Materials Management (MM)

This document is intended to help instructors understand the case study process and manage the learning process in and outside the classroom. The main focus lies on prerequisites and common tasks such as testing and trouble-shooting.

Product
SAP S/4HANA 2020
Global Bike

Level
Instructor

Focus
Materials Management

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4.1

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MOTIVATION

Theoretical lectures explain concepts, principles, and theories through reading and discussion. They, therefore, enable students to acquire knowledge and gain theoretical insights.
In contrast, case studies allow them to develop their abilities to analyze enterprise problems, learn and develop possible solutions, and make sound decisions.

The main objective of the GB case studies in general is for students to understand the concept of integration. These descriptive and explanatory case studies will allow students to understand the importance and the advantages of integrating enterprise areas using an S/4HANA system.

The main goal of this document is to help instructors prepare the SAP system for the Material Management case study process and to support them trouble-shoot problems that might occur during the course.

Beside technical and didactic prerequisites, the lecturer notes list SAP transactions for testing and correcting student results in the SAP system. In addition, this document describes common problems and explains their reason and solution.

SAP University Alliances

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Prerequisites

Note Before using this case study in your classroom please make sure that all technical (month-end closing, user management etc.) and didactic prerequisites are fulfilled. Such prerequisites are briefly pointed out below. Detailed documentation can be displayed at and downloaded from the *Learning Hub of SAP UA* or the *UCC web sites*.

Technical Prerequisites

The Materials Management case study is based on a standard SAP S/4HANA client with the current GB dataset. Before processing the case study on your own or with your students all general setting should be checked.

This includes **month-end closing** in Materials Management (transaction **MMPV**) which is documented on the UCC web sites.

Month-end closing in MM
MMPV

Note: With the current version of the GB client a **year-end closing** is not necessary, because it has already been automated or because it is not needed for the process described in the curriculum material.

~~Year-end closing~~

User accounts in the SAP system need to be created or unlocked.

User management

These student user accounts should end with a three-digit numeric number (e.g. LEARN-001, LEARN-002 etc.). This number will be represented by ### in the case study and helps differentiate customer accounts, products etc.

In an SAP S/4HANA GB client there exist already 1000 user accounts from **LEARN-000** to **LEARN-999**. These users need to be unlocked. The initial password for each LEARN-### account is set to **tlestart**.

LEARN-000 to LEARN-999

tlestart

Transaction **ZUSR** was developed in the Global Bike client in order to mass maintain SAP user accounts. For a detailed description of this and SAP standard transactions for user management (**SU01** and **SU10**) please refer to the *lecturer notes „SAP User Management“* (see: current Global Bike curriculum → chapter 99 – Instructor Tools).

ZUSR

SU01
SU10

All LEARN-### user accounts have been assigned to the role *Z_UCC_GBI_SCC* and have authorizations to use all applicative transactions in the SAP S/4HANA system. The role allows access to all transactions necessary for GBI exercises and case studies. If you need access to system-critical transactions, i.e. for development purposes, you may assign the composite profile *SAP_ALL* to your student accounts.

In addition to these backend authorizations, LEARN users have all the necessary frontend authorizations. With these, the Fiori Launchpad can be accessed and the module-specific groups can be viewed.

Note: Please be aware that the Fiori interface follows a different concept than the SAP GUI. While all transactions via the SAP GUI are generally immediately usable, Fiori apps have to be activated, set up and checked

individually in an elaborate process with a lot of manual work. The UCC strives to continuously expand the scope. The main focus is on functionalities used in the case studies.

Instructor account LEARN-000

It is useful for the instructor to have a user account available for testing that has the same authorizations as the student accounts. You may use the predefined instructor account **LEARN-000** for this purpose. Please use the user TEACH-### for administrative purposes before, during and after the course only. For more information about using the TEACH user, see the folder 99 Instructor Tools.

Didactic Prerequisites

Navigation

In order to successfully process this case study, students should be familiar with the **navigation** in SAP systems, especially the SAP Easy Access menu, the SAP transaction concept as well as possible documentation and help options. We highly recommend using the *navigation slides* and the *navigation course* (see: current GB curriculum → chapter 2 – Navigation).

Historic background

In addition, it has been proven beneficial that students have a thorough understanding of the **historic background** and the enterprise structure of the Global Bike concern before they start working on the SAP system. For this purpose we recommend the *case study „Global Bike“* (see: current GB curriculum → chapter 3 – Global Bike).

Because the case study is not based on the exercises, it is not necessary to have processed the MM exercises (MM 1 to MM 5) before you start with the case study. However, it is recommended.

GBI client version

ZGBIVERSION

In order to function properly this case study needs a **GB client version** that is equal to or higher than the case study version (see cover page). Please check. If you do not know the client version please use the transaction **ZGBIVERSION** within your SAP S/4HANA system or contact your UCC team.

Global Feedback

Do you have any suggestions or feedback about GB? Please send it to our new email-address **gbi@ucc.ovgu.de** which is used to gather feedback globally. All emails will be evaluated by the persons responsible for the curriculum bi-weekly. This way your feedback might influence future releases directly.

