Chapter 08: Material Planning (MP)

Exercise 08-01: MP Master Data

Multiple Company Code

Version 4.14

Revised 07/27/2015

Introduction

General Notes and Information

It is strongly recommended that you read through the entire exercise prior to starting. Not all instructions can be provided in a linear manner in the exercise itself. READ CAREFULLY!

The following symbols are used to indicate important information as described below.

* An arrow highlights an important instruction that must not be overlooked.

🖉 A pencil prompts you to write down an important piece of information.

Each student or group will be assigned a unique two-digit identifier. This identifier is used in all exercises. Whenever you see ##, replace it with your identifier. For example, Joe may have an identifier of 05. Every time Joe sees the ## symbol, he will replace it with “05”.

**Differences in Font**:Throughout this exercise you will see tables with different fonts used in the Data Entry column(s). The normal Times New Roman indicates you enter exactly what is typed out except for the ## Symbol where you would put in your identifier. The italicized *Times New Roman* font indicates the data is looked up, found, or otherwise not to be entered literally as written.

* Always work with your data.

Business Process Overview

GBI utilizes the material planning process to develop forecasts and to create sales plans. After successfully implementing materials planning, GBI can automate its planning through an MRP run which will automatically create purchase requisitions and planned orders for production. In this exercise, you review the master data relevant to material planning processes.

Exercise Prerequisites

Chapter 06-01 Version MCC 4.10

Chapter 07-01 Version MCC 4.10

Exercise Workflow

Exercise Deliverables

Deliverables are consolidated into one worksheet at the end of the exercise. It is only necessary to turn in that worksheet and that worksheet alone along with data in the system if required.

For this exercise you will need the following deliverables:

In the System:

* Materials Created
* Finished Product Bills of Materials Created
* Finished Product Routings Created
* Vendor Created
* Product Group Created

On Paper:

* Answer(s) to Question(s)
* You may be assigned additional deliverables. Make certain to check with your instructor.

Step 1: Create Materials

In this step, you create the raw materials and finished goods for the material planning process.

1. In the “SAP Easy Access” screen, follow the navigation path below:

Navigation

Logistics à Materials Management 🡪 Materials Master 🡪 Material 🡪 Create (General) 🡪 Immediately

1. What is the transaction code to create a general material immediately? MM01 🖉
2. You are in the “Create Material (Initial Screen)” screen.

Enter the following information:

|  |  |
| --- | --- |
| Field Name | Data Entry |
| Material | TRFR10## |
| Industry Sector | *Mechanical engineering* |
| Material Type | *Raw Materials* |
| Copy from…Material | *Original Touring Frame-Black* |

1. Click on  (ENTER).
2. In the “Select View(s)” pop-up, click on the “Deselect All” icon.
3. Highlight the “Basic Data 1” row.

* Remember that by selecting the “Basic Data 1” row (because it is already created in the first place) doesn’t necessarily create the view but yet, keeps it in the default to display the material to answer some of the questions at the end of this step for the chart.

1. Highlight the “Purchasing” row.
2. Highlight the “MRP 1” row.
3. Highlight the “MRP 2” row.
4. Highlight the “General Plant Data / Storage 1” row.
5. Highlight the “Accounting 1” row.
6. Highlight the “Costing 1” row.
7. Click on  (SAVE AS DEFAULT VALUES).
8. Click on  (CONTINUE (ENTER)).
9. In the “Organizational Levels” pop-up, enter the following information:

|  |  |
| --- | --- |
| Field Name | Data Entry |
| Plant | Your Dallas Plant |
| Stor. Location | Your Raw Materials |
| Copy from Plant | *Original Dallas Plant* |
| Copy from Stor. Location | *Original Raw Materials* |

1. Click on  (SAVE AS DEFAULT VALUES).
2. Click on  (CONTINUE (ENTER)). You will receive a message that says “The material already exists and will be extended”.
3. You are in the “Create Material TRFR10## (Raw Materials)” screen.

