Oracle Inventory Replenishment II, Release 11i

Student Guide

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ORACLE

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Preface

Profile

Before You Begin This Course

Before you begin this course, you should have the following qualifications:

- Working experience with Oracle Inventory

Prerequisites

- Setting up enterprise structures
- Setting up items
- Setting up inventory controls
- Setting up and performing inventory transactions

How This Course Is Organized

Oracle Inventory Replenishment II, Release 11i is an instructor-led course featuring lecture and hands-on exercises. Online demonstrations and written practice sessions reinforce the concepts and skills introduced.

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Related Publications

Oracle Publications

Title	Part Number
Oracle Inventory User's Guide, R11I	*A83505-01*
MRP and Supply Chain Planning User's Guide	*A82939-01*

Additional Publications

- System release bulletins
- Installation and user's guides
- *read.me* files
- *Oracle Magazine*

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Typographic Conventions

Typographic Conventions in Text

Convention	Element	Example
Bold italic	Glossary term (if there is a glossary)	The ***algorithm*** inserts the new key.
Caps and lowercase	Buttons, check boxes, triggers, windows	Click the Executable button. Select the Can't Delete Card check box. Assign a When-Validate-Item trigger to the ORD block. Open the Master Schedule window.
Courier new, case sensitive (default is lowercase)	Code output, directory names, filenames, passwords, pathnames, URLs, user input, usernames	Code output: `debug.set ('I", 300);` Directory: `bin` (DOS), `$FMHOME` (UNIX) Filename: Locate the `init.ora` file. Password: User `tiger` as your password. Pathname: Open `c:\my_docs\projects` URL: Go to `http://www.oracle.com` User input: Enter `300` Username: Log on as `scott`
Initial cap	Graphics labels (unless the term is a proper noun)	Customer address (*but* Oracle Payables)
Italic	Emphasized words and phrases, titles of books and courses, variables	Do *not* save changes to the database. For further information, see *Oracle7 Server SQL Language Reference Manual.* Enter `user_id@us.oracle.com`, where *user_id* is the name of the user.
Quotation marks	Interface elements with long names that have only initial caps; lesson and chapter titles in cross-references	Select "Include a reusable module component" and click Finish. This subject is covered in Unit II, Lesson 3, "Working with Objects."
Uppercase	SQL column names, commands, functions, schemas, table names	Use the SELECT command to view information stored in the LAST_NAME column of the EMP table.

Convention	Element	Example
Arrow	Menu paths	Select File–> Save.

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Brackets	Key names	Press [Enter].
Commas	Key sequences	Press and release keys one at a time: [Alternate], [F], [D]
Plus signs	Key combinations	Press and hold these keys simultaneously: [Ctrl]+[Alt]+[Del]

Typographic Conventions in Code

Convention	Element	Example
Caps and lowercase	Oracle Forms triggers	`When-Validate-Item`
Lowercase	Column names, table names	`SELECT last_name FROM s_emp;`
	Passwords	`DROP USER scott IDENTIFIED BY tiger;`
	PL/SQL objects	`OG_ACTIVATE_LAYER (OG_GET_LAYER ('prod_pie_layer'))`
Lowercase italic	Syntax variables	`CREATE ROLE role`
Uppercase	SQL commands and functions	`SELECT userid FROM emp;`

Typographic Conventions in Navigation Paths

This course uses simplified navigation paths, such as the following example, to direct you through Oracle Applications.

(N) Invoice > Entry > Invoice Batches Summary (M) Query > Find (B) Approve

This simplified path translates to the following:

1. (N) From the Navigator window, select Invoice > Entry > Invoice Batches Summary.

2. (M) From the menu, select Query > Find.

3. (B) Click the Approve button.

Notations :

(N) = Navigator

(M) = Menu

(T) = Tab

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(I) = Icon

(H) = Hyperlink

(B) = Button

Typographical Conventions in Help System Paths

This course uses a “navigation path” convention to represent actions you perform to find pertinent information in the Oracle Applications Help System.

The following help navigation path, for example—

(Help) General Ledger > Journals > Enter Journals

—represents the following sequence of actions:

1. In the navigation frame of the help system window, expand the General Ledger entry.

2. Under the General Ledger entry, expand Journals.

3. Under Journals, select Enter Journals.

4. Review the Enter Journals topic that appears in the document frame of the help system window.

Getting Help

Oracle Applications provides you with a complete online help facility.

Whenever you need assistance, simply choose an item from the Help menu to pinpoint the type of information you want.

To display help for a current window:

1. Choose Window Help from the Help menu, click the Help button on the toolbar, or hold down the Control key and type 'h'.

   A web browser window appears, containing search and navigation frames on the left, and a frame that displays help documents on the right.

   The document frame provides information on the window containing the cursor. The navigation frame displays the top-level topics for your responsibility, arranged in a tree control.

2. If the document frame contains a list of topics associated with the window, click on a topic of interest to display more detailed information.

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3. You can navigate to other topics of interest in the help system, or choose Close from your web browser's File menu to close help.

Searching for Help

You can perform a search to find the Oracle Applications help information you want. Simply enter your query in the text field located in the top-left frame of the browser window when viewing help, then click the adjacent Find button.

A list of titles, ranked by relevance and linked to the documents in question, is returned from your search in the right-hand document frame. Click on whichever title seems to best answer your needs to display the complete document in this frame. If the document doesn't fully answer your questions, use your browser's Back button to return to the list of titles and try another.

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Oracle Inventory Replenishment II, Release 11i

Chapter 1

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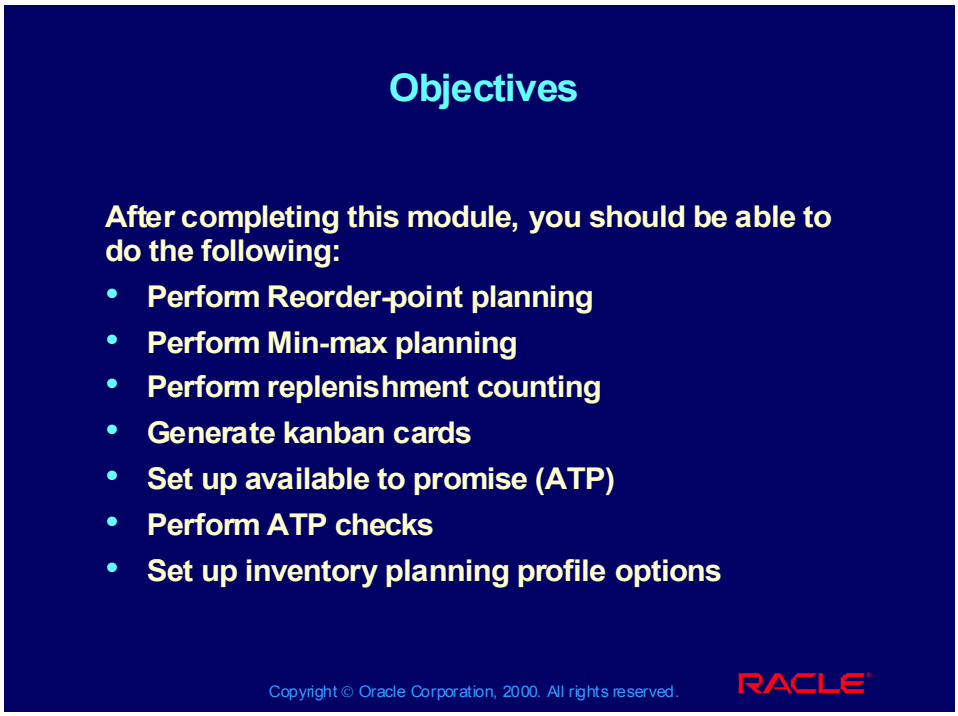

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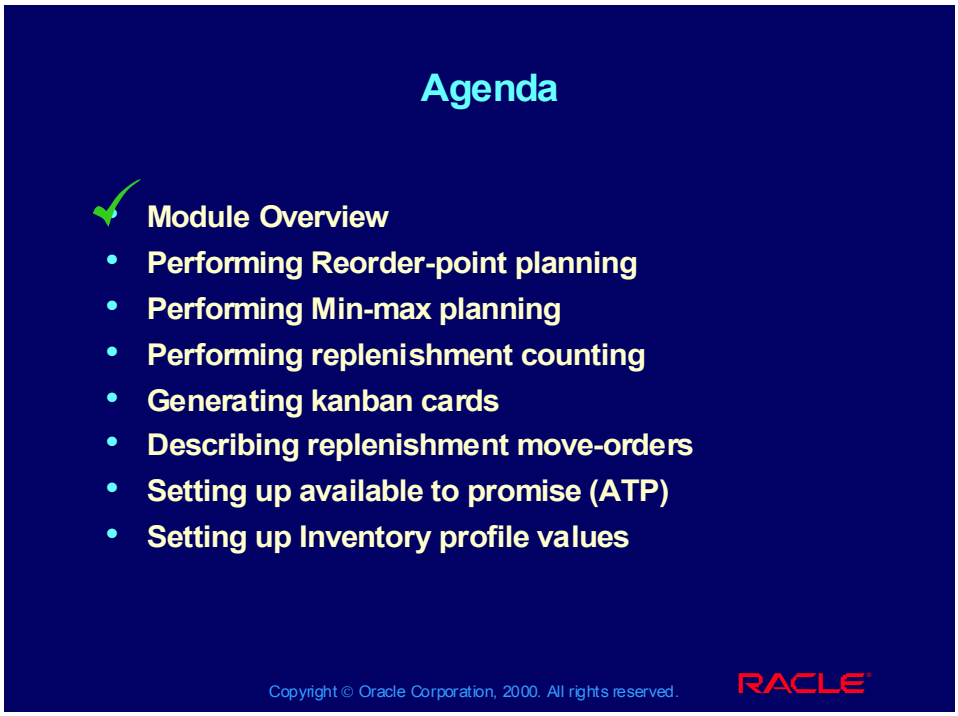