Please note that any support requests send to this email address will be ignored. Please use the common support channels for your support requests.

Student Assessment

Note With the app described below you can check and correct master and transactional data that your students have created during your course.

Global Bike Monitoring Tool (beta)

Global Bike Monitor

We are developing a GB Monitoring Tool, which is available in this GB release. Since it is still in development the beta version does not support all case studies yet.

A detailed tutorial for this tool is available in the module 99 Instructor Tools of the current GB curriculum. Please keep in mind that this app is an additional functionality designed by the UCC Magdeburg and still in development. Therefore, we kindly ask you to send any feedback or detailed error descriptions to the following address: **gbi@ucc.ovgu.de**

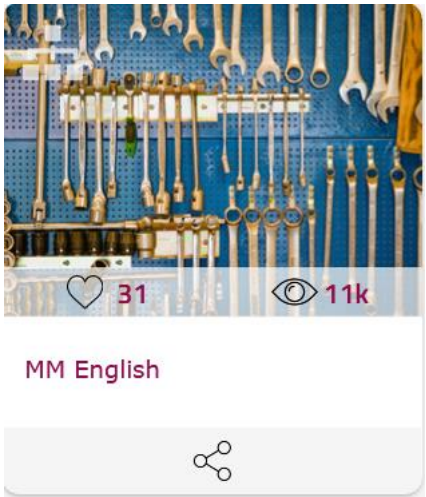
Learning Snacks MM

Note With the Learning Snacks MM you can check your learning success in the module MM.

What is Learning Snacks?

Learning Snacks offers the possibility to check the knowledge gained during the case studies and exercises by means of small single-choice questions. Depending on the selected module, you can play through a Learning Snacks (MM here). Learning Snacks can be used with or without prior registration. By having your own account, you can create snacks yourself, like other snacks and receive some kind of points for each question you answer correctly.

You can find detailed instructions on Learning Snacks in the module "98 Cross-Module".



Process Monitoring

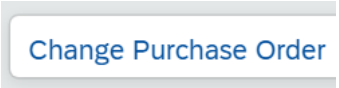
Note During the case study the SAP system creates documents which are automatically logging all business process steps. These documents rely on master data that were either predefined by the curriculum development team or created by your students.

The **Purchase Order History** visualizes all documents related to a purchase order and thus helps you monitor individual procurement processes and serves as a starting point for trouble-shooting student problems.

Purchase Order History

Open Fiori App *Change Purchase Order* in order to display a purchase order.

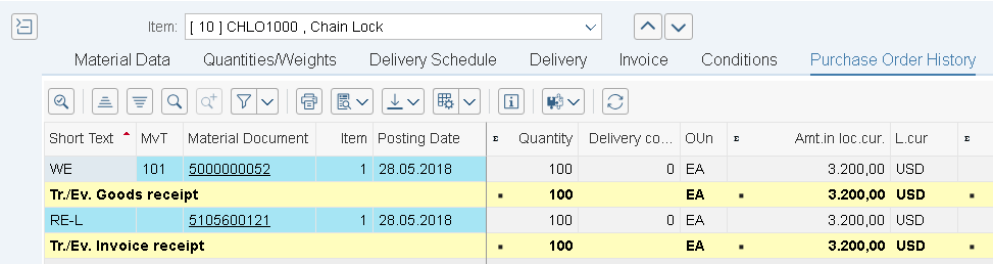
Fiori App



If you do not see any navigation on the left side of your screen, press Document Overview On . Click on and select *Purchase Orders*. Enter you material **CHLK1###** under *Material Number*. Click on Execute. Look for the **purchase order number** and clicking on it double

CHLK1###

You find the *Purchase Order History* tab in the item details on the bottom of the screen. If the item details are not displayed click on Item Detail. Then, click on the *Purchase Order History* tab.



After successfully processing the case study all students should have one purchase order (based on one of three quotations) with two items each, a goods receipts (WE) and a vendor invoices (RE-L) each. The amount of each goods receipt and invoice is 3,200 USD each and a total sum of 6,400 USD.

Problem: Incorrect or Incomplete Material Master Record

Symptom During the case study the SAP system requests additional data not mentioned in the documentation or error messages occur.

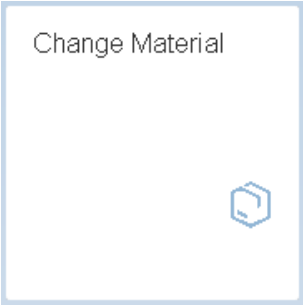
Reason The student created all required views in the material master, but forgot to fill out some of the given data from the case study. In this example the material group and the division are missing.

Solution Please change incorrect or incomplete data using Fiori App *Change Material*. This example illustrates a change in the Basic Data 1 view.

