VARIANT CONFIGURATION

Course ID : PP1015_Variant_Configuration

Lesson Objectives

- Objectives -On successful completion of this training module, you should have:
- Understood the basics of Variant Configuration
- ➤ What is Variant Configuration and Configurable Product
- Example and Process flow of Variant Configuration



Training Agenda

- ➤ What is Variant Configuration
- ➤ What is Configurable Product
- Example For Variant Configuration
- ➤ Variant Configuration Industries
- Cross Module Integration



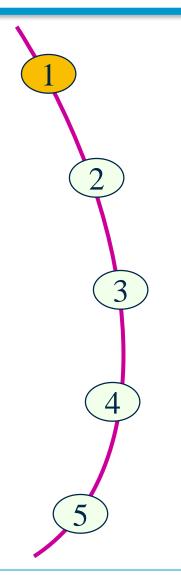


Training Agenda

- > Process Flow
- > Environment
- Prerequisites of Variant Configuration
- ➤ Basic Terminology
- ➤ Master Data
- Configuration of Variant Configuration



Variant Configuration



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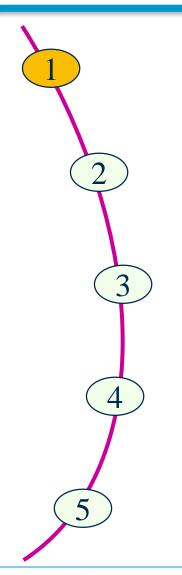
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Variant Configuration



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Introduction

Variant configuration is useful if you have large number of combination of parts that go into a product. It means different permutations and combinations of the parts of the same material



Example:

A Customer ordering a computer can choose different combinations of monitor ,CPU, keyboard.

A customer ordering a car can choose different combinations of accessories and colors.

What is Variant Configuration?

- Variant Configuration is a tool which improves information exchange between sales, engineering and production.
- Variant configuration helps sales person to put together specification for the product, so that product can be produced from these specifications.
- Variant configuration is for manufacturing complex product which contains various characteristics and variants



What is Configurable Product?

What is Configurable Product???

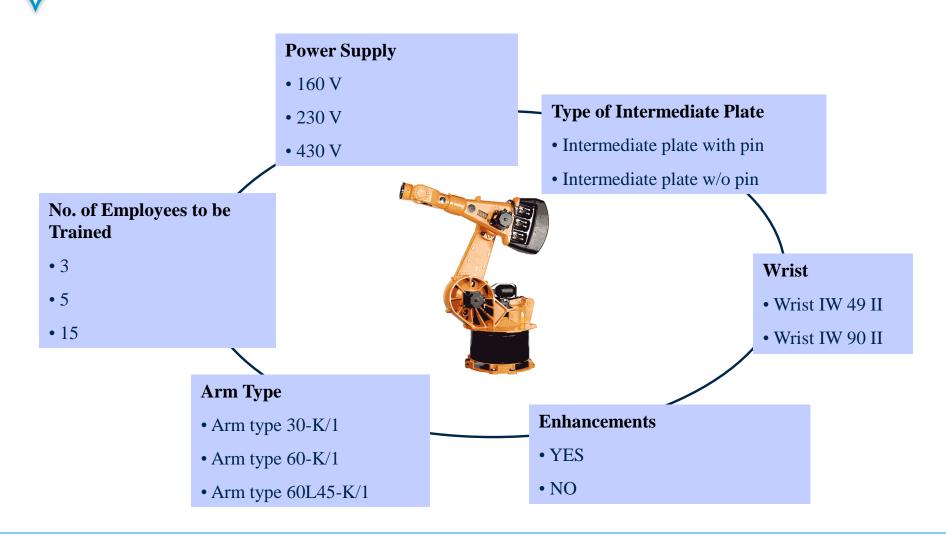
Products with...
Features

Colors Options

Customer Choices



Example For Variant Configuration





Example For Variant Configuration

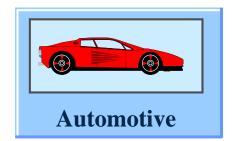
Engine Extras **1600** ABS 1800 Cruise control **2000** Heated seats =2500Transmission Wheels ■ 4-gear Steel wheels. 4-gear automatic Light alloy wheels ■5-gear ■5-gear automatic standard Light alloy wheels **.** . . . Paintwork wide tires. Black Red Blue

Variant Production



Variant Configuration Industries

New industries - New Requirements....





