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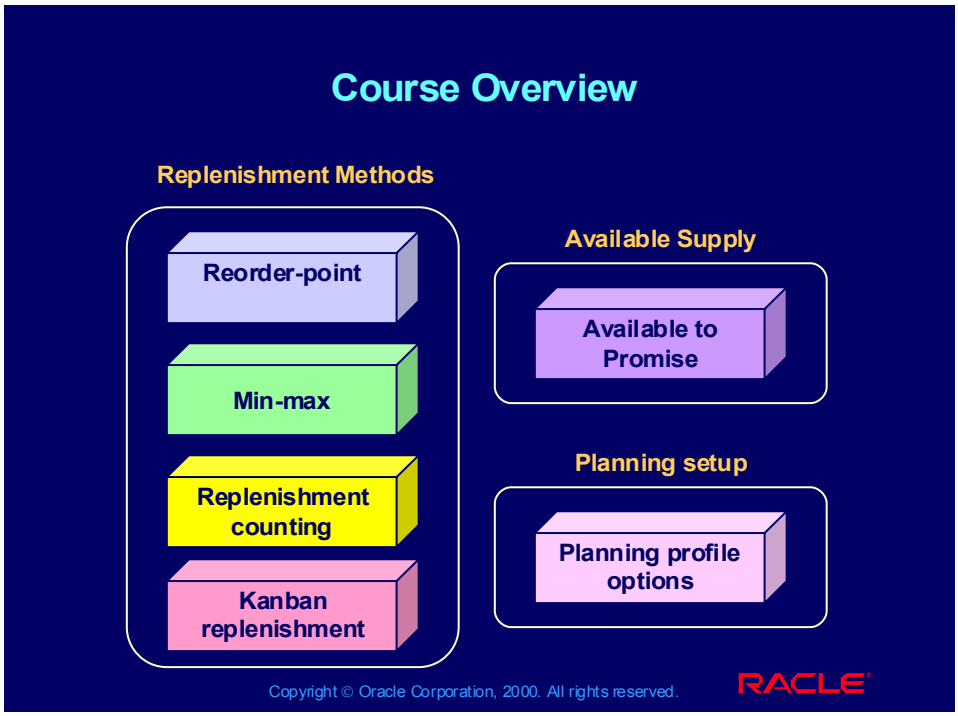

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Agenda

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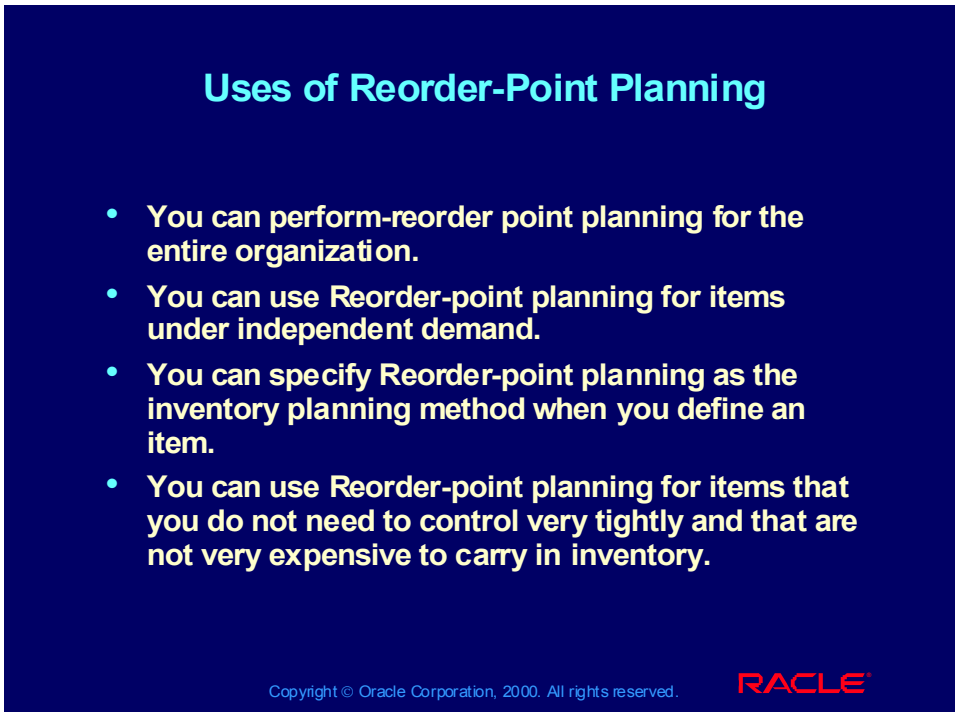

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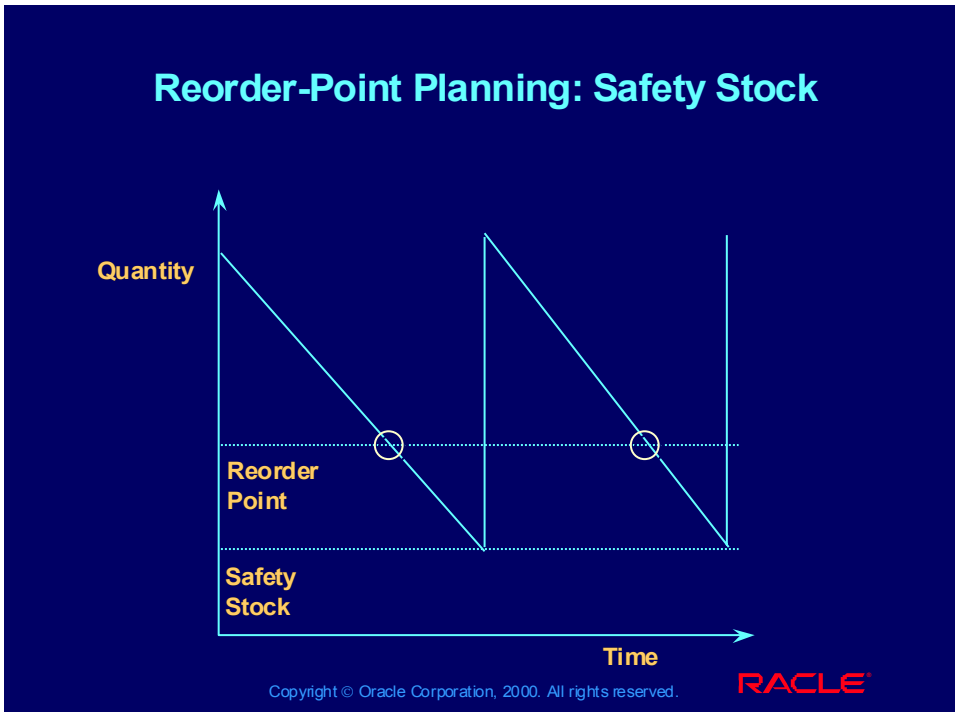

Describing Reorder-Point Planning

Recall from Replenishment I that with Reorder-point planning, you order a quantity when the quantity falls to a predetermined reorder point, as shown in the above graphic.

Reorder-point planning uses the following pieces of information:

- Safety stock
- Replenishment lead time
- Item demand
- Order cost
- Carrying cost

Safety Stock

Safety stock is the quantity of an item that you plan to have in inventory to protect against fluctuations in supply and demand. You can manually enter safety stock quantities, or Oracle Inventory can calculate a safety stock level based on an existing forecast for an item.

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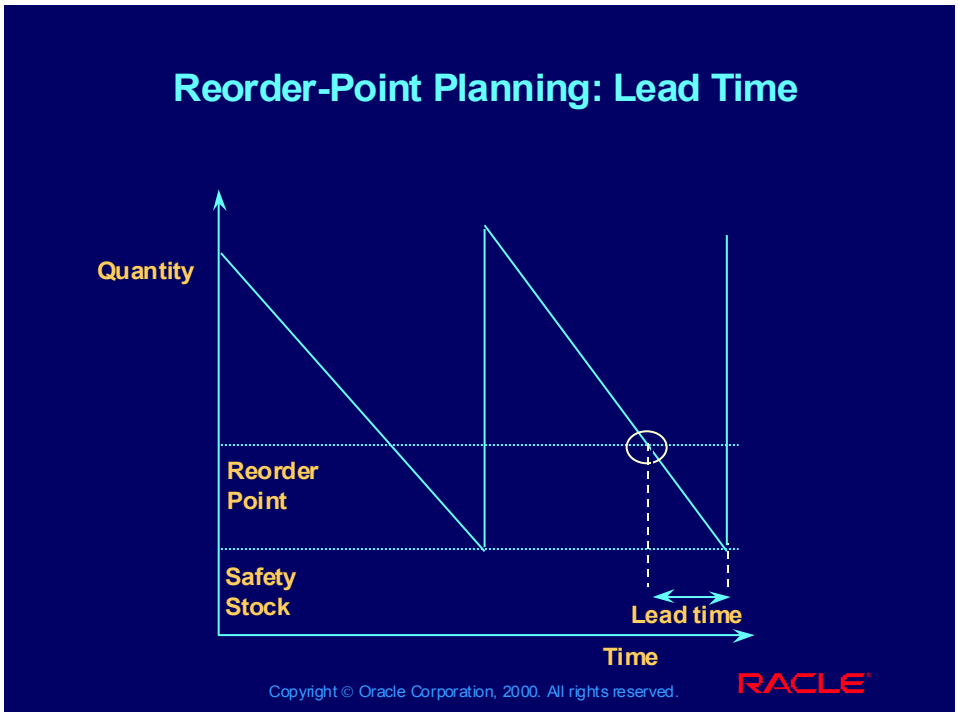

Describing Reorder-Point Planning (continued)

Replenishment Lead Time

Replenishment lead time is the total time between recognizing the need to reorder and the receipt of items. Order processing lead times include the following components:

- Preprocessing lead time
- Processing lead time
- Postproccessing lead time

Oracle Inventory calculates reorder point planning lead time by adding all three components.

Item Demand

The reorder point planning routine uses the average demand during the replenishment lead time. Oracle Inventory uses forecast information to calculate average demand.