Change Material Master Record

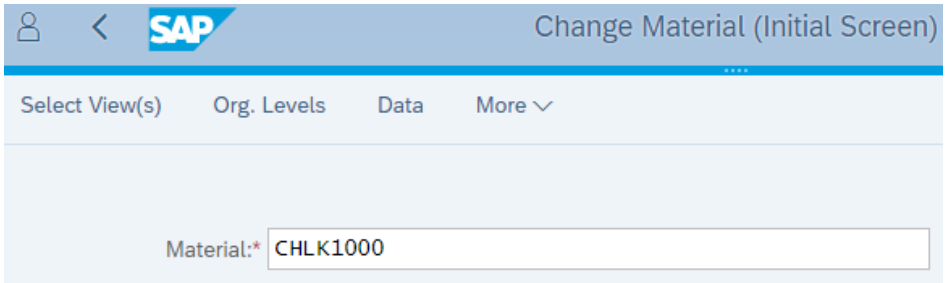
Please open Fiori App *Change Material* to change a material master record.

Fiori App



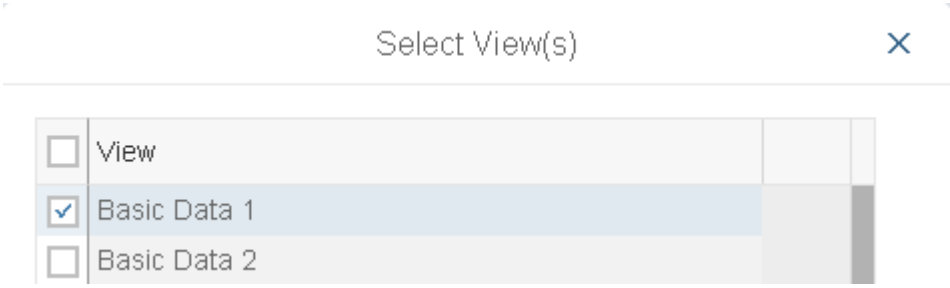
In the material text field, enter the number of the material you would like to change for example **CHLK1###**. Then, press Enter or click on Continue.

CHLK1###



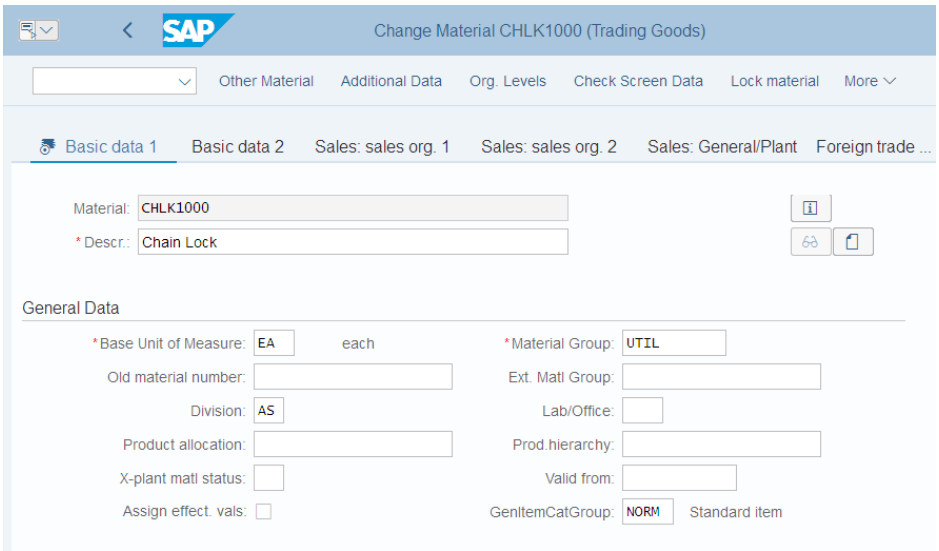
Select the incomplete views by clicking on the square in front of the respective rows. In this case **Basic Data 1** is required, since the material group and the division are defined there.

Basic Data 1



On the *Basic Data 1* tab, enter **UTIL** (Utilities) as a material group. As division, choose **AS** (Accessories) as specified in the case study.

UTIL
AS



Then, click on Save to save your material.

Problem: Create Missing Material Master Record View

Symptom During the case study, the user receives error messages that a material or a view of this material does not exist.

Reason The student has missed one or more views when creating the trading good. In this example, the student forgot the MRP 3 view.

Solution Create the missing views using Fiori App *Change Material*. The exemplary creation of the MRP3 view is shown below.

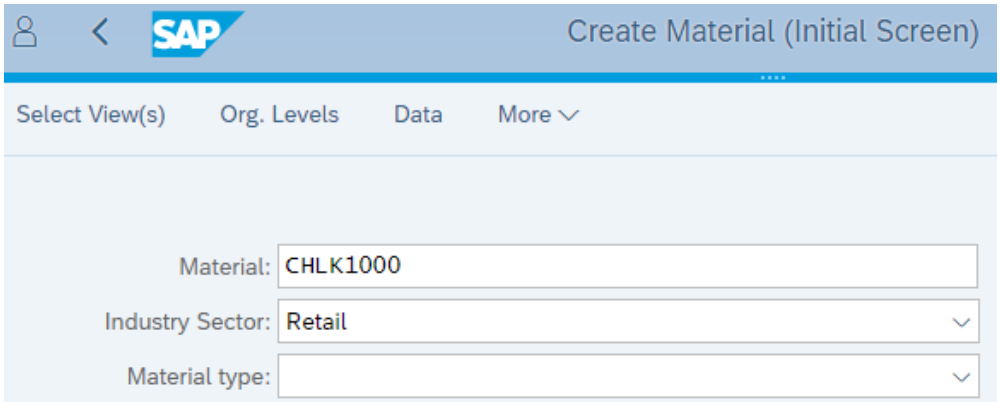
Create Material Master Record View

With Fiori App *Create Material* you can create missing material master record views.

