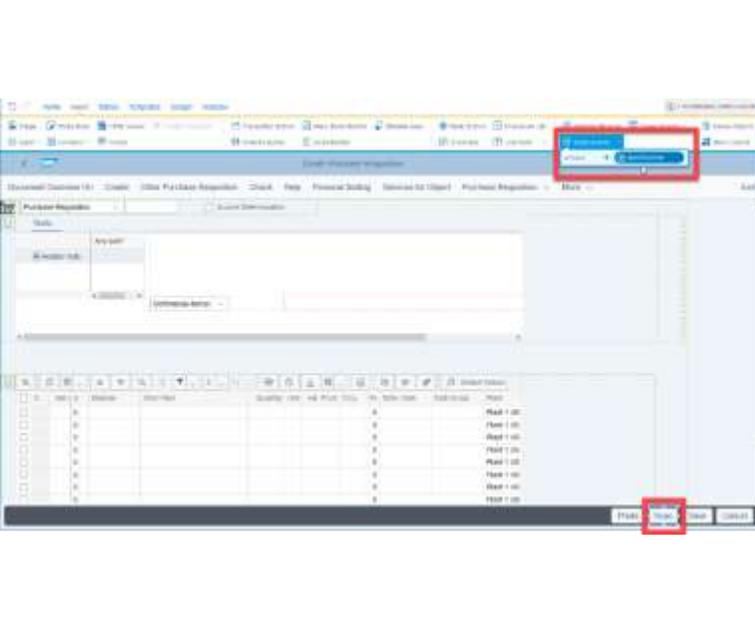
Explanation	Screenshot
<p>(1) Click </p>	
<p><i>The viewport buttons now switch between the item details and description view of the same underlying screen.</i></p>	

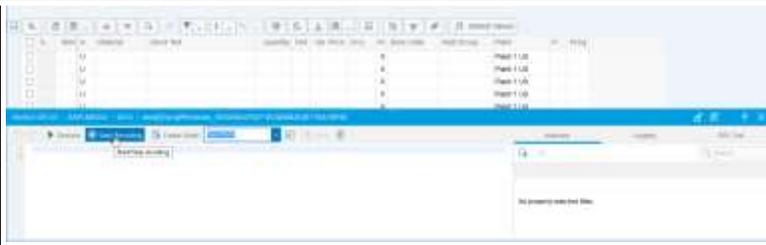
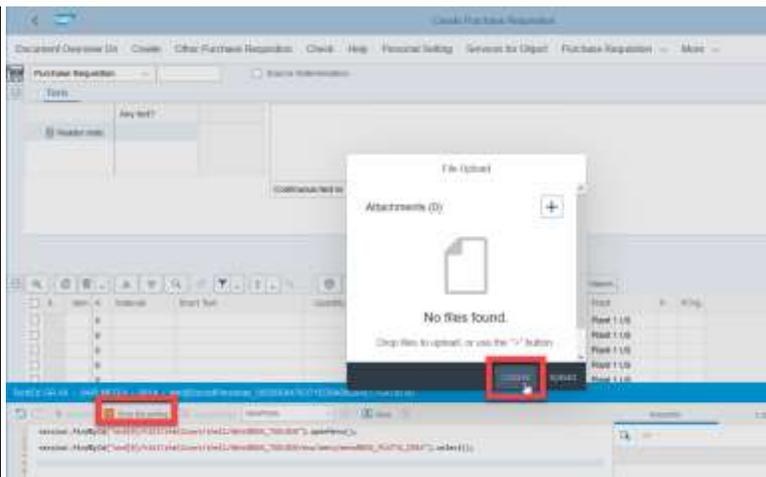
Explanation	Screenshot
<p>Now it's time to test the flavor for functionality:</p> <ul style="list-style-type: none"> - Select a material number, this will pull in other related values from the master record. - Enter a quantity 	
<ol style="list-style-type: none"> (1) Click the Description button and type in an explanation for the requisition. (2) Test the viewport buttons back and forth to ensure that the correct screen, with your added content, is displayed (3) Hit the 'Save' button to create the document. Note the document number. 	
<p>Use transaction ME53N and display the requisition you just created.</p> <ol style="list-style-type: none"> (1) In the menu bar, go to 'Other Purchase Requisition' (2) Enter your requisition number (3) Select the 'Purch. Requisition' radio button (4) Hit ENTER or click 'Other Document'. <p>Verify that all entered values are saved properly.</p>	