Timing of Reorders

You should reorder when the following is true:

(quantity on hand + quantity on order) < reorder point

where the reorder point = safety stock + [(lead time) × (average demand during lead time)]

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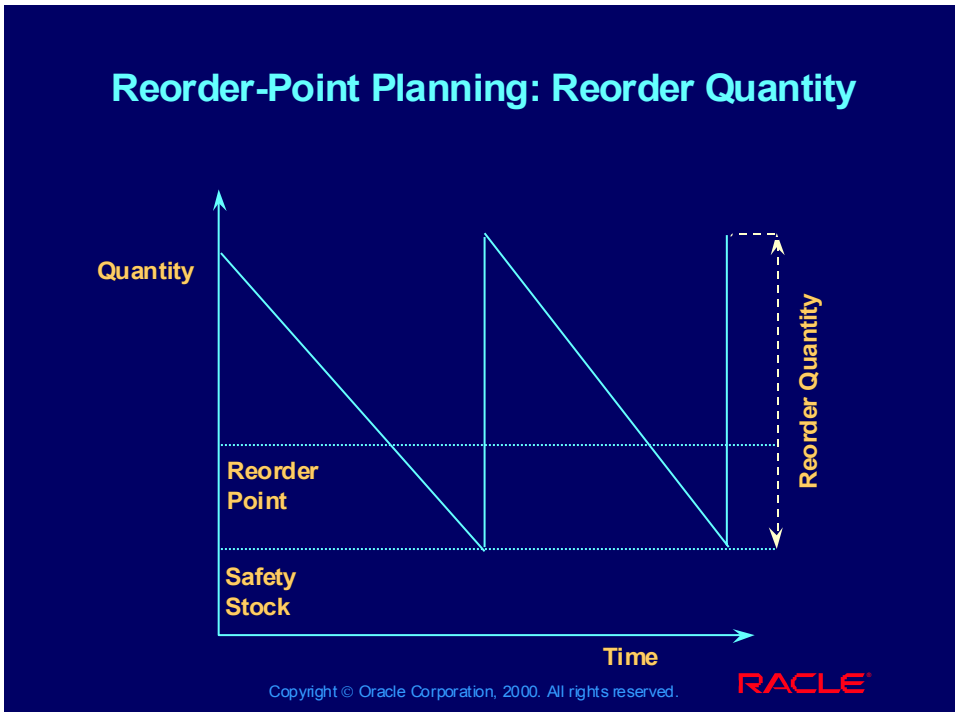

Describing Reorder-Point Planning (continued)

Quantity of Reorders

The reorder quantity is equal to the Economic Order quantity (EOQ). The EOQ is the quantity that minimizes the total cost of ordering and storing inventory. Use the following formula to determine the EOQ:

EOQ = SQRT {[2 × (annual demand) × (order cost)] / (annual carrying costs)}

Oracle Inventory calculates the EOQ by using annual demand from the forecast that you provide when you perform Reorder-point planning. The system also uses the order and annual carrying costs that you specify when you define items.

You can constrain the reorder quantity by specifying the following information for each item:

- Fixed-lot multiplier
- Minimum order quantity
- Maximum order quantity

Quantity on Order

Quantity on order represents supply that you have not yet received. The quantity on order is the sum of the purchase order, requisition (internal and supplier), and in-transit quantities owned by the organization.

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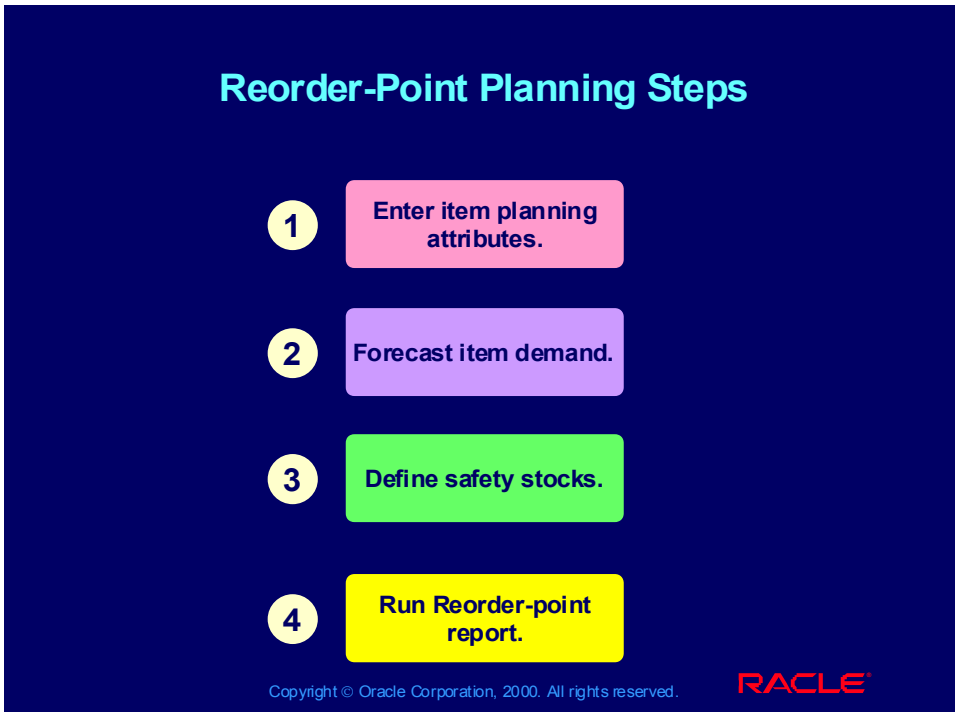
Reorder-Point Planning Steps



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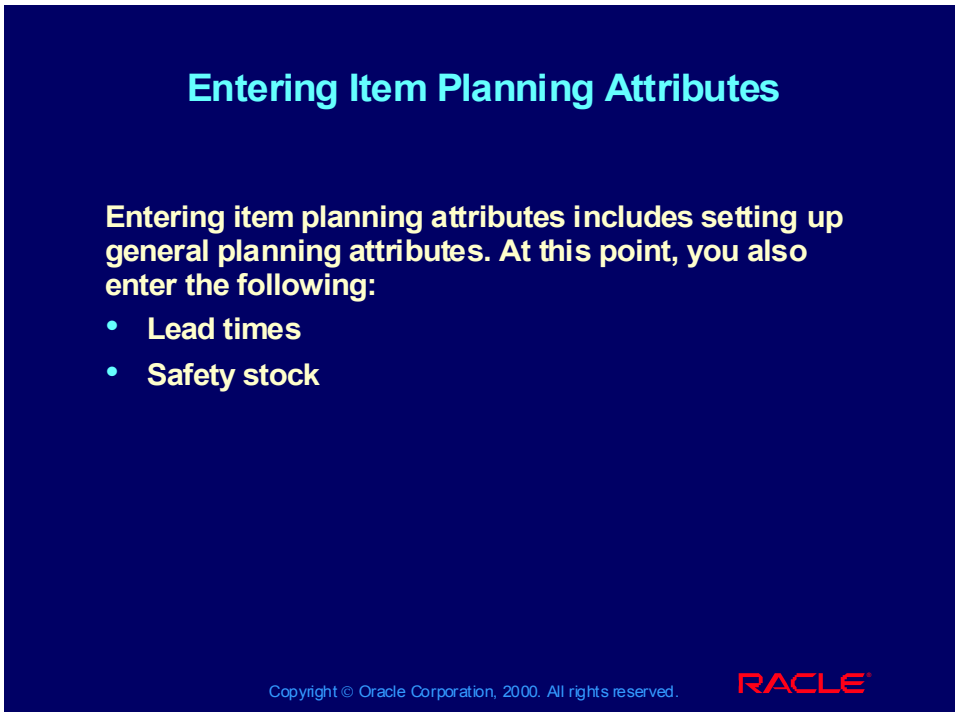

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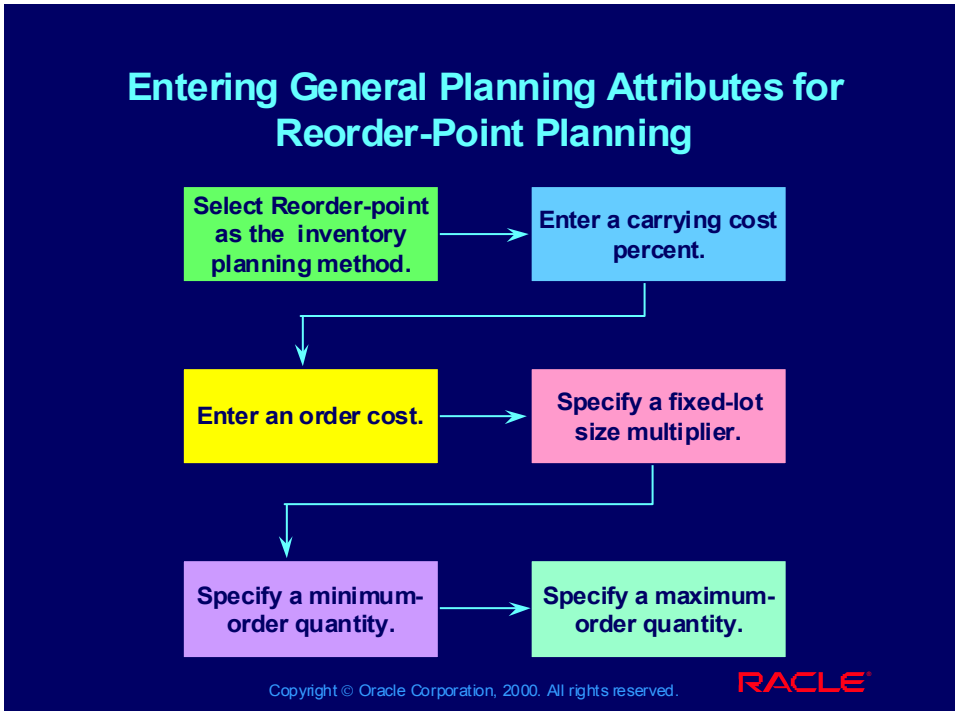
Entering General Planning Attributes for Reorder-Point Planning



Organization Items: General Planning Window

(N) Items > Organization Items > (T) General Planning

Carrying Cost Percent

Oracle Inventory uses the carrying cost percent information to calculate the EOQ for the item. The annual carrying cost represents you internal cost to stock one of that item per year.

Carrying cost = (carrying cost percent) × (standard unit cost)

Order Cost

Oracle Inventory uses the order cost to calculate the EOQ for the item. The order cost represents the fixed cost of placing an order for any quantity of the item.

Fixed-lot Size

Oracle Inventory orders a quantity that is a multiple of the fixed-lot size multiplier.

Minimum-Order Quantity

Oracle Inventory orders a quantity that is at least as large as the minimum-order quantity.

Maximum-Order Quantity

Oracle Inventory orders a quantity that is less than or equal to the maximum-order quantity.