Fiori App

In the Material field, enter **CHLK1###** (replace ### with the students' number) and select **Retail** as an Industry sector. Then, click on Continue or press Enter.

CHLK1###
Retail



The system automatically copies the Industry sector and material type. Press Continue again to confirm the message.

On the next screen, select the missing view by clicking on the square in front of **MRP 3**. Make sure **Create views selected** is selected. Then, click on ✔.

MRP 3
Create views selected

MI00
TG00

On the Organizational Levels screen, enter plant **MI00** (Miami), Stor. Location **TG00** (Trading Goods). Then, click once more on ✔. You will be informed that the material already exists and will be extended.

Enter the information given in the case study. Afterwards, click on Save to save the material.

Problem: Material Created in Wrong Plant

Symptom During the case study, the user receives error messages that a material does not exist in a specific plant.

Reason The student created the material in the wrong plant and therefore cannot work with it during the case study.

Solution Copy the material master record to the correct plant.

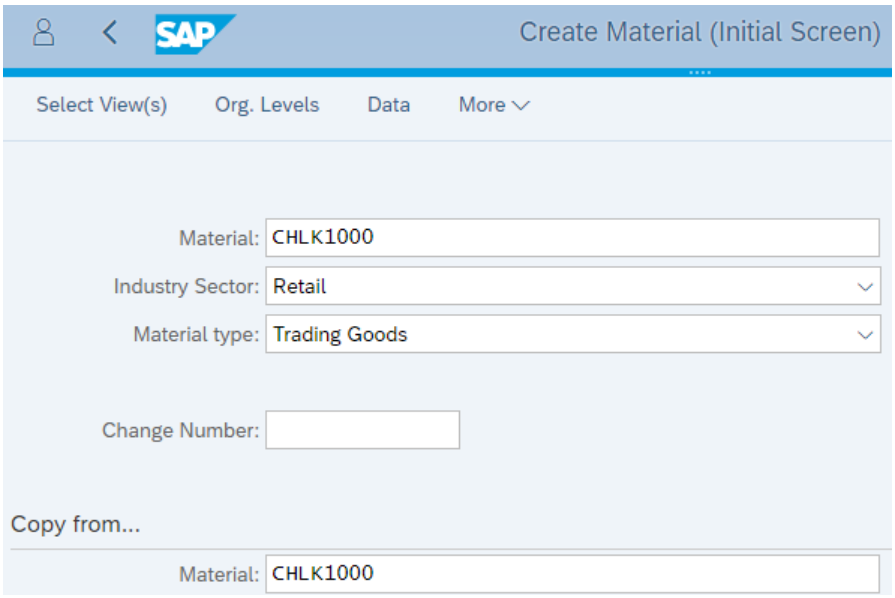
Copy Material Master Record

With Fiori App *Create Material* you can create the material for the correct plant duplicating all necessary data from a copy-from material.

Fiori App

In the Material field, enter **CHLK1###** (replace ### with the students' number), select **Retail** as an Industry sector and **Trading Goods** as Material type. In the section Copy from... the material **CHLK1###**, which you want to copy. Then, click on Continue or press Enter.

CHLK1###
Retail
Trading Goods



On the next screen, select the following views by clicking on the square in front of the respective rows:

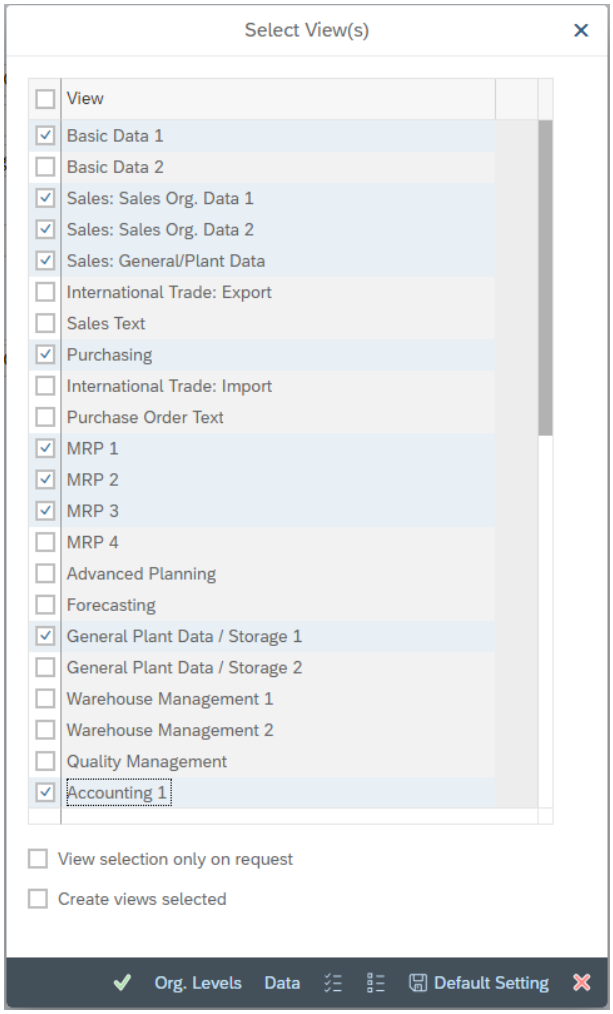
Basic Data 1
Sales: Sales Org. Data 1
Sales: Sales Org. Data 2