Cross Module Integration

Variant configuration is integrated with the following applications:

CA Classification

LO Material Master

PP Bill of Material

PP Routings

PP Material Requirements Planning (MRP)

PP Production Orders

PP-PI Master Recipes

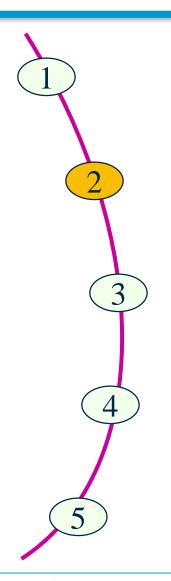
CO Costing SD Sales

SD Conditions

MM Purchasing



Variant Configuration



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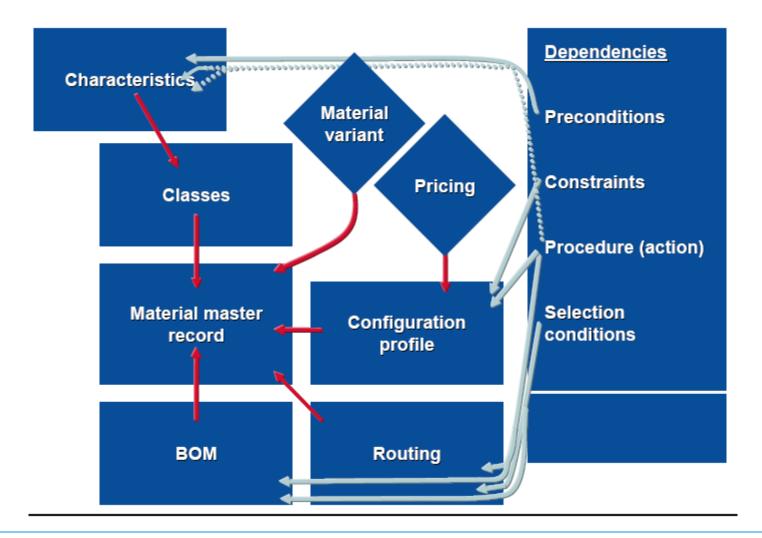
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MODELING VARIANT CONFIGURATION



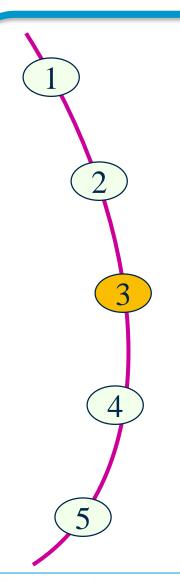


Process Flow

- 1 Creating Sales Order
- 2 Checking Requirements using MRP
- 3 Requirements Planning
- 4 Converting the planed order into a Production order
- 5 Confirming the production order
- 6 Checking the production order settlement
- 7 Creating the delivery
- 8 Creating the billing document



Variant Configuration



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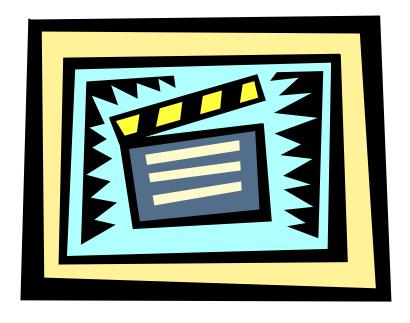
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- Environment
- Prerequisites of Variant Configuration
- Basic Terminologies used in Variant Configuration & their Definitions
- Master Data
- Customizing



Environment

The Environment in which Variant Configuration runs is SAP R/3 under PP module.



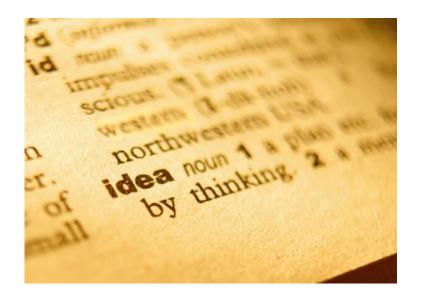
Prerequisites of Variant Configuration

- ➤ Master data like
 - a. Material Master
 - b. Super BOM and Routing
 - c. Class and Characteristics
 - d. Object Dependency and Configuration Profile
 - e. SD Condition Records



Basic Terminology used in Variant Configuration & their Definitions

- Super BOM
- Super Routing
- Dependencies
- Configuration Profile
- Planning Material
- Material Variant



Definitions...