Enter the following information:

|  |  |
| --- | --- |
| Field Name | Data Entry |
| Material Description (Short Text) | ## Touring Frame-Black |
| Purchasing Group | Your GBI Buyer |

1. Click on  (ENTER) after you have gathered the necessary information from each tab.
2. What is the name of the MRP Controller for the frame? DL MRP CONTROLLER 🖉
3. What is the lot size type for the touring frame? LOT-FOR-LOT ORDER QUANTITY 🖉
4. What is the planned delivery time for the touring frame? 1 DAY 🖉
5. What is the base unit of measure for the touring frame? EA 🖉
6. What is the moving price for the touring frame? 200 🖉
7. Click on  (ENTER).

* Be sure to view every tab marked with the yellow icon so that every necessary view is actually created.

1. In the “Last data screen reached” pop-up, click on the  icon. You will receive a message that says “Material TRFR10## created”.
2. Repeat the previous steps to create your touring frame-silver raw material.
3. You are in the “Create Material (Initial Screen)” screen.

Enter the following information:

|  |  |
| --- | --- |
| Field Name | Data Entry |
| Material | DXTR10## |
| Material Type | *Finished Product* |
| Copy from…Material | *Original Deluxe Touring Bike (black)* |

1. Click on  (ENTER).
2. In the “Select View(s)” pop-up, highlight the “Work Scheduling” row.
3. Click on  (CONTINUE (ENTER)).
4. In the “Organizational Levels” pop-up, enter the following information:

|  |  |
| --- | --- |
| Field Name | Data Entry |
| Stor. Location | Your Finished Goods |
| Copy from Stor. Location | *Original Finished Goods* |

1. Click on  (CONTINUE (ENTER)). You will receive a message that says “The material already exists and will be extended”.
2. You are in the “Create Material DXTR10## (Finished Product)” screen.

Enter the following information:

|  |  |
| --- | --- |
| Field Name | Data Entry |
| Material Description (Short Text) | ## Deluxe Touring Bike (black) |
| MRP Type | *MRP* |

1. Click on  (ENTER) after you have gathered the necessary information from each tab.

* Hint: You may receive an error saying, “In-house production time is 0 for material produced in-house.” Press  (ENTER) to acknowledge it and move on.

1. What is the name of the MRP Controller for the bike? DL MRP CONTROLLER 🖉
2. What is the lot size type for the bike? LOT-FOR-LOT ORDER QUANTITY 🖉
3. What is the procurement type for the bike? BOTH IN-HOUSE PRODUCTION AND EXTERNAL PROCUREMENT 🖉
4. What is the base unit of measure for the bike? EA 🖉
5. What is the moving price for the bike? 1400 🖉
6. What is the standard price for the bike? 1400 🖉
7. Click on  (ENTER).
8. In the “Last data screen reached” pop-up, click on the  icon. You will receive a message that says “Material DXTR10## created”.
9. Repeat Step 1.21 to Step 1.30 to create your deluxe touring bike (silver).

Exercise Deliverables:

In the System:

* Materials Created

On Paper:

* Answer(s) to Question(s)

Step 2: Create Bills of Materials

In this step, you repeat steps from Chapter 06 and copy a bill of materials for a finished product. The bill of material for the touring wheel assembly is already created from that chapter as well. This will also be true for the product routing which you will then create in the next step after this.

1. In the “SAP Easy Access” screen, follow the navigation path below:

Navigation

Logistics 🡪 Production 🡪 Master Data 🡪 Bills of Material 🡪 Bill of Material 🡪 Material BOM 🡪 Create

1. What is the transaction code to create a bill of materials? CS01 🖉
2. You are in the “Create material BOM: Initial Screen” screen.

Enter the following information:

|  |  |
| --- | --- |
| Field Name | Data Entry |
| Material | Your Deluxe Touring Bike (black) |
| Plant | Your Plant Dallas |
| Usage | *Production* |

1. Click on  (COPY FROM).
2. In the “Copy From…” pop-up, enter the following information:

|  |  |
| --- | --- |
| Field Name | Data Entry |
| Material | *Original Deluxe Touring Bike (black)* |
| Plant | *Original Plant Dallas* |

1. Click on  (CONTINUE (ENTER)).
2. You are in the “Create material BOM: Copy From” screen.

Click on the “Select All” icon.