- **Basic Data 1**
- **Sales: Sales Org. Data 1**
- **Sales: Sales Org. Data 2**
- **Sales: General/Plant Data**
- **Purchasing**
- **MRP 1**
- **MRP 2**
- **MRP 3**
- **General Plant Data/Storage 1**
- **Accounting 1**

Sales: General/Plant Data
Purchasing
MRP 1
MRP 2
MRP 3
General Plant Data /St.1
Accounting 1

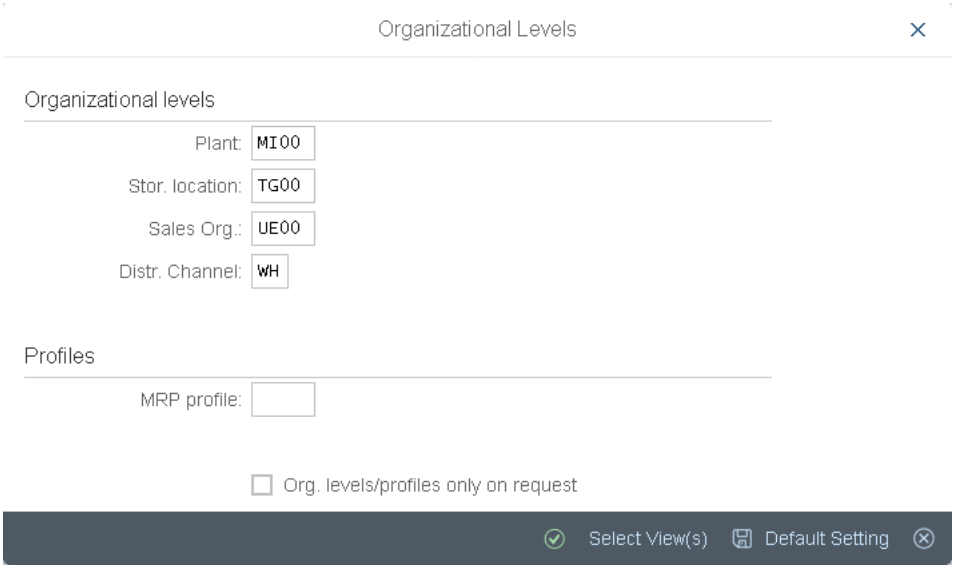
Also, select **Create views selected**. Then, click on .

Create views selected



On the Organizational Levels screen, enter plant **MI00** (Miami), Stor. Location **TG00** (Trading Goods), Sales Org. **UE00** (US East), and Distr. Channel **WH** (Wholesale). Compare with the screen shown below. Then, click on .

MI00
TG00
UE00
WH



All information will be copied from the existing material. Click on Save to save the material for the correct plant.

Problem: Quotation cannot be created

Symptom The quotation cannot be created because the request for quote is not approved, instead its status remains on *in approval*.

Reason If the request for quote is not published automatically, it is because the approval process is not automated.

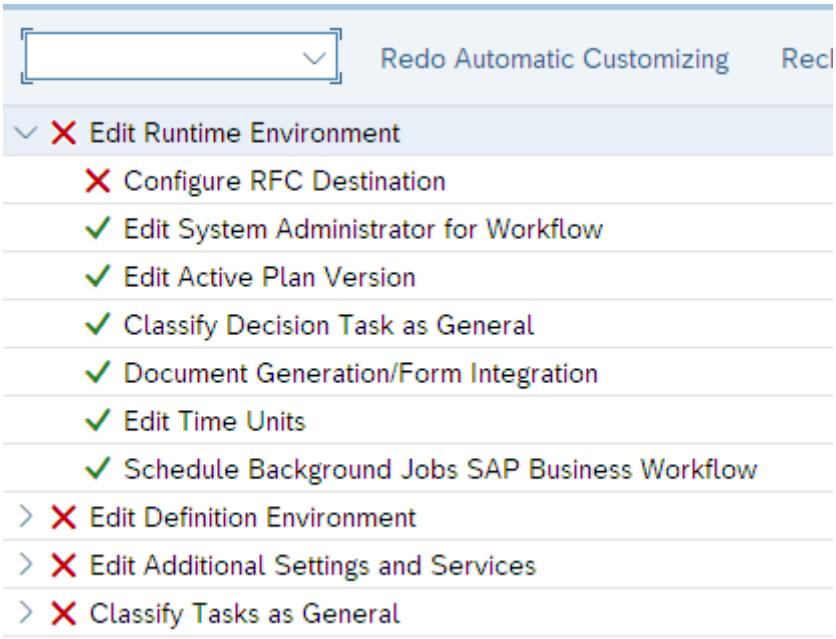
Solution In order for the request for quote to be approved automatically, the approval process must be customized.