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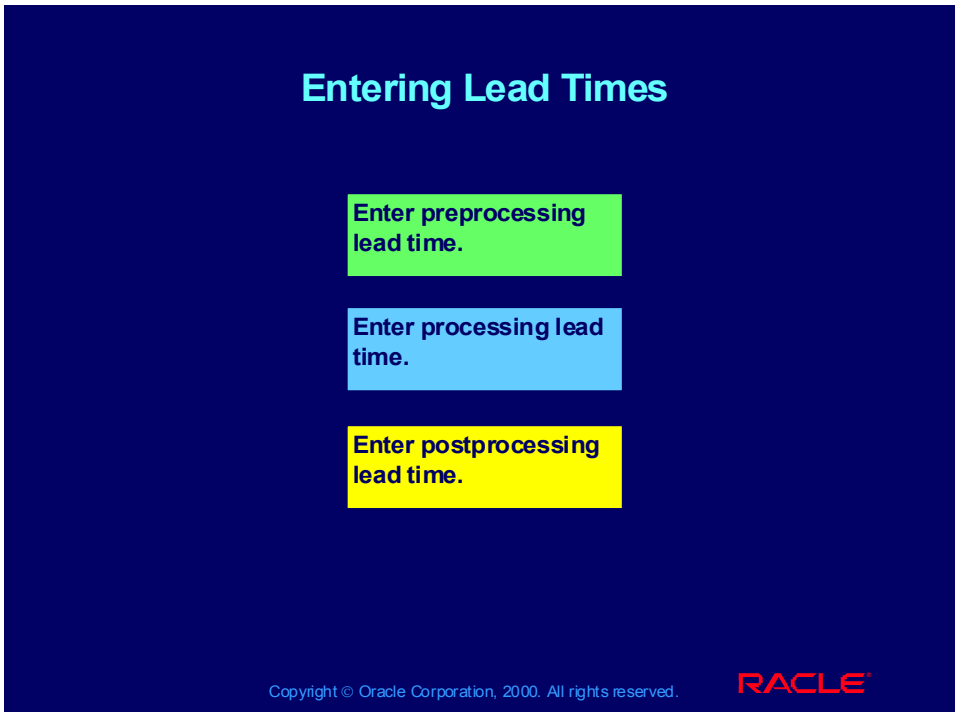
Entering Lead Times



Organization Items: Lead Times Window

(N) Items > Organization Items > (T) Lead Times

Describing Lead Times

You can specify the following lead times:

- Preprocessing lead time: Represents the number of days required to place a purchase or manufacturing order.
- Processing lead time: Represents the number of days required to procure or manufacture the item.
- Postprocessing lead time: Represents the number of days required to deliver a purchased item from the initial supplier receipt of the purchase order (PO).

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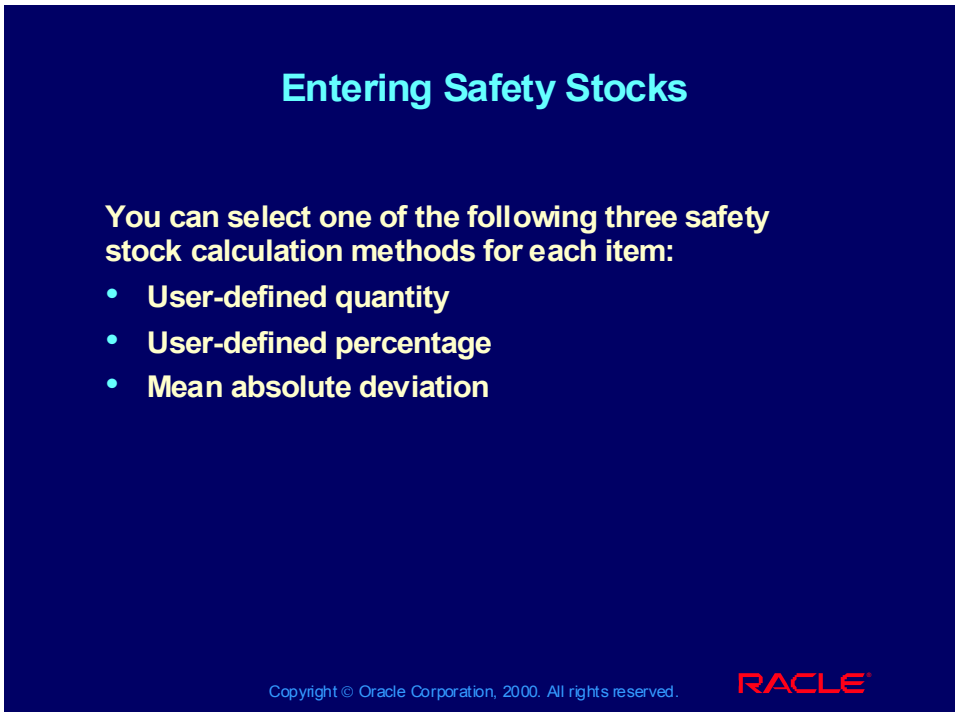

Accessing the Enter Item Safety Stocks Window

With safety stock, you can enter a user-defined quantity or have the system calculate a safety stock for you. You enter user-defined quantities in the Enter Item Safety Stocks window.

(N) Planning > Safety Stocks

If you want Oracle Inventory to calculate safety stock, using the Mean Absolute Deviation method, you must submit a concurrent request through the Reload Safety Stock window

(N) Planning > Safety Stock Update

Describing Stock Calculation Methods

- User-defined quantity method: You can enter safety stock quantities and the date for which each quantity is effective. You can update safety stock quantities that you previously entered or that Oracle Inventory calculated for you.
- User-defined percentage method: To use the user-defined percentage method, you must use the Reload Safety Stock window and specify the following information for the item:
  - A forecast
  - A safety stock percent

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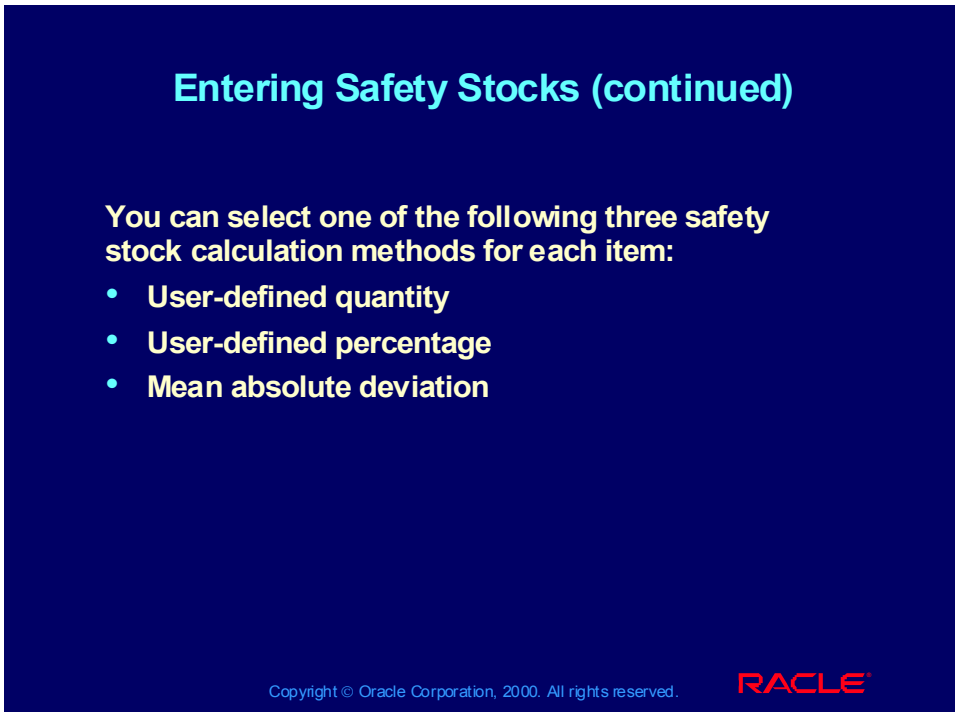

Accessing the Enter Item Safety Stocks Window (continued)

Describing Stock Calculation Methods (continued)

Oracle Inventory uses the following equation to calculate safety stock quantities:

Safety stock = (safety stock percent) × (forecast demand)

- Mean Absolute Deviation Method: To calculate safety stock using this method, you submit a concurrent request using the Reload Safety Stock window. In this window, you must specify the following information:
  - A forecast
  - A service level percent

The service level percent represents the probability that you can fill an order from available inventory. If you enter a high service level, then Oracle Inventory calculates relatively larger safety stock quantities. Oracle Inventory calculates safety stock quantity by using the following equation:

safety stock = Z × 1.25 × (mean absolute deviation)

where Z is the appropriate value from a table of standard normal distribution, corresponding to the service level. The mean absolute deviation is a measure of how the forecast demand deviates from the actual demand.

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Providing a Forecast

The reorder-point planning program uses information from the forecast to calculate the economic order quantity (EOQ) and the reorder-point quantity. The following equations show each of these calculations:

- EOQ = SQRT {[2 × (annual demand) × (order cost)] / (carrying cost)]}
- Reorder point = safety stock + [(lead time) × (average demand)]

Providing On-Order Quantity Information

Oracle uses on-order quantity information to determine when to reorder an item. You should reorder when the following is true:

(quantity on hand + quantity on-order) < reorder point

Oracle uses the following sources to calculate on-order quantities:

- Purchase orders
- Requisitions (internal and supplier)
- In-transit shipments owned by the organization

Oracle Inventory uses purchase orders, requisitions, and in-transit shipments that are scheduled to be delivered before the supply cutoff date.

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Viewing Planning Information

You can view planning information before creating replenishment orders. If you want to create replenishment orders automatically, then you must request requisitions.

Creating Requisitions

Oracle creates requisitions for all items that meet the following condition:

(quantity on hand + quantity on order) < reorder point

Oracle creates either purchase requisitions (if the source is the supplier) or internal requisitions (if the source is the organization). The reorder quantity is the EOQ constrained by the following attributes:

- Fixed-lot size multiplier
- Minimum order quantity
- Maximum order quantity

Describing Exception Reporting

You can submit the planning process for all items under reorder-point planning, or submit the planning process for just those items that are below their reorder-point quantities.