1. Click on  (COPY).
2. You are in the “Create material BOM: Item Overview” screen.

Enter the following information:

|  |  |
| --- | --- |
| Item | Component |
| 0010 | Your Touring Aluminum Wheel Assembly |
| 0020 | Your Touring Frame-Black |
| 0030 | Your Derailleur Gear Assembly |
| 0040 | Your Touring Seat Kit |
| 0050 | Your Touring Handle Bar |
| 0060 | Your Pedal Assembly |
| 0070 | Your Chain |
| 0080 | Your Brake Kit |
| 0090 | Your Warranty Document |
| 0100 | Your Packaging |

1. Click on  (SAVE).

You will receive a message that says “Creating BOM for material”.

1. Repeat the previous steps to create your deluxe bike (silver) bill of materials.

* Remember that your silver bike will have one thing different from it which is color of frame.

Exercise Deliverables:

In the System:

* Finished Product Bills of Materials Created

On Paper:

* Answer(s) to Question(s)

Step 3: Create Product Routings

In this step, you create (copy) the product routing for the finished products.

1. In the “SAP Easy Access” screen, follow the navigation path below:

Navigation

Logistics 🡪 Production 🡪 Master Data 🡪 Routings 🡪 Routings 🡪 Standard Routings 🡪 Create

1. What is the transaction code to create routings? CA01 🖉
2. You are in the “Create Routing: Initial Screen” screen.

Enter the following information:

|  |  |
| --- | --- |
| Field Name | Data Entry |
| Material | Your Deluxe Touring Bike (black) |
| Plant | Your Plant Dallas |

* Ensure that the group field is cleared out.

1. Click on  (COPY FROM).
2. In the “Select Type” pop-up, click on the  icon.
3. You are in the “Create Using Copy Function: Object to be Copied” pop-up. Enter the following information:

|  |  |
| --- | --- |
| Field Name | Data Entry |
| Material | *Original Deluxe Touring Bike (black)* |
| Plant | *Original Plant Dallas* |

1. Click on  (CONTINUE (ENTER)).
2. In the “Create Routing: Header” screen, enter the following information:

|  |  |
| --- | --- |
| Field Name | Data Entry |
| Status | *Released (general)* |

1. Click on  (ENTER).

You will receive a message that says “Enter standard value Setup”.

1. Click on  (ENTER). You will receive a message that says “Activity type LABOR is not set up for cost center NA## NAPR10## in the current year”.
2. Click on  (ENTER). You will receive a message that says “Activity type LABOR is not set up for cost center NA## NAPR10## in the current year”.
3. Repeat the last three steps until you reach the overview of all operations.

* You will need to repeat these steps quite a few times

1. You are in the “Create Routing: Operation Overview” screen. Click on the  icon. You will receive a message that says “Routing was saved with group”.
2. In the “Create Routing: Initial Screen” screen, clear out the “Group” field.
3. Repeat the previous steps to create your deluxe silver bike product routing.

Exercise Deliverables:

In the System:

* Finished Product Routings Created

On Paper:

* Answer(s) to Question(s)

Step 4: Create Vendor

At the end of the next exercise, you will start the procurement process for three raw materials based on the demand planned for a product group and finished good in Exercise 08-02.In this step, you will create two vendors to be procured from since GBI procures only the touring seat kit and touring handle bars from one vendor and the touring frame from another.

1. In the “SAP Easy Access” screen, follow the navigation path below:

Navigation

Logistics 🡪 Materials Management 🡪 Purchasing 🡪 Master Data 🡪 Vendor 🡪 Central 🡪 Create

1. What is the transaction code to create the vendor? XK01 🖉
2. In the “Create Vendor: Initial Screen” screen, enter the following information:

|  |  |
| --- | --- |
| Field Name | Data Entry |
| Vendor | 1050## |
| Company Code | Your Global Bike Inc. |
| PurchasingOrganization | Your GBI, Purchasing |
| Account group | Vendor (int.number assgnmnt) |
| Reference Vendor | Original Space Bike Composites |
| Company code | Original Global Bike Inc. |
| Reference PurchasingOrganization | GBI US |

1. Click on  (ENTER).
2. In the “Create Vendor: Accounting information Accounting” screen, click on the  icon. You will receive a message that says “Vendor 00001050## has been created for company code US## purchasing organization US##”.