Automatic Workflow Customizing

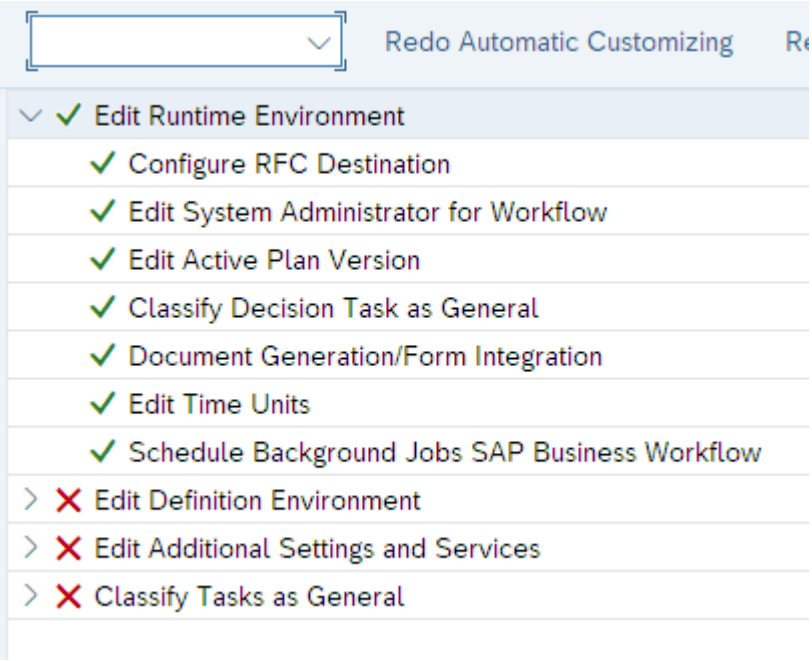
Transactioncode

Open transaction SWU3 with a user that has SAP_ALL rights.

You can see that the edit runtime environment was not executed correctly.



Click on Redo Automatic Customizing to start the process.



The request for quote should now be published.

Problem: Supplier quotation can’t be awarded or completed

Symptom During the price comparison a quotation cannot be award or cannot be closed.

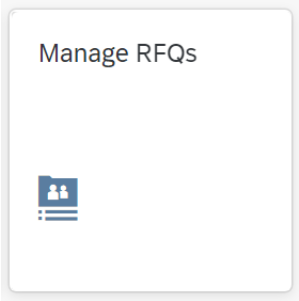
Reason If a supply quotation has been created but not submitted, it appears in the overview for comparing supplier quotations, but cannot be accepted or rejected.

Solution In order to be able to accept or reject the supplier request, you must first submit it.

Change Quotation

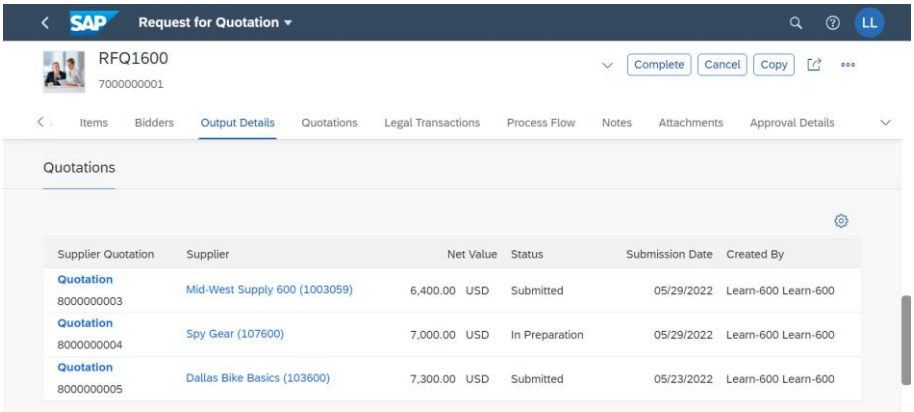
To change a quotation, use the Fiori App *Manage RFQs*.

Fiori App

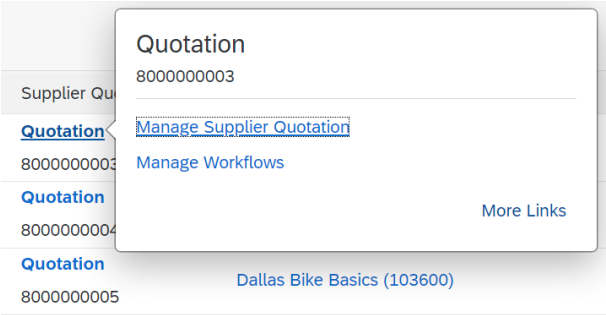


Search for your RFQ and select it.