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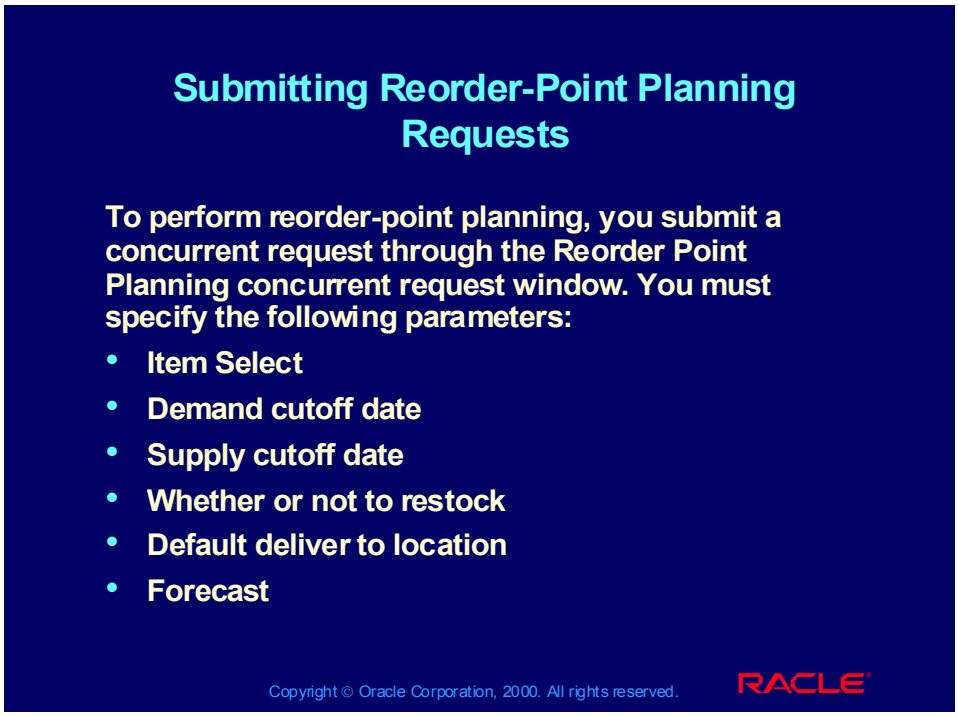

Reorder Point Planning

(N) Planning > Reorder Point Planning

Describing Reorder-Point Planning Considerations

When submitting Reorder-point planning requests, consider the following:

- Nettable Subinventories: Oracle Inventory uses on-hand quantities that exist in nettable subinventories only.
- Oracle Inventory displays the sum of all unfulfilled demand created before the cutoff date.
- Oracle Inventory calculates demand quantity by using information from the following sources:
  - Sales orders
  - Internal orders

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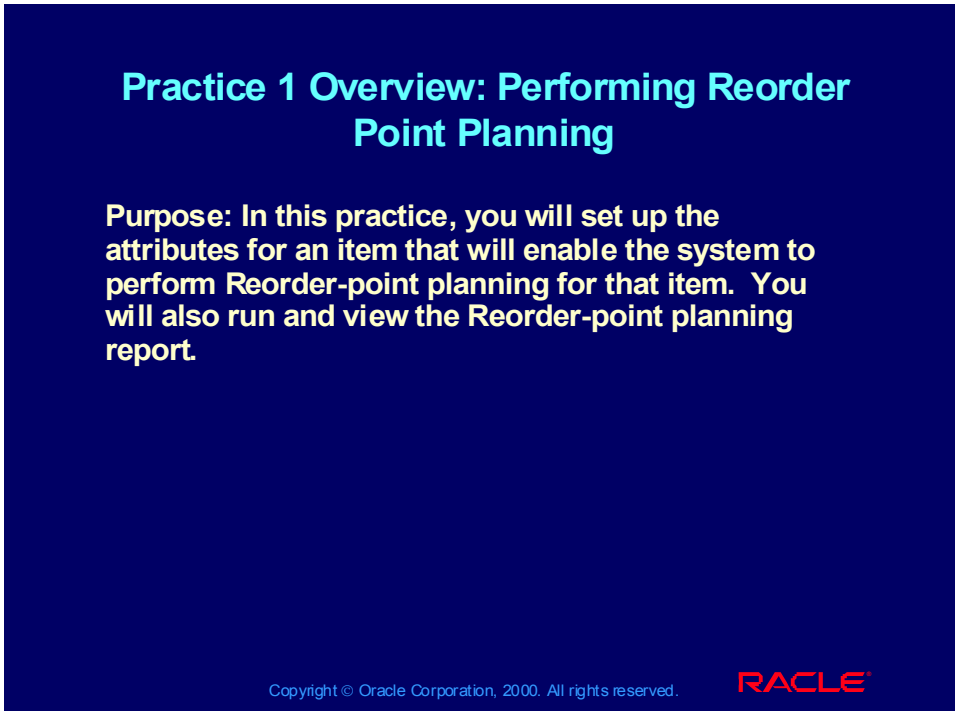
Practice 1 Overview: Performing Reorder Point Planning



Practice 1: Performing Reorder Point Planning

Instructions

Note: Wherever you see XX, substitute your student number. If you have not done so, assign your XX-Item01 to Seattle Manufacturing (M1).

1. Set the item attributes for your XX-Item01 for Reorder Point Planning.

   (N) Items > Organization Items

   - The Find window opens. Enter your item information, and click the Find
   - button.
   - General Planning Tab
     - Inventory Planning Method — Reorder Point Planning
     - Minimum Order Quantity — 35
     - Order Cost — 45
     - Carrying Cost Percent — 12
   - Lead Time Tab
     - Processing Lead Time — 5
   - Save your work. (M) Action > Save

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Practice 1: Performing Reorder Point Planning

2. Enter item safety stock for the item [that you used in Step 1].

   (N) Planning > Safety Stocks

   - Click the New button
   - Tab through the default item field and navigate to the Item field. Enter the following information:
     - Item `XX-Item01`
     - Effective date Today's date (example: 01-JAN-2000)
     - Quantity 50
   - Save your work. (M) Action > Save

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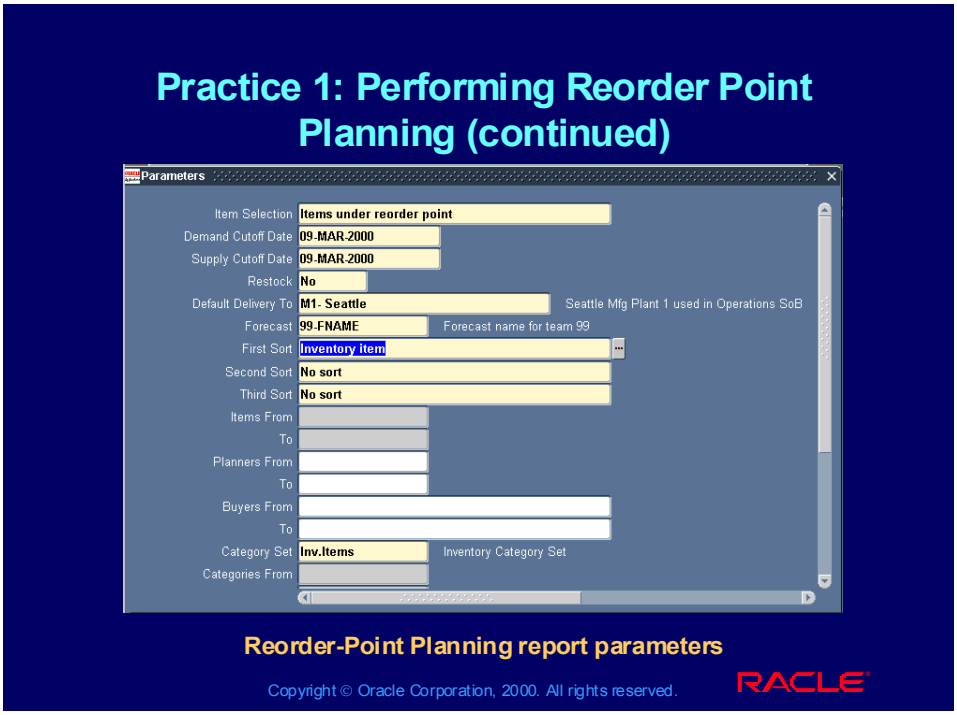

Practice 1: Performing Reorder Point Planning

3. Request the Reorder Point Planning report.

   (N) Planning > Reorder Point Planning

   The Parameters window for the Reorder Point Planning report opens.

   - Enter the following parameters:
     - Parameters Items under reorder point
     - Demand cut off date 4 months from now
     - Supply cut off date 4 months from now
     - Restock No
     - Forecast Your forecast
     - Accept all other defaults
   - Click the OK button to return to the Reorder Point Planning submit requests window.
   - Click the Submit button to submit the Reorder Point Planning report.
   - Write down your request number_____
   - Click the No button when prompted to enter another request.
   - Save your work. (M) Action > Save

4. Select (M) View > Requests to view your report.
   - How many of this item should you reorder?_____

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Agenda

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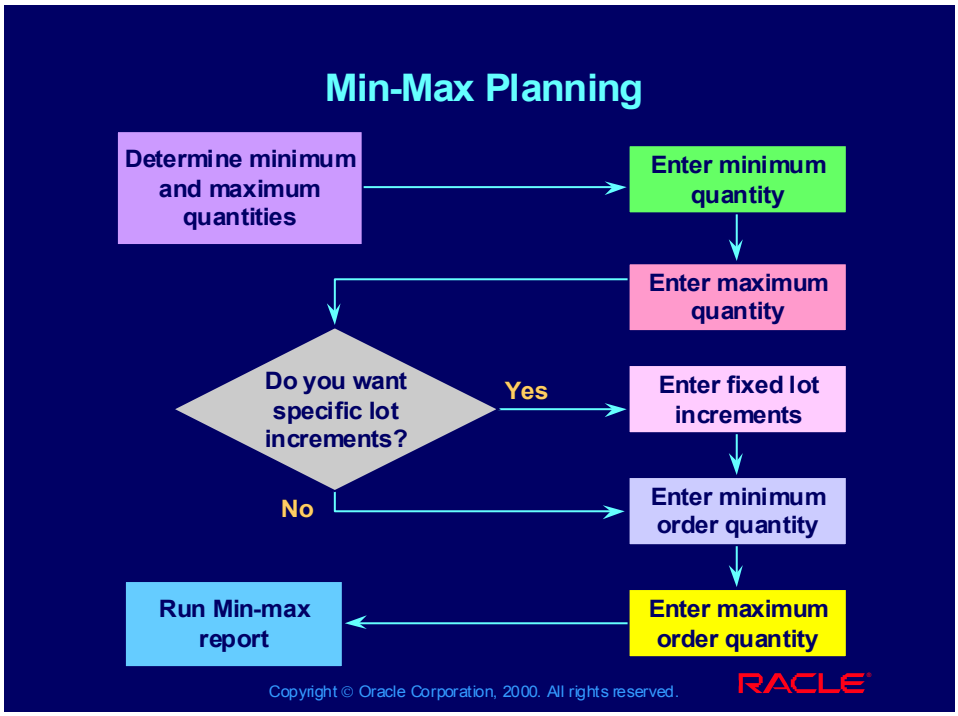

Describing Min-Max Planning

Recall that Min-max planning is a method of determining when and how much to order based on user-defined minimum and maximum inventory levels.

Note: To perform organization-level Min-max planning for an item, you must specify organization-level minimum and maximum quantities.

Deciding When to Order with Min-Max Planning

You should order when the following is true:

(on-hand quantity – demand) + (quantity on order) < minimum quantity

Quantity on order is the sum of purchase order quantities, requisition quantities, and in transit shipments. It also includes WIP jobs as supply at the organization level. Quantity on order represents supplies that you have not yet received in your organization.