* Recall how to display this vendor. Use the display transaction to answer the following two questions referring to vendor data that you just copied from the original vendor.

1. What is the name for this vendor? SPACE BIKE COMPOSITES 🖉
2. What is the reconciliation account number for this vendor? 300000 🖉
3. In the “Create Vendor: Initial Screen” screen, enter the following information:

|  |  |
| --- | --- |
| Field Name | Data Entry |
| Vendor | 1100## |
| Reference Vendor | Original Fun n the Sun Seats n Bars |

1. Click on  (ENTER).
2. In the “Create Vendor: Accounting information Accounting” screen, click on the  icon. You will receive a message that says “Vendor 00001100## has been created for company code US## purchasing organization US##”.

* Recall how to display this vendor. Use the display transaction to answer the following two questions referring to vendor data that you just copied from the original vendor.

1. What is the name for this vendor? FUN N THE SUN SEATS N BARS 🖉

Exercise Deliverables:

In the System:

* Vendor Created

On Paper:

* Answer(s) to Question(s)

Step 5: Create Product Groups

GBI has two product groups consisting of bicycles and accessories. In this step, you create the bicycles product group at each of its levels. In the next step, you will view what you create.

* If you back out of this process before you are completely finished, you will not be able to complete it exactly as shown below. The difference will be that you cannot double-click on member product groups to edit their data. You will have to individually create/edit them and then add them as members to the “umbrella” product group(s). See the solution database for more help.

1. In the “SAP Easy Access” screen, follow the navigation path below:

Navigation

Logistics à Production 🡪 SOP 🡪 Product Group 🡪 Create

1. What is the transaction code to create a product group? MC84 🖉
2. You are in the “Create Product Group: Initial Screen” screen.

Enter the following information:

|  |  |
| --- | --- |
| Field Name | Data Entry |
| Product group | PG-BIKE0## |
| Product group description | 0## Product Group Bikes |
| Plant | Your Plant Dallas |
| Base Unit | *Each* |
| Members | *Product group* |

1. You will see an information popup.

Click on  (ENTER). You will receive a message that says “Master data created for product group PG-BIKE0## in plant DL##”.

1. You are in the “Create Product Group: Maintain Members (Groups)” screen.

Enter the following information:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Member number | Plnt | Aggr.fact. | Proportion | UoM MTyp |
| PG-ORBK0## | Your Plant Dallas | 1 | 40 | *each* |
|  | 0## Product Group OffRoad Bicycles | | |  |
| PG-TRBK0## | Your Plant Dallas | 1 | 60 | *each* |
|  | 0## Product Group Touring | | |  |

1. You will see an information popup.

Click on  (ENTER). You will receive a message that says “Master data created for product group PG-TRBK0## in plant DL##”.

1. What is the material type code for each of these product groups? MC84 🖉
2. Double-click on PG-TRBK0##.
3. In the “Define Members Type” pop-up, click on Product groups.
4. Click on  (CONTINUE (ENTER)).
5. You are in the “Create Product Group: Maintain Members (Groups)” screen.

Enter the following information:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Member number | Plnt | Aggr.fact. | Proportion | UoM MTyp |
| PG-DXTR0## | Your Plant Dallas | 1 | 70 | *each (EA)* |
|  | 0## Product Group Deluxe Touring Bicycle | | |  |
| PG-PRTR0## | Your Plant Dallas | 1 | 30 | *each (EA)* |
|  | 0## Product Group Professional Touring | | |  |

1. Click on  (ENTER). You will receive a message that says “Master data created for product group PG-PRTR0## in plant DL##”.
2. Double-click on PG-PRTR0##.
3. In the “Define Members Type” pop-up, click on the  icon.