In the *Quotations* area take a look at the supplier quotations. A quotation that has not been submitted has the status In Preparation.



In the corresponding row click on Quotation and then on *Manage Supplier Quotation*.



In the *Supplier Quotation* Screen click on Submit.

Your offer now changes to the status submitted and can be edited further.

Problem: No Open Item When Posting the Goods Receipt

Symptom A student is not able to find open items when creating a goods receipt for the purchase order.

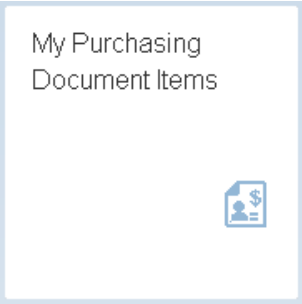
Reason This case occurs if the goods receipt has already been posted or if the wrong purchase order number was entered.

Solution Check your purchase order status.

Display Purchase Order

To display a purchase order, use the Fiori App *My Purchasing Document Items*.

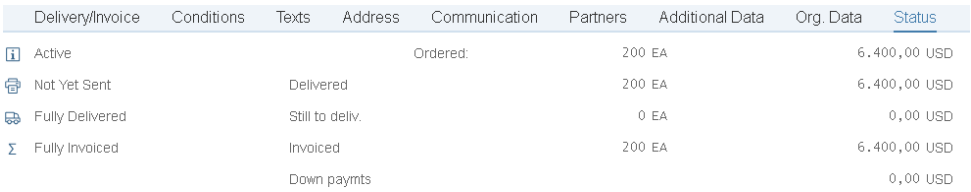
Fiori App



Choose Purchase Orders. Now you can search for the **purchase order number** and display the correct one by clicking on it.

Purchase order number

Furthermore, you can check the purchase order status. If the header data is not yet displayed, open the section by clicking on Header. Now, click on the *Status* tab. In this example, no open items are available because all 200 pieces were already delivered. This happens when the student forgot to reduce the quantity for the first goods receipt from 200 to 100 pieces.



Delivery/Invoice	Conditions	Texts	Address	Communication	Partners	Additional Data	Org. Data	Status
Active				Ordered:	200 EA			6.400,00 USD
Not Yet Sent		Delivered			200 EA			6.400,00 USD
Fully Delivered		Still to deliv.			0 EA			0,00 USD
Fully Invoiced		Invoiced			200 EA			6.400,00 USD
		Down paymts						0,00 USD

Problem: Wrong Balance When Creating Vendor Invoice

Symptom When creating the vendor invoice, the system displays a balance different than 0.00 USD.

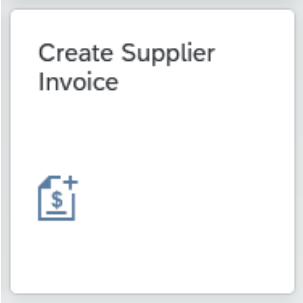
Reason Probably, students have not noted down the correct invoice amount or they have made mistakes in previous case study tasks.

Solution Check the purchase order quantity and crate the invoice with the correct amount.

Create Vendor Invoice

To create a vendor invoice, use the Fiori App *Create Supplier Invoice*.

Fiori App

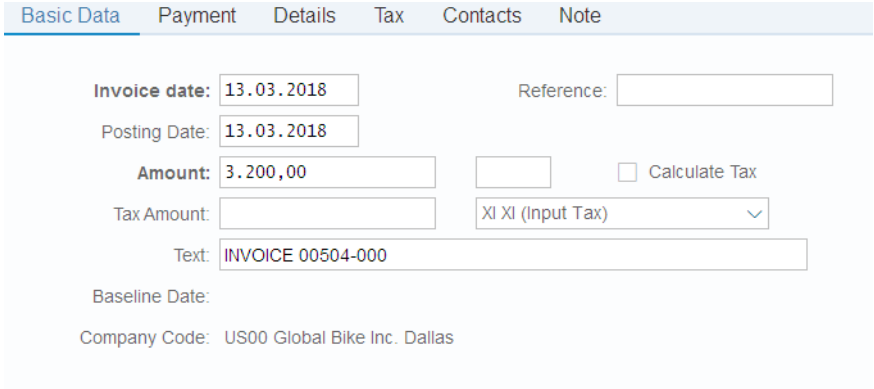


Enter the students **invoice number**. If the student forgot to reduce the quantity during goods receipt from 200 to 100 the total invoice amount is 6,400.00 instead of 3,200.00 USD.

Invoice number

Make sure that **XI (Input Tax)** is selected. Other tax codes lead to a balance different from 0.00 USD.

XI



Solution: MM Challenge

Motivation After you have successfully completed the Materials Management case study, you should be able to solve the following task independently.