Super BOM

It is a BOM Contains all the components for producing configurable product. It contains both variant as well as non-variant parts required for producing configurable product.

Super Routing

A configurable routing describes the production process for all variants of a product. Instead of creating a routing for each variant of a product, you can create operations for one routing, or a "super" routing.



Definitions...

Dependencies

Dependencies restricts the combinations of options i.e. characteristic that are not allowed. It also select exactly the right BOM components and operations to produce a variant.

Configuration Profile

The configuration profile for a material controls the configuration process in sales order. Configurable profile also used to define central settings for configuring the object. Using this profile it is possible to hide some of the characteristic value defined during characteristic creation. We can assign any number profile for a configurable material in which selection is based on either priority or manual selection during configuration.



Definitions...

Planning Material

Planning Material is a material, which contains all the non-variant parts. By using planning material all non-variants are procured / produced before sales order.

It is also possible for Planning the Planning Materials without reference to any sales requirement.

Material Variant

Material Variant is an material that can arises from individual Configuration of a configurable product and can be kept in stock.

For variants that are required frequently, we can create material variants, which can be produced without a sales order and kept in stock.



Master Data

- Super BOM
- Super Routing
- Characteristic and Values
- Classification
- Object Dependency
- Configurable Profile
- Configuration stimulation
- SD Condition Records



Configuration of Variant Configuration

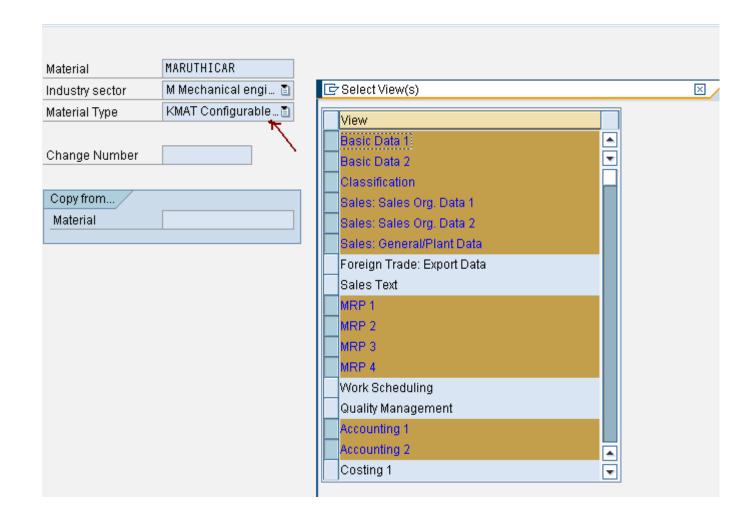
- Create a Material KMAT type with Item category (002)
- Create characteristics
- Assign Characteristics to class
- Assign the class to material master
- Creating a configuration profile
- Configuration stimulation
- Assign object dependences