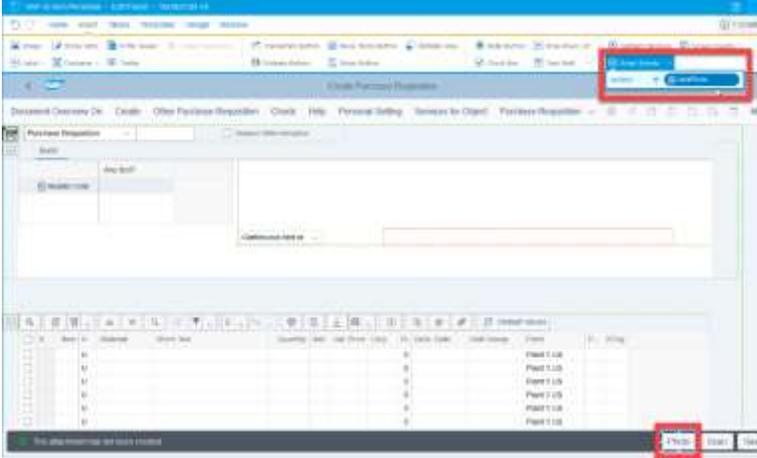
Explanation	Screenshot
<p><i>Test your flavor on your cell phone.</i></p> <p>(1) Log on to the system via the SAP Fiori Client and your credentials.</p> <p>(2) Start transaction ME51N. If you have set the copied base flavor as your default, it will now render the proper adaptive flavor, based on your device screen size. You should see the Item Details screen.</p>	

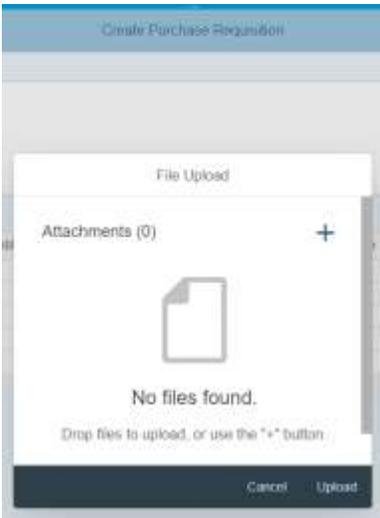
EXERCISE 2

The second task is to activate the barcode scanning and photo attachment features. The buttons are already present in the base flavor, so they will also be part of child flavors automatically. Barcode scanning scripts are included in the base flavor as well.

Explanation	Screenshot
<p>TechEd Demo 2018</p>	
<p>(1) Edit the <u>base</u> flavor you originally copied (from “TechEd base” flavor in Exercise 1)</p> <p>(2) Assign the openScanner script to the Scan button.</p> <p>(3) Analyze the script in the Script Editor. This script is based on a Knowledge Base article at https://wiki.scn.sap.com/wiki/x/moMoHQ</p> <p>For participants who wish to exercise scripting to add the barcode scanning, feel free to write your own scripts using the above KB article, instead of relying on the provided scripts in your base flavor. In this case, the target material number field is the one in the Item Details section, Material Data tab.</p>	

Explanation	Screenshot
<p>To attach a photo to the requisition, you need to record the actions and attach your recorded script to the Photo button in the base flavor.</p> <p>(1) Switch to the Script Editor in your base flavor</p>	
<p>(1) Create a new script called <i>takePhoto</i> and start recording</p>	
<p>(1) Record the following actions: In the menu bar: Services for Object -> Create -> Create Attachment</p>	
<p>(1) Hit Cancel in the popup and stop recording.</p> <p>(2) Save the script</p> <p>(3) Exit the script editor</p>	

Explanation	Screenshot
<p>Assign the script to the “Photo” button:</p> <ol style="list-style-type: none"> (1) Select the button in the Editor (2) Insert -> Script Events -> onClick -> takePhoto (3) Save the flavor 	
<p>Now test your phone flavor.</p> <ol style="list-style-type: none"> (1) Start ME51N on your phone (2) Scan one of these barcodes. The corresponding number should populate the Material Number field. 	<div style="text-align: center;">  <p>SP001</p> </div> <div style="text-align: center; margin-top: 100px;">  <p>EMMS4-CAR00</p> </div> <div style="text-align: center; margin-top: 100px;">  </div> <p>MZ-RM-M500-10:</p>