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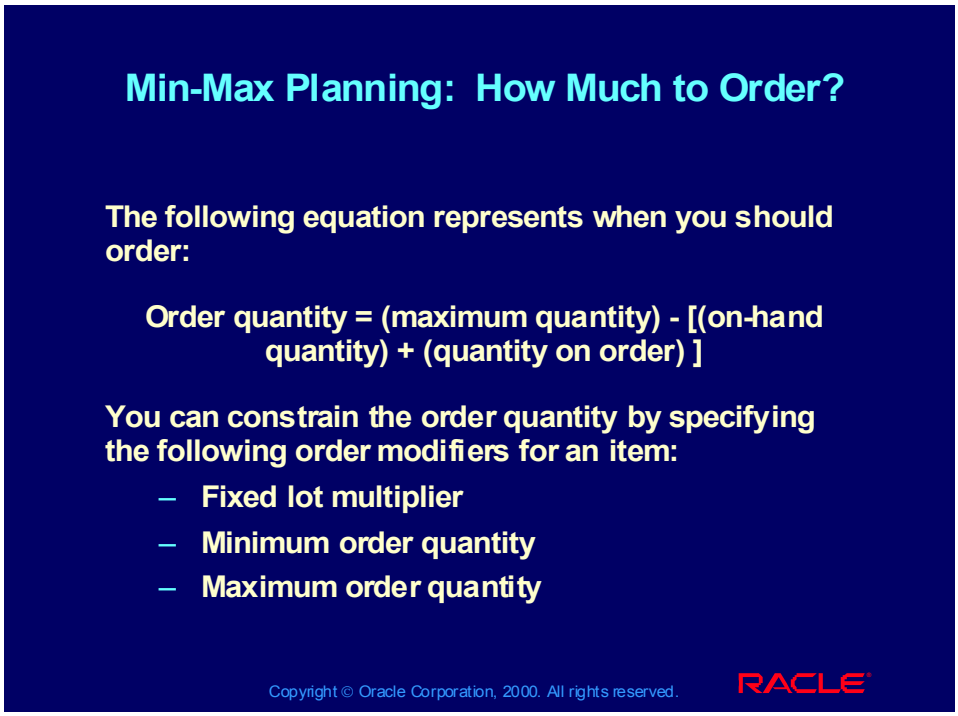

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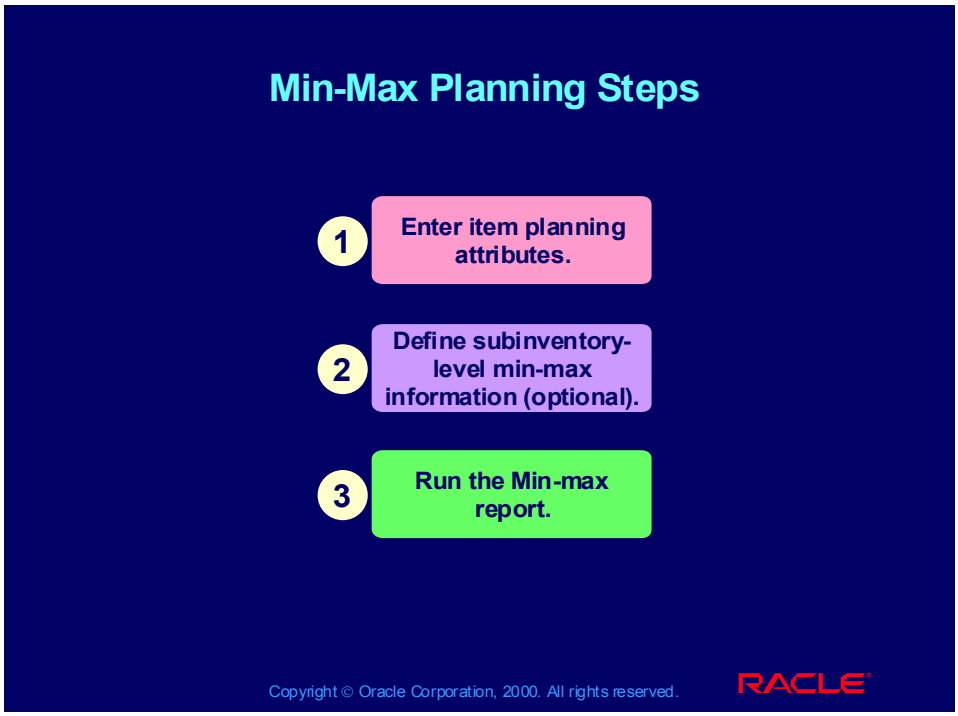
Min-Max Planning Steps



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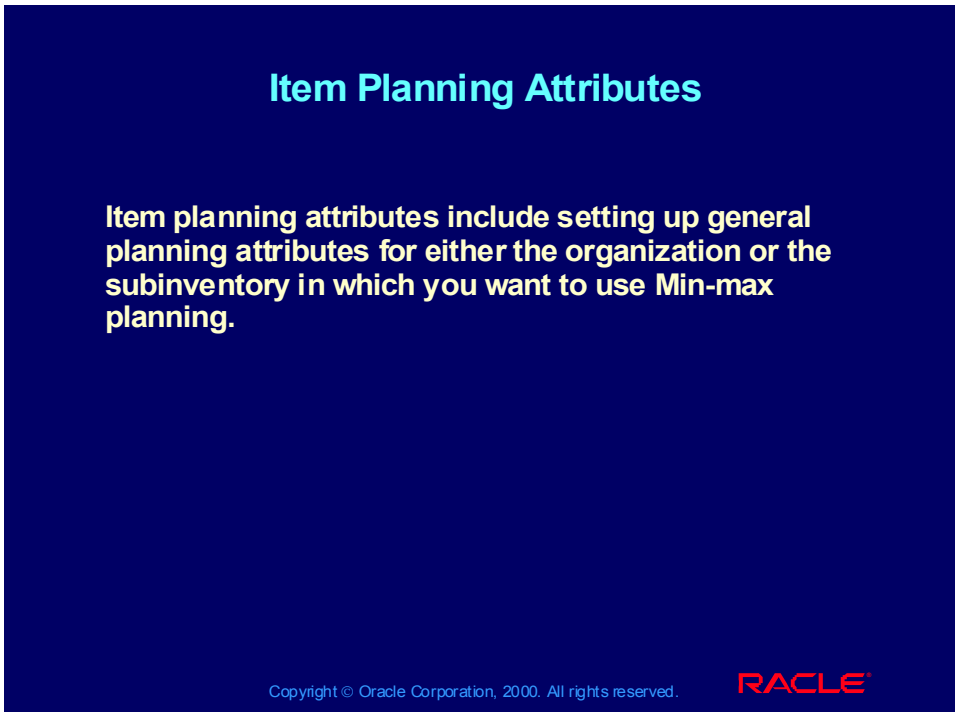

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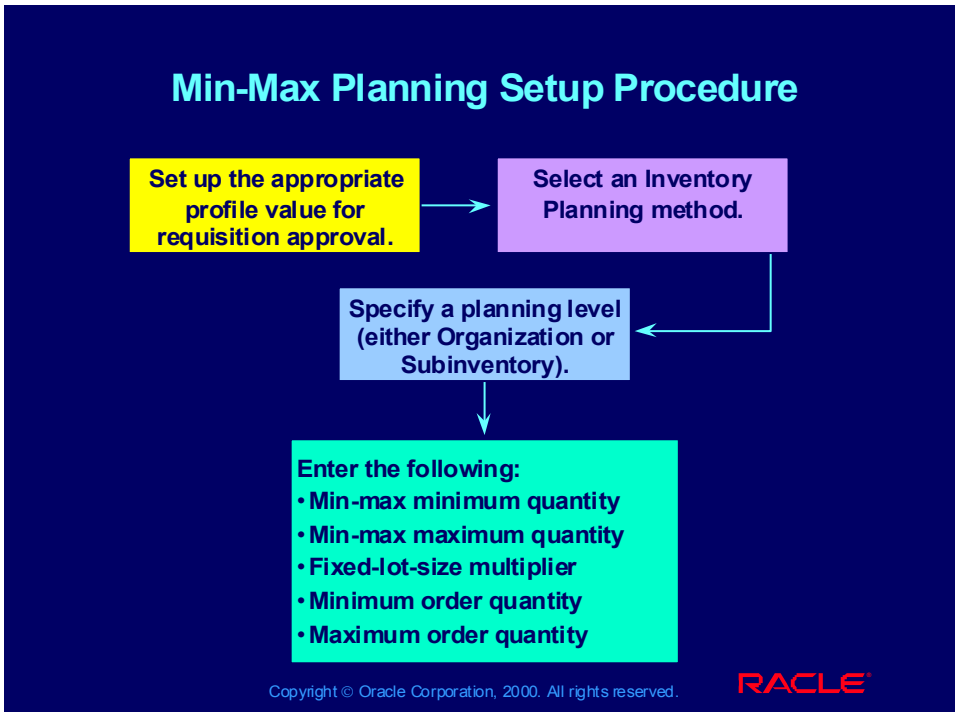
Min-Max Planning Setup Procedure



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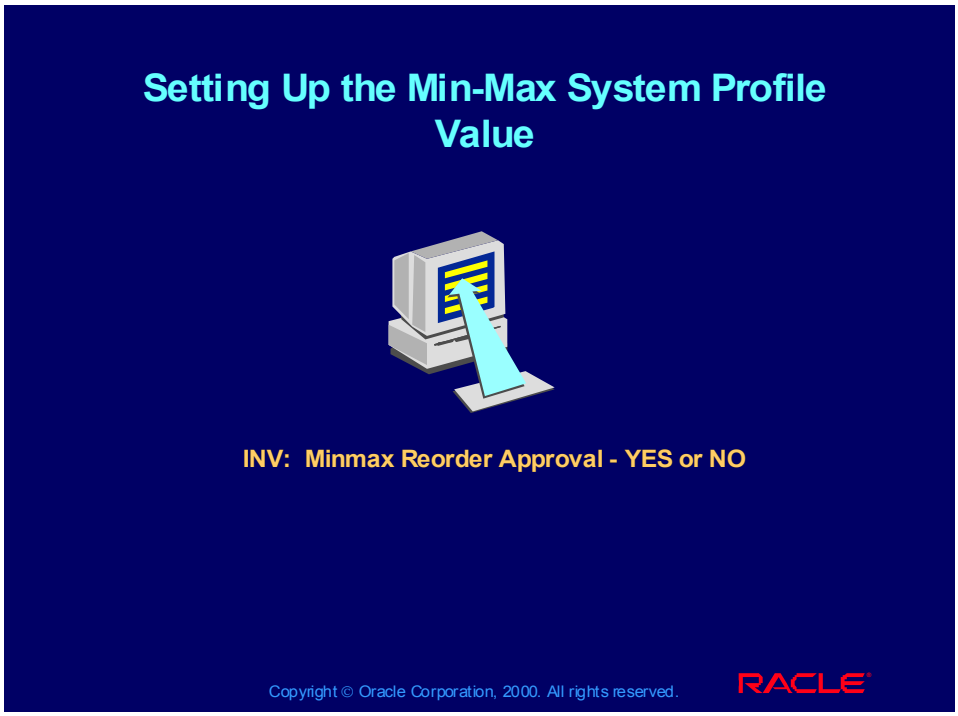

Entering Min-Max Approval Status

When you run the Min-max report, the INV: Minmax Reorder Approval profile option enables you to create requisitions as either approved or unapproved.