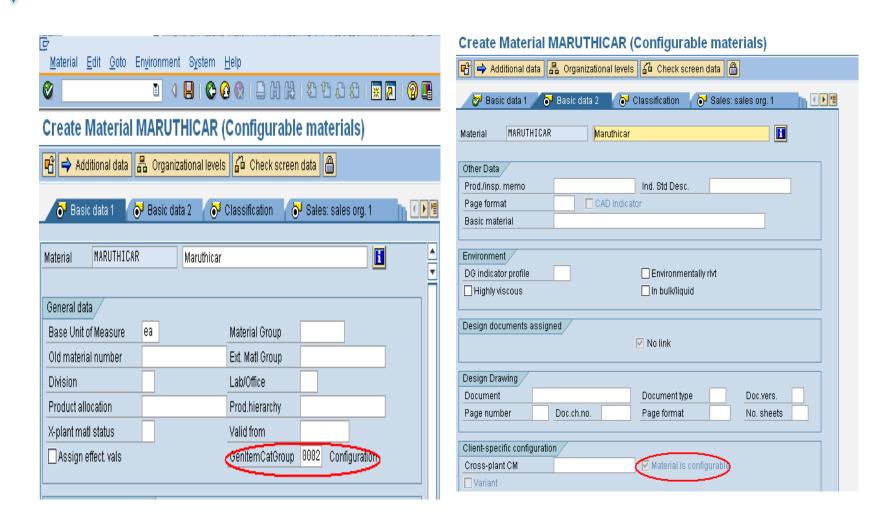
Master Data Settings

- Master data settings:
- Basic data 2 : Set Material is Configurable indicator
- To determine item category TAC in sales order, maintain the suitable item category such as 0002
- MRP 2 View: set Procurement type E
- MRP 3 View :Set strategy group 25: Make to order for configuration
- MRP3 :set Availability check 02 ;Individual Requirement
- Class view ; Attach the variant class