Explanation	Screenshot
<p>Test attaching a photo to the requisition.</p> <p>(1) Click on the “Photo” button, then the + sign</p> <p>(2) Select the camera, take the photo, select and upload it.</p> <p>The attachment will be saved with the requisition.</p>	

EXERCISE 3

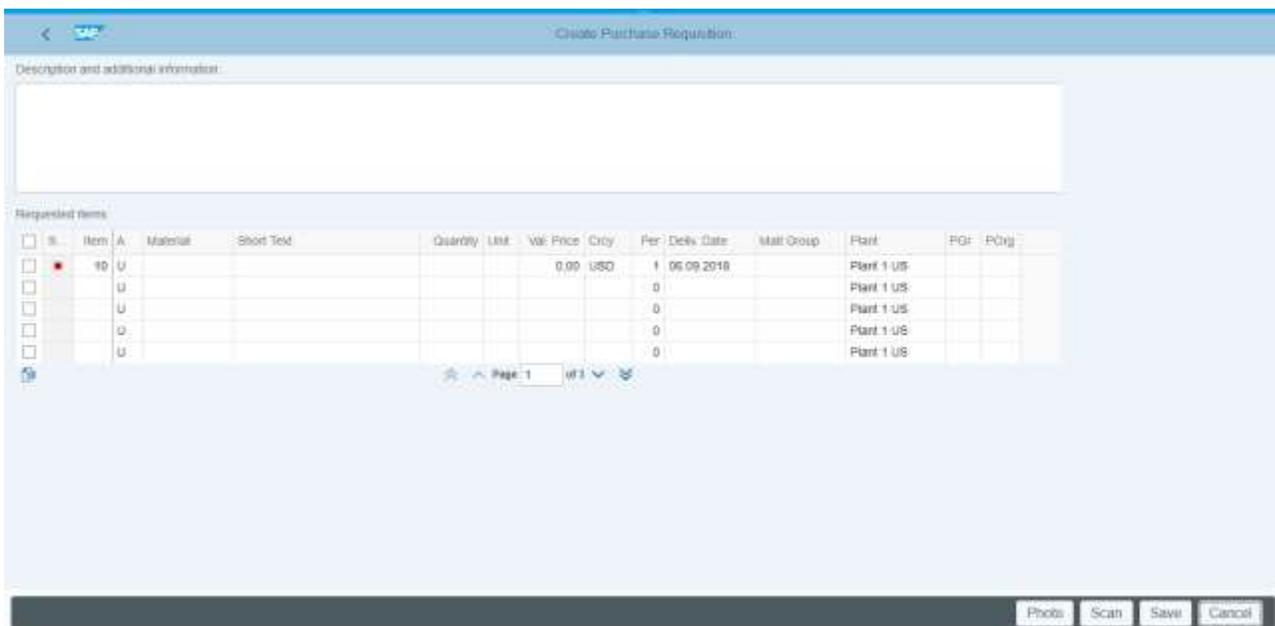
(no detailed instructions)

Based on the earlier exercises you should be able to create an adaptive tablet flavor that could also work as a simplified desktop flavor. Contrary to the phone flavor, this flavor will allow the creation of requisitions with multiple line items.

Create another adaptive flavor for your base flavor, the width setting should be 1000.

The users should only see the long text area, and the table for the requested items. The following screen shot shows the desired layout and look of the screen.

This flavor should be automatically selected when you log on using the laptop.



www.sap.com/contactsap

© 2018 SAP SE or an SAP affiliate company. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP SE or an SAP affiliate company.

The information contained herein may be changed without prior notice. Some software products marketed by SAP SE and its distributors contain proprietary software components of other software vendors. National product specifications may vary.

These materials are provided by SAP SE or an SAP affiliate company for informational purposes only, without representation or warranty of any kind, and SAP or its affiliated companies shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP or SAP affiliate company products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

In particular, SAP SE or its affiliated companies have no obligation to pursue any course of business outlined in this document or any related presentation, or to develop or release any functionality mentioned therein. This document, or any related presentation, and SAP SE's or its affiliated companies' strategy and possible future developments, products, and/or platforms, directions, and functionality are all subject to change and may be changed by SAP SE or its affiliated companies at any time for any reason without notice. The information in this document is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, and they should not be relied upon in making purchasing decisions.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and other countries. All other product and service names mentioned are the trademarks of their respective companies.

See <https://www.sap.com/copyright> for additional trademark information and notices.