How to Enter a Min-Max Approval Status

To enter a min-max requisition approval status, navigate to the System Profiles window to enter a personal or system profile value to specify a min-max reorder approval status.

(N) Setup > Profiles > Personal

A Find window appears. Enter "%Minmax%" in the find window to locate the Minmax Reorder Approval profile option.

Note: If you do not have access to system-level profile values, ask your system administrator for assistance in setting up the system-level Minmax Reorder Approval profile option.

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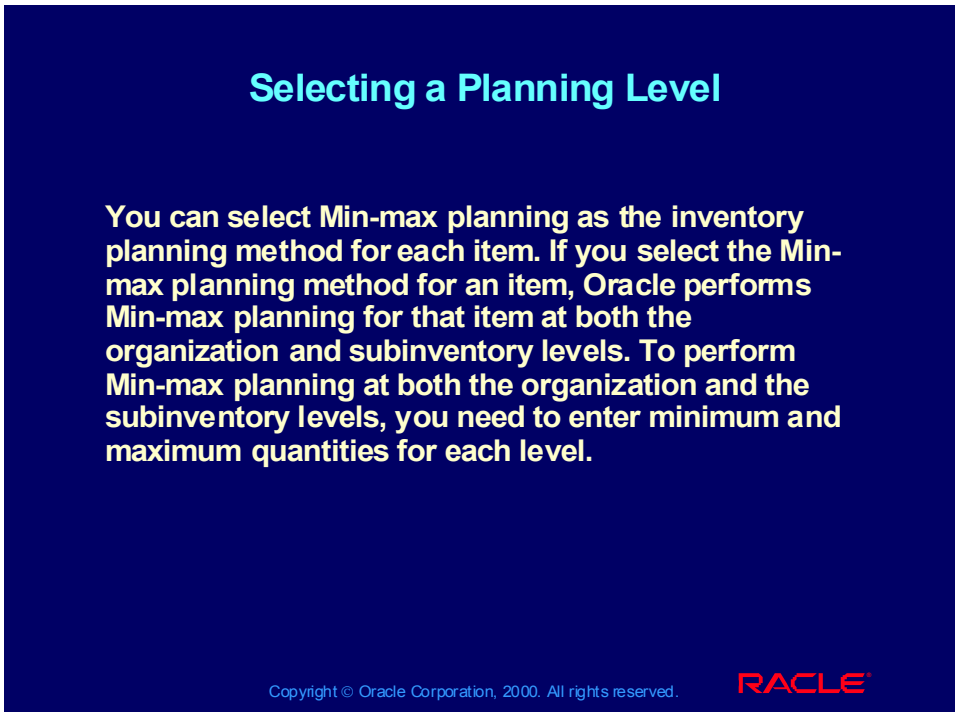

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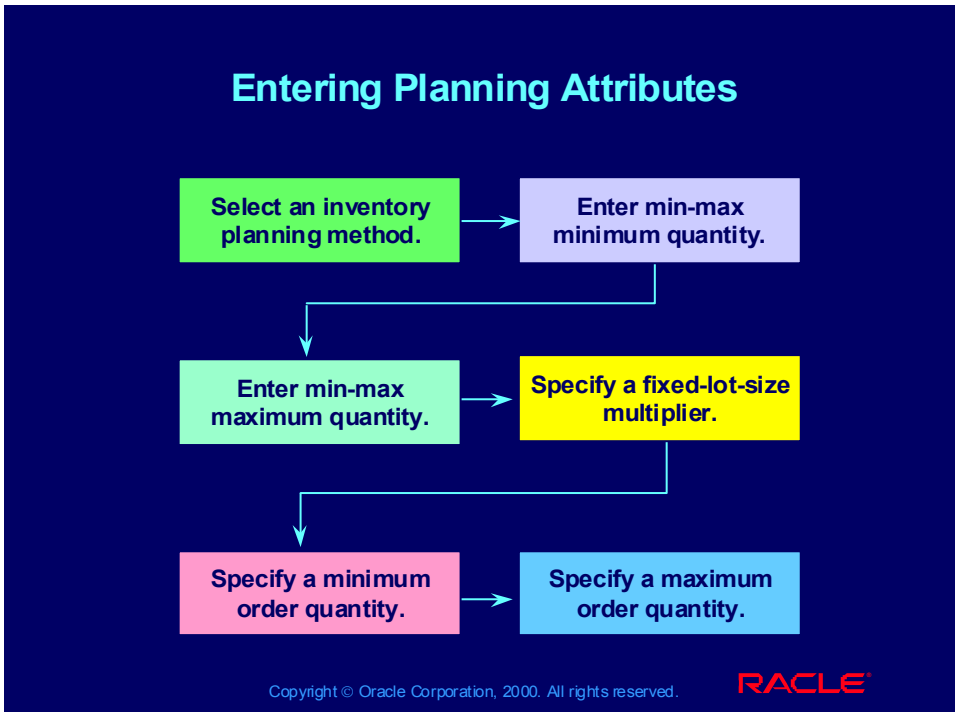

Entering Item Planning Attributes

After you select a planning level, either Organization or Subinventory, you enter the appropriate planning attributes. The following table describes these attributes in more detail:

Planning Attribute	Organization-Level	Subinventory-Level
Min-Max Minimum Quantity	Compares the item's on-hand quantity in the entire organization to the item's organization-level min-max minimum quantity	Compares the item's on-hand quantity in the specific subinventory to the item's subinventory level min-max minimum quantity
Min-Max Maximum Quantity	Uses the organization-level min-max maximum quantity to calculate the order quantity	Uses the item's subinventory-level min-max maximum quantity to calculate the order quantity
Fixed-Lot-Size-Multiplier	Calculates order quantities that are multiples of the fixed-lot-size multiplier	Calculates order quantities that are multiples of the fixed-lot-size multiplier
Minimum Order Quantity	Calculates order quantities that are greater than or equal to the minimum order quantity	Calculates order quantities that are greater than or equal to the minimum order quantity
Maximum Order Quantity	Calculates order quantities that are less than or equal to the maximum order quantity	Calculates order quantities that are less than or equal to the maximum order quantity

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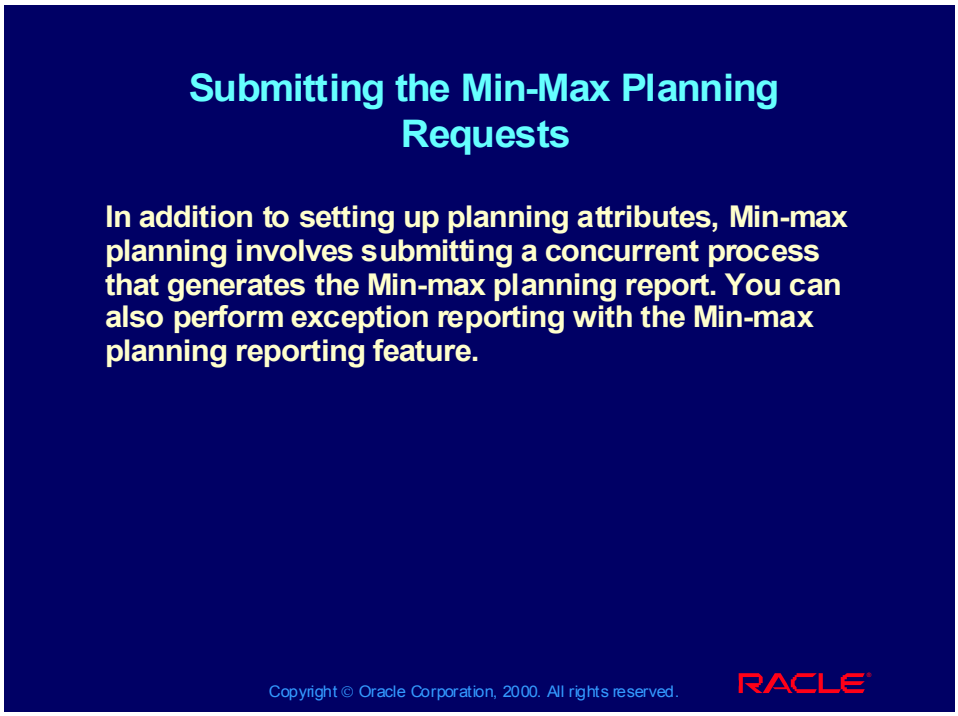

Submitting the Min-Max Planning Report

When you submit the Min-max planning report, you must specify a number of parameters, including parameters that address the following:

- Nettable Subinventories
- Demand quantities
- On-order quantity information
- Requisitions and WIP unrealized jobs
- Exception reporting

Using Nettable Subinventories

Oracle Inventory enables you to use on-hand quantities that exist in either nettable or non-nettable subinventories, or both.

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Submitting the Min-Max Planning Report (continued)

Displaying Demand Quantity

Oracle Inventory displays the sum of all unfulfilled demand created before the cutoff date. The system calculates demand quantity by using information from the following sources:

- Sales orders
- Internal orders

You can include WIP job component requirements as a source of demand as well. You can net unfulfilled demand against on-hand quantity and also include inventory reservations in netting on-hand quantity against demand.

Viewing Planning Information

You can view planning information before creating replenishment orders. To automatically create replenishment orders, you must request requisitions.