* Ensure that “Materials” is selected in this step and in the following similar steps.

1. You are in the “Create Product Group: Maintain Members (Materials)” screen. Enter the following information:

|  |  |  |  |
| --- | --- | --- | --- |
| Member number | Plnt | Aggr.fact. | Proportion |
| Your Professional Touring Bike (black) | DL00 | 1 | 40 |
| Your Professional Touring Bike (silver) | DL00 | 1 | 30 |
| Your Professional Touring Bike (red) | DL00 | 1 | 30 |

* Remember that you still have professional touring bikes with your identifier at the end of their number. However, they are not defined for your plant. They are only defined for the original Plant Dallas (DL00). The step tells you to enter this in the above table.

1. Click on  (ENTER).
2. Click on  (BACK).
3. You are in the “Create Product Group: Maintain Members (Groups)” screen.

Double-click on PG-DXTR0##.

1. In the “Define Members Type” pop-up, click on the  icon.
2. In the “Create Product Group: Maintain Members (Materials)” screen.

Enter the following information:

|  |  |  |  |
| --- | --- | --- | --- |
| Member number | Plnt | Aggr.fact. | Proportion |
| Your Deluxe Touring Bike (black) | DL## | 1 | 40 |
| Your Deluxe Touring Bike (silver) | DL## | 1 | 30 |
| Your Deluxe Touring Bike (red) | DL## | 1 | 30 |

1. Click on  (ENTER).
2. Click on  (BACK).
3. You are in the “Create Product Group: Maintain Members (Groups)” screen. Click on  (BACK).
4. Double-click on PG-ORBK0##.
5. In the “Define Members Type” pop-up, click on the  icon.
6. You are in the “Create Product Group: Maintain Members (Materials)” screen. Enter the following information:

|  |  |  |  |
| --- | --- | --- | --- |
| Member number | Plnt | Aggr.fact. | Proportion |
| Your Men’s Off Road Bike | DL00 | 1 | 65 |
| Your Women’s Off Road Bike | DL00 | 1 | 35 |

1. Click on  (ENTER).
2. Click on  (SAVE).

You will receive a message that says “Product group created”.

Exercise Deliverables:

In the System:

* Product Group Created

On Paper:

* Answer(s) to Question(s)

Step 6: View Graphic Hierarchy

In this step, you display the product group at each of its levels through a graphic window.

* This transaction may not work properly in the Web GUI.

1. In the “SAP Easy Access” screen, follow the navigation path below:

Navigation

Logistics à Production 🡪 SOP 🡪 Product Group 🡪 Graphic 🡪 Product Group

1. What is the transaction code to view a product group graphic? MC91 🖉
2. You are in the “Product Group Hierarchy Graphic: Initial Screen” screen.

Enter the following information:

|  |  |
| --- | --- |
| Field Name | Data Entry |
| With description | Selected |
| With materials | Selected |

1. Click on  (ENTER).

* If you receive an SAP security pop-up, click “Allow.”
* Compare your graphic to the original PG-BIKE product group to check your work. Remember, your materials will be located in different plants and have different identifiers.
* You may need to scroll around to answer the following questions.

1. What is the color that represents the product groups within the graphic? YELLOW 🖉
2. How many total product groups are there within the graphic? 5 🖉
3. What is the color that represents the materials within the graphic? GREEN 🖉
4. How many total materials are there within the graphic? 8 🖉

Exercise Deliverables:

In the System:

* None

On Paper:

* Answer(s) to Question(s)

Step 7: Display Requirements List

In this step, you go into the stock/requirements list to view the requirements for your bikes.

1. In the “SAP Easy Access” screen, follow the navigation path below:

Navigation

Logistics 🡪 Materials Management 🡪 Inventory Management 🡪 Environment 🡪 Stock 🡪 Stock/Requirements List

1. What is the transaction code to display a stock/requirements list? MD04 🖉
2. You are in the “Stock/Requirements List: Initial Screen” screen.

Click on the  tab.