Scenario A new chain closure, *Chain Lock Security Pro ###* (Ger.: Kettenschloss Security Pro ###), is available on the market and we would like to include it in our inventory. The new chain closure with material number CHSP1### consists of a higher quality steel than the previous chain lock (CHLK1###), but the old one can still be used as a template because it has the same properties. The new material is intended for plant MI00, sales organization UE00, and distribution channel WH. With modern production techniques, the new material CHSP1### is also offered more cheaply by the suppliers. Global Bike passes the savings on to its customers. Maintain the chain close in Sales and Distribution with the price condition 50.00 USD per chain close. Request offers for 300 chain locks of security pro with a valuation price of 25.50 USD. Based on your request of 300 pieces, *Boomtown Tire & Wheel* is offering $26.00 per piece and *Space Bike Composites* of $25.50 per piece. Enter both quotations and accept the best quotation and order the requested 300 chain locks. Process the inbound delivery and enter the incoming invoice. You then pay for the delivery.

Note Since this task is based on the Materials Management case study, you can use this as a guide. However, we recommend that you carry out this continuing task without assistance in order to test your acquired knowledge.

Create Material

Use the Fiori App *Manage Product Master Data* to create a new Security Chain Lock.	Fiori App
Proceed as described in the case study ‘Step 2: Create material’. Only change the following values.	
Enter **CHSP1###** as the *Product Number*.	CHSP1###
As *Descriptions* enter **Chain Lock Security Pro ###** for language EN (English) and **Kettenschloss Security Pro ###** for language DE (German).	Chain Lock Security Pro ### Kettenschloss Security Pro ###
For *Inventory Price* enter **50.00.**	50.00
Click on the home icon to go to the Fiori Launchpad Overview.	CHSP1###

Create purchase requisition

Use the Fiori App *Create Purchase Requisition*.	Fiori App
Proceed as described in the case study ‘Step 5: Create Purchase Requisition’. Only change the following values.	
Enter Material **CHSP1###** (replace ### with your number). For Valuation Price enter **25.00 USD**, **1** for Price Uni and Quantity **300**.	CHSP1### 25.50 USD 1 300

Close the notification and then click SAP to go to the SAP Fiori launchpad.

Create request for quotation

Use the Fiori App *Manage Purchase Requisitions*.

Fiori App

Proceed as described in the case study ‘Step 7: Create RFQ’. Only change the following values.

As RFQ Description use RFQ2###. Enter as *Bidders* **Boomtown Tire & Wheel** and **Space Bike Composites**.

Boomtown Tire & Wheel
Space Bike Composites

Click SAP to go to the SAP Fiori launchpad. Confirm any notes about unsaved data.

Maintain quotations from vendors

Use the Fiori App *Manage RFQs*.

Fiori App

Proceed as described in the case study ‘Step 8: Create quotation from vendor’. Only change the following values.

Enter the following net order prices:

Boomtown Tire & Wheel	**26.00** USD
Space Bike Composites	**25.50** USD

Boomtown Tire & Wheel
26.00
Space Bike Composites
25.00

Click SAP to go to the SAP Fiori launchpad. Confirm any notes by choosing OK.

Reject quotation

Use the Fiori App C*ompare Supplier Quotations*.

Fiori App

Proceed as described in the case study ‘Step 9: Price Based Bid Evaluation’ Only change the following values.

Award the quotation from Space Bike Composites and reject the quotation Boomtown Tire & Wheel.

Click SAP to go to the SAP Fiori launchpad. Confirm any notes by choosing OK.

Create purchase order referencing an RFQ

Use the Fiori App *Manage RFQs.*

Fiori App

Proceed as described in the case study ‘Step 10: Create purchase order with reference to RFQ’. Only change the following values.

Search for your **RFQ2###**.

Select the offer from Bike Composites. Check that the system has taken the material CHSP1###, the order quantity 300, the delivery date in three months and a net price of 25.50 USD. Do not change the order quantity, the 300 chain locks should be delivered together.

Click SAP to go to the SAP Fiori launchpad. Confirm any notes by choosing OK.

Create goods receipt for purchase order

Use the Fiori App *Post Goods Receipt for Purchasing Document*. — Fiori App

Proceed as described in the case study 'Step 12: Post Goods Receipt for Purchase Order'. Only change the following values.

Select **Unrestricted Use** as *Stock Type*. — Unrestricted Use

Click SAP to go to the SAP Fiori launchpad.

Create and post an invoice

Use the Fiori App *Create Supplier Invoice*. — Fiori App

Proceed as described in the case study 'Step 15: Create and post the first supplier invoice'. Only change the following values.

Enter the amount from the invoice above (**7,650.00**) in the *Amount* field. And the Reference **INVOICE00604-###**. — 7,650.00 INVOICE00604-###

Press No to go back to the SAP Fiori launchpad.

Post outgoing payment

Use the Fiori App *Post Outgoing Payments*. — Fiori App

Proceed as described in the case study 'Step 21: Post Outgoing Payment'. Only change the following values.

Enter for *Amount* **7,650.00**. — 7,650.00

In the *Open items selection* field group, enter (or find) the vendor number for your **Space Bike Composites** vendor in the Account field. Verify your data with the screenshot below. — Space Bike Composites

Click SAP to go to the SAP Fiori launchpad.