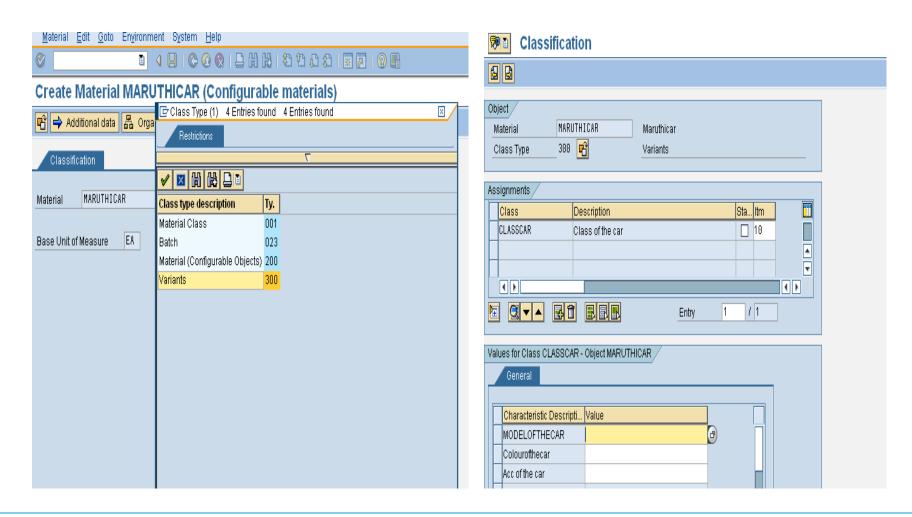






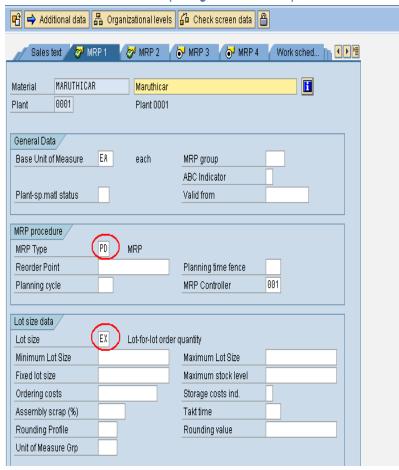


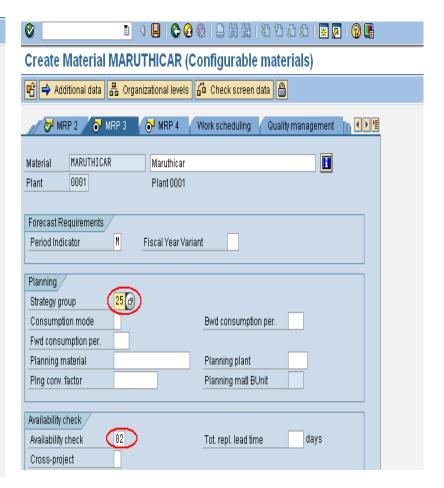




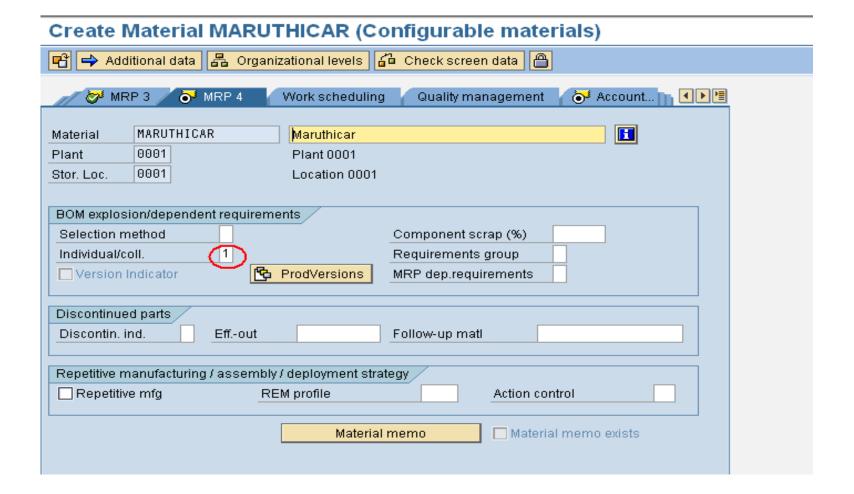


Create Material MARUTHICAR (Configurable materials)





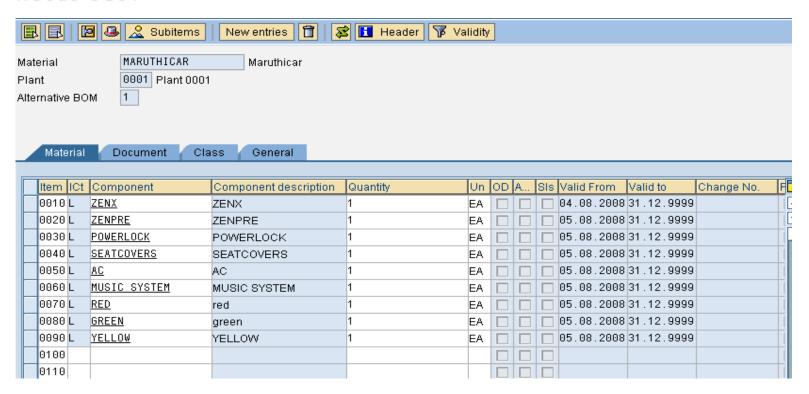






Bill of Material

T.Code-CS01



Characteristic and Values

- Characteristics describe the properties of objects.
- The values of a characteristic specify these properties.
- Example

Material - PC

Characteristic - Values

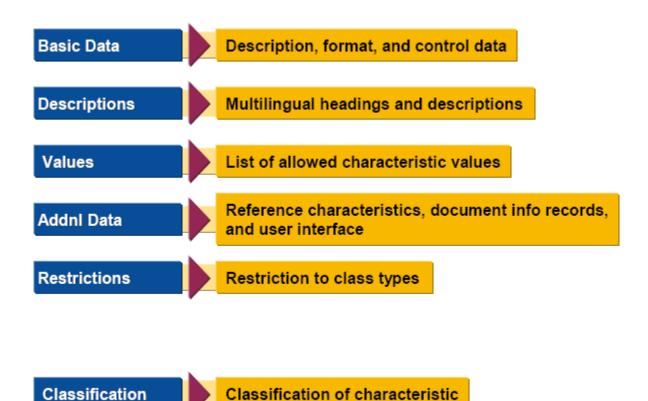
RAM - 256 MB,512 MB, 1 GB

Hard Disk - 80 GB,120 GB,160 GB

- Characteristic Value can be Numeric , Characters, Date and Time and Currency format.
- It can be single or multi value or restrict value.



Screens for maintaining the characteristic





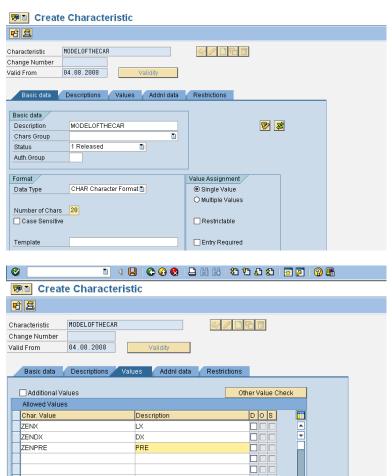
Reference Characteristics

- Reference characteristics are characteristics that refers to tables
 &fields
- Tables and structures whose fields values can be changed by dependencies
- SDCOM-Communication between the SD and Variant configuration
- VCSD_UPDATE: Table for updating sales documents from the configuration