1. Enter the following information:

|  |  |
| --- | --- |
| Field Name | Data Entry |
| Plant | Your Plant Dallas |
| Product group | Your Product Group Bicycles |

1. Click on  (ENTER).

* The result shows all eight bikes in your product group hierarchy.

1. You are in the “Stock/Requirements List: Material List” screen.

Double-click on DXTR10##.

* The stock requirements list for the black bike is displayed.

1. You are in the “Stock/Requirements List as of hrs” screen.

Click on the “Show Overview Tree” icon.

* This will view the list of current materials in the product group that are selected.

1. What is the available quantity of stock for the black deluxe touring bike? 0 🖉
2. What is the material type for the black deluxe touring bike? FINISHED PRODUCT 🖉

* At this time, the screen is blank. This will not be the case when performing the production.

1. Click on  (BACK).
2. In the “Stock/Requirements List: Material List” screen, click on the  icon.
3. In the “Exit Material List” screen, click on the  icon
4. You are in the “Stock/Requirements List: Initial Screen” screen.

Click on the “Individual Access” tab.

1. Enter the following information:

|  |  |
| --- | --- |
| Field Name | Data Entry |
| Material | Your Touring Aluminum Wheel Assembly |

1. Click on  (ENTER).

* The stock requirements list for the touring wheel assembly is displayed.

1. What is the available quantity of stock for the wheel assembly? 0 🖉
2. What is the material type for the wheel assembly? SEMI FINISHED PRODUCT 🖉

* Keep the stock requirements list open as you complete the next exercise in material planning. Complete the steps in the next exercise in a different session and then return to this session and refresh the data to see the impact of the material planning process.

Exercise Deliverables:

In the System:

* None

On Paper:

* Answer(s) to Question(s)

Attachment 1: Exercise Worksheet

**Name:** CHAITHANYA CHEEMIREDDY

**Course and Section:** OMIS 643

**Identifier:** GBI-016

**Client:** 555

1. What is the transaction code to create general material immediately? MM01 🖉
2. What is the name of the MRP Controller for the frame? DL MRP CONTROLLER 🖉
3. What is the lot size type for the touring frame? LOT-FOR-LOT ORDER QUANTITY 🖉
4. What is the planned delivery time for the touring frame? 1 DAY 🖉
5. What is the base unit of measure for the touring frame? EA 🖉
6. What is the moving price for the touring frame? 200 🖉
7. What is the name of the MRP Controller for the bike? DL MRP CONTROLLER 🖉
8. What is the lot size type for the bike? LOT-FOR-LOT ORDER QUANTITY 🖉
9. What is the procurement type for the bike? BOTH IN-HOUSE PRODUCTION AND EXTERNAL PROCUREMENT 🖉
10. What is the base unit of measure for the bike? EA 🖉
11. What is the moving price for the bike? 1400 🖉
12. What is the standard price for the bike? 1400 🖉
13. What is the transaction code to create a bill of materials? CS01 🖉
14. What is the transaction code to create routings? CA01 🖉
15. What is the transaction code to create the vendor? XK01 🖉
16. What is the name for this vendor? SPACE BIKE COMPOSITES 🖉
17. What is the reconciliation account number for this vendor? 300000 🖉
18. What is the name for this vendor? FUN N THE SUN SEATS N BARS 🖉
19. What is the transaction code to create a product group? MC84 🖉
20. What is the material type code for each of these product groups? MC84 🖉
21. What is the transaction code to view a product group graphic? MC91 🖉
22. What is the color that represents the product groups within the graphic? YELLOW 🖉
23. How many total product groups are there within the graphic? 5 🖉
24. What is the color that represents the materials within the graphic? GREEN 🖉
25. How many total materials are there within the graphic? 8 🖉
26. What is the transaction code to display a stock/requirements list? MD04 🖉
27. What is the available quantity of stock for the black deluxe touring bike? 0 🖉
28. What is the material type for the black deluxe touring bike? FINISHED PRODUCT 🖉
29. What is the available quantity of stock for the wheel assembly? 0 🖉
30. What is the material type for the wheel assembly? SEMI FINISHED PRODUCT 🖉