Create the Characteristic and values

T.code:CT04





™ Create Characteristic	
" 5	
Characteristic	PRICECALCULATION
Change Number	
Valid From	04.08.2008 Validity
Basic data	Descriptions Values Addnl data Restrictions
Reference to Tab	ole Field SDCOM (d) Field Name (VKOND)
Document	
Document	
Document Type	
Document Part	
Doc. Version	
Procedure for Value Assignment Not Ready for Input No Display Display Allowed Values	



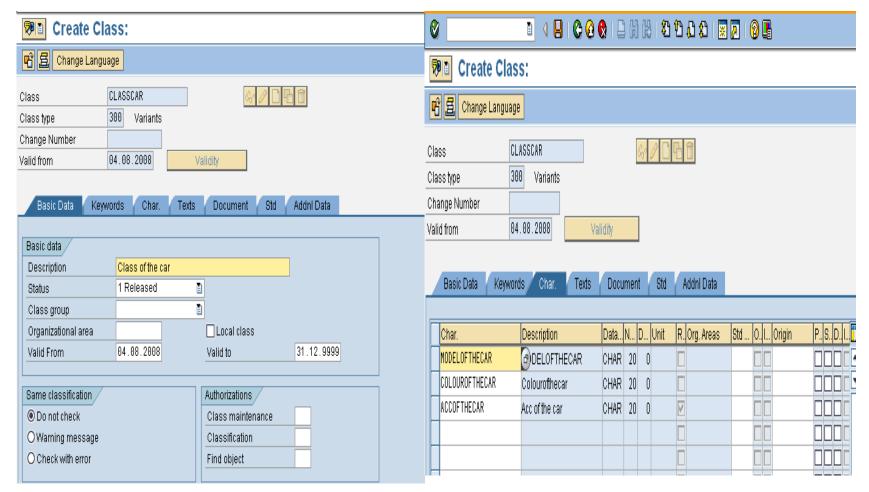
Class and Class type

A Class is used to hold the characteristics that describe about configurable material.

Class type used to determines which object types can be classified.

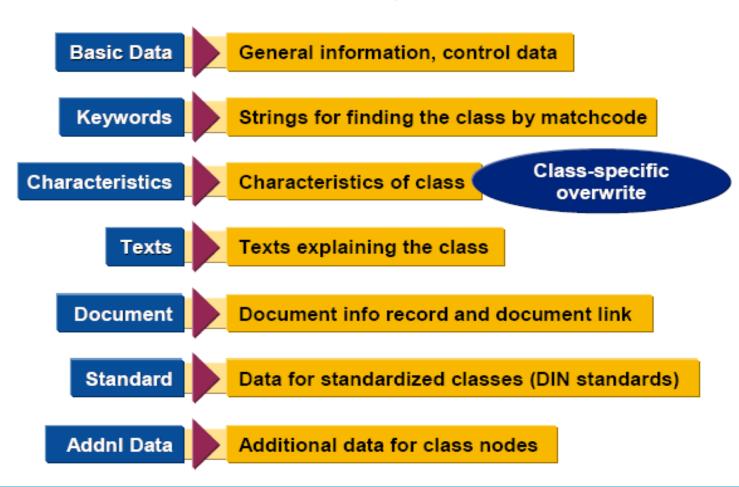
Class types 200 and 300 are defined for material which are used in variant configuration/Classification

Create classes type 300 assign characteristics





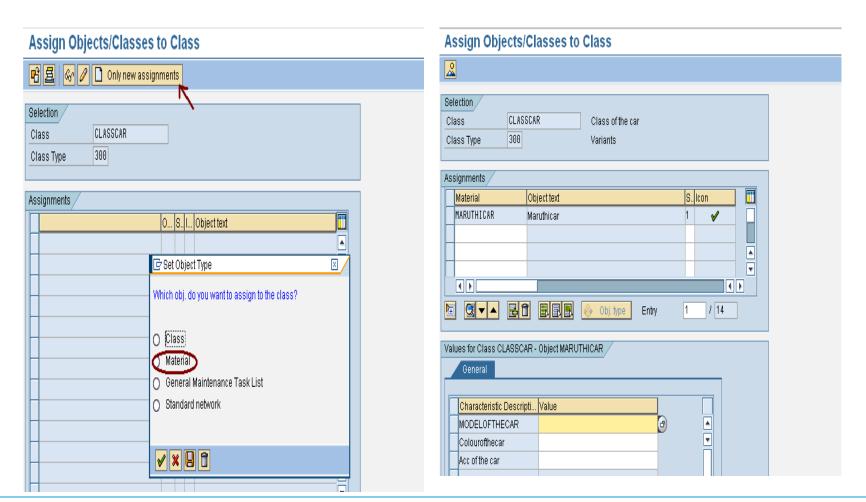
Screens for maintaining the classes





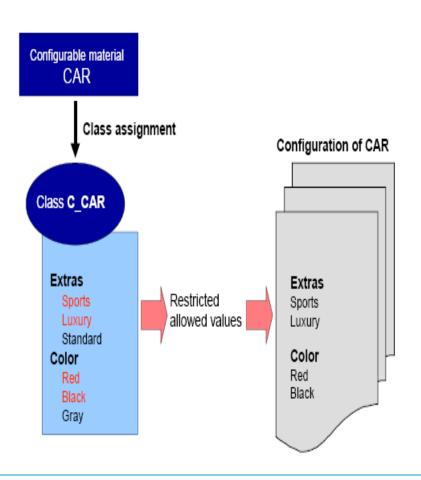
Assign class to material

T.code: CL24N





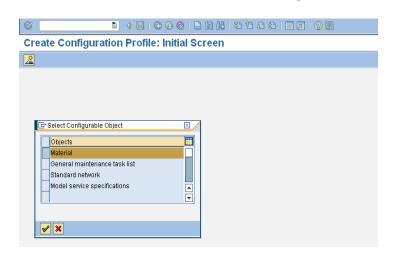
Configuration Profile



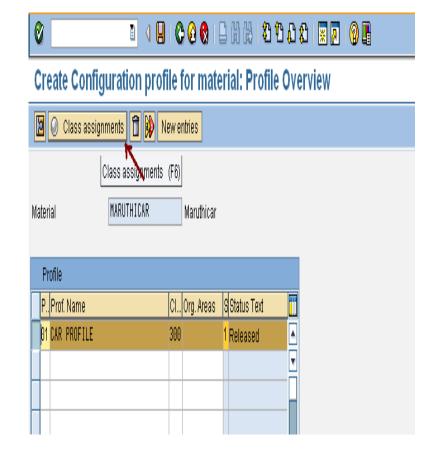
- nConfigurable Profile is used for assigning one or more variant classes to configurable material.
- nA configurable material has several profiles. Profile is selected during configuration or according to priority.
- nlt also possible to define central settings for Configurable Object.

Create Configuration Profile

T. Code-CU41

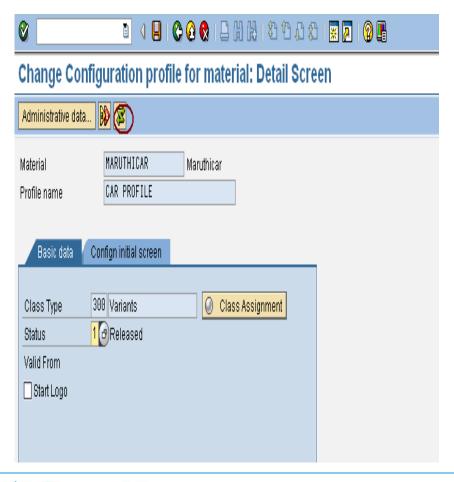


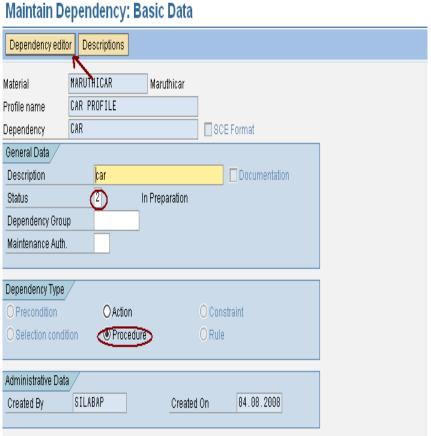






Create Configuration Profile

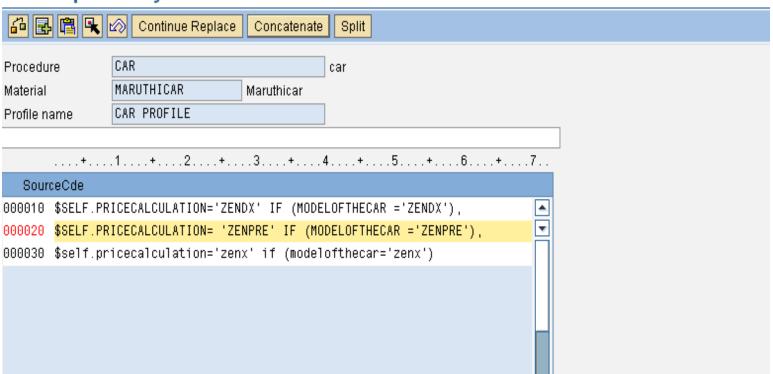






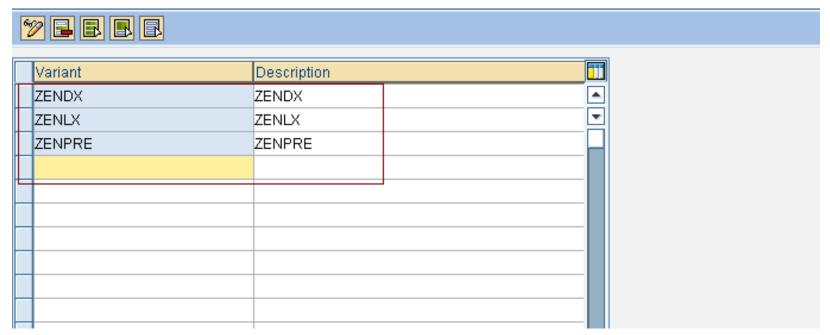
Assign Dependencies

Edit Dependency



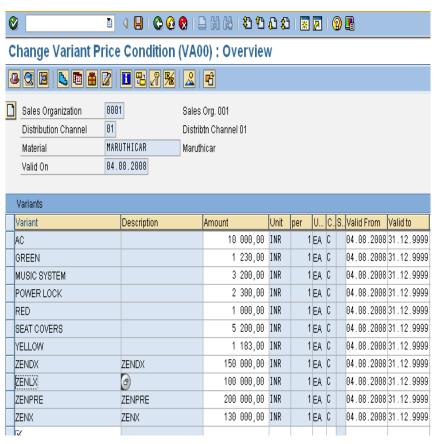
Create Variant Keys with any Name and Description T Code- VK30

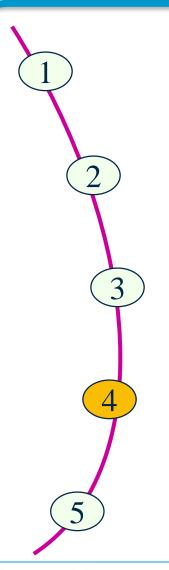
New Entries: Overview of Added Entries



Create Variant Condition with Variant Price T. Code- VK11







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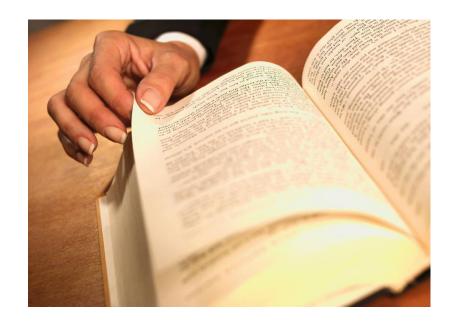
Let Me....

- Understand the Basic Business scenario of Variant Configuration
- Use of Master Data.

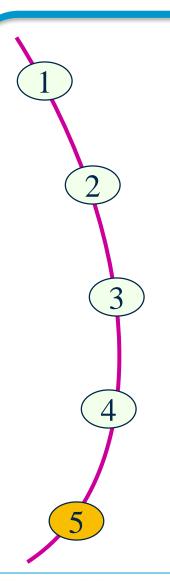


References

- Tips and Tricks
- Additional Info







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SAP Library link:

https://help.sap.com/saphelp_46c/helpdata/en/92/58c09b 417011d189ec0000e81ddfac/content.htm?frameset=/en/d 8/fa9bd49ede11d1903b0000e8a49aad/frameset.htm&curr ent_toc=/en/92/58d455417011d189ec0000e81ddfac/plain .htm&node_id=4





Q & A



THANK YOU