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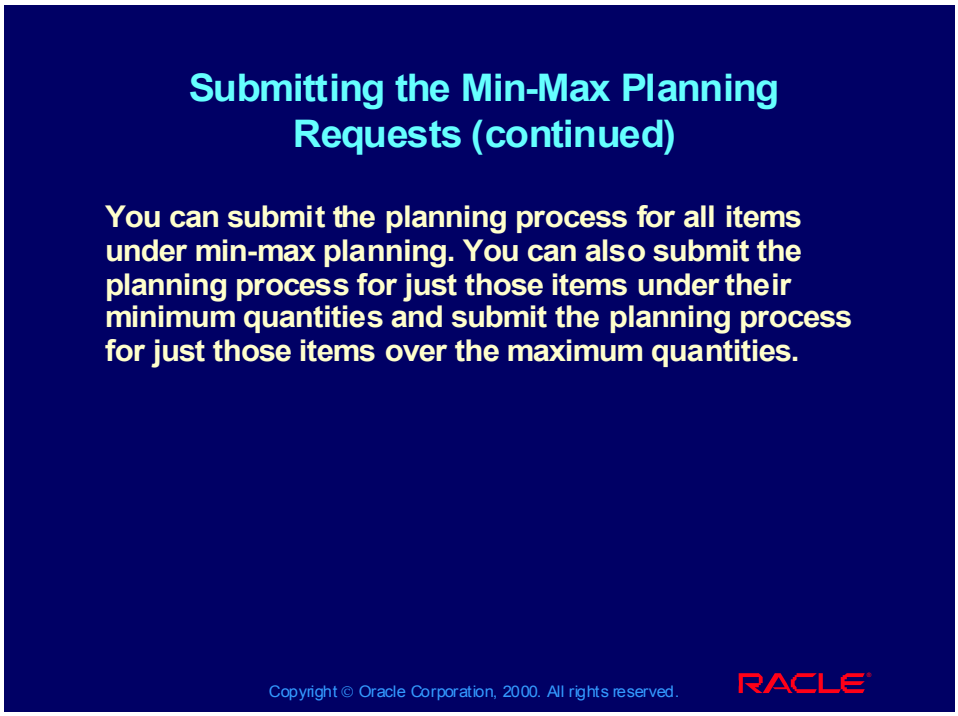

Submitting the Min-Max Planning Report (continued)

Creating Requisitions and WIP Unrealized Jobs

If you request a restock, Oracle Inventory creates requisitions and WIP unreleased jobs for all items that meet the following condition:

(on-hand quantity) + (quantity on order) < minimum quantity

Oracle Inventory creates purchase requisitions (if the source is Supplier) and internal requisitions (if the source is Inventory Organization) for all Buy items, and WIP unreleased jobs for all Make items. The order quantity is constrained by the following attributes:

- Fixed-lot size multiplier
- Minimum order quantity
- Maximum order quantity

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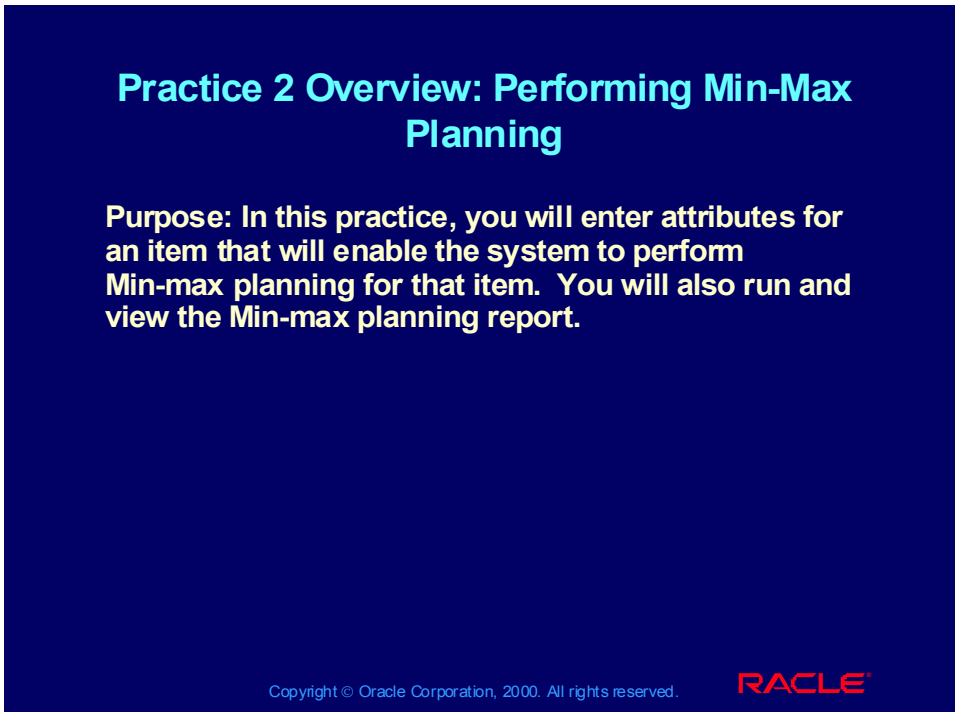

Practice 2: Performing Min-Max Planning

Instructions

Note: Wherever you see `XX`, substitute your student number. If you have not done so, assign your `XX-Item03` to Seattle Manufacturing (M1).

1. Set the item's general planning attributes for your `XX-Item03` for Min-Max Planning.

   (N) Items > Organization Items

   The Find window opens. Enter your item, and click the Find button.

   - General Planning Attributes tab
     - Inventory Planning Method — Min-Max Planning
     - Min-max Quantity: Minimum — 500
     - Min-max Quantity: Maximum — 3000
   - Select (M) File > Save

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Practice 2: Performing Min-Max Planning

2. In this practice, you run your Min-Max report by subinventory, so you need to enter the min-max quantities for the item/subinventory combination, or special item/subinventory. If you have not closed the Organization Items window, skip the next navigation step to reopen the Organizational Items window, and select (M) Tools > Items/Sub-inventories.

(N) Items > Organization Items

Enter your item in the Find window and then click the Find button.

(M) Tools > Item Subinventories

- Enter the following information for the item:
  - Name — Select the FGI subinventory
  - Min-Max Planning checkbox — Selected
  - Minimum Quantity — 300
  - Maximum Quantity — 900
- Save your work. (M) File > Save

Note: These general planning attributes affect organization-level planning, not subinventory-level planning.

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Practice 2: Performing Min-Max Planning

3. Request the Min-Max Planning report for your FGI subinventory.

   (N) Reports > Planning

   - In the Report Name field, select the Min-Max Planning Report from the list of values.
   - Click the Save icon to save your selection.
   - Click the Submit Request button to submit your request.

     Write down the concurrent request ID number _____.
   - View your report.

     (M) View > Requests

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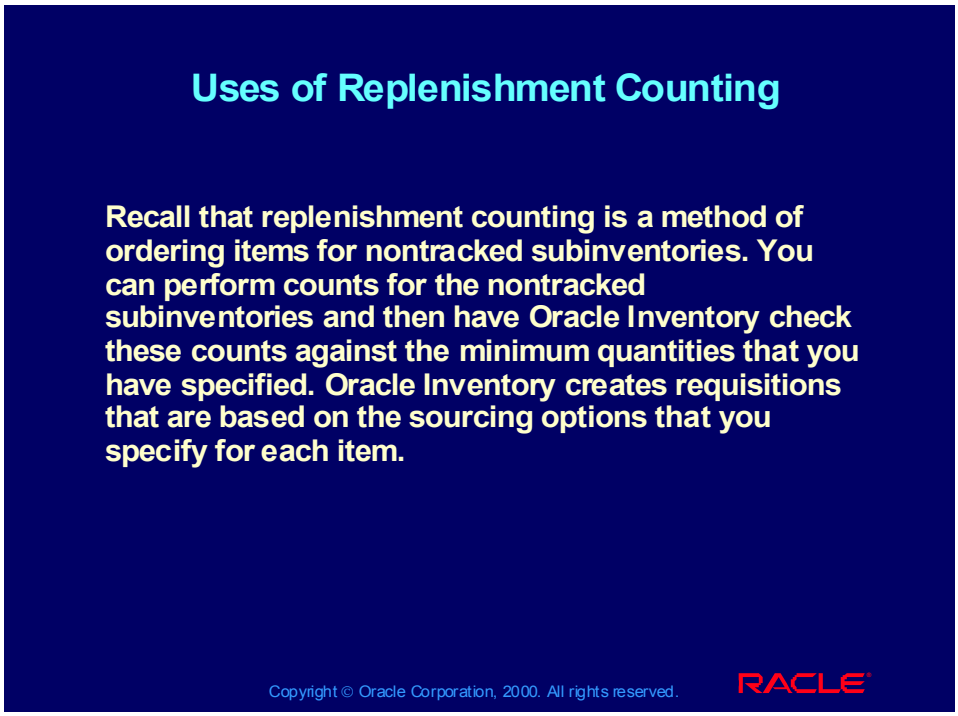

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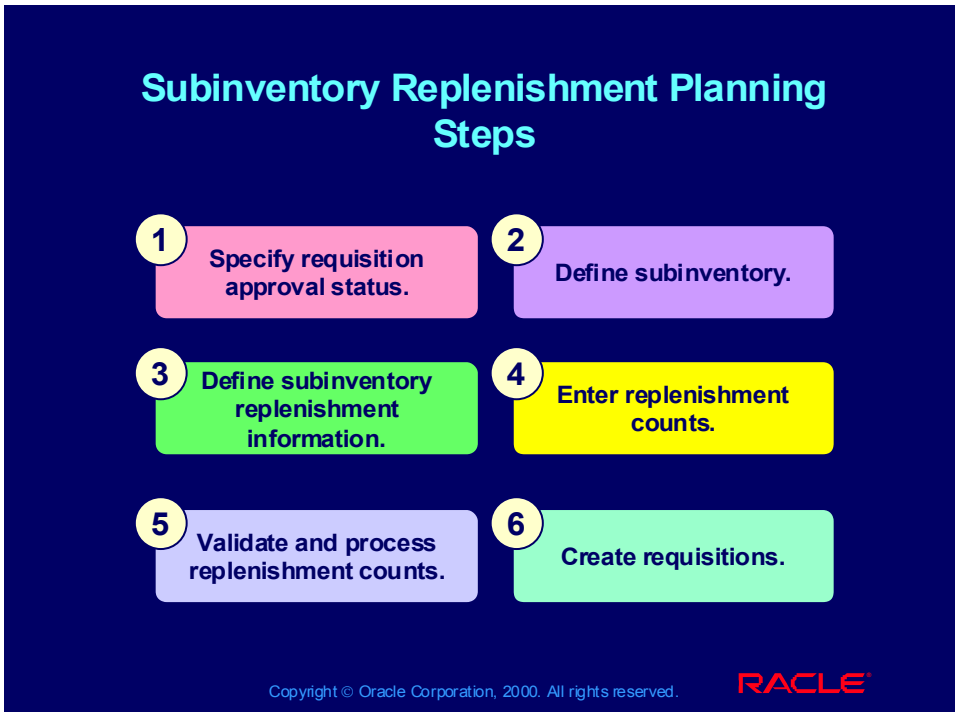
Subinventory Replenishment Planning Steps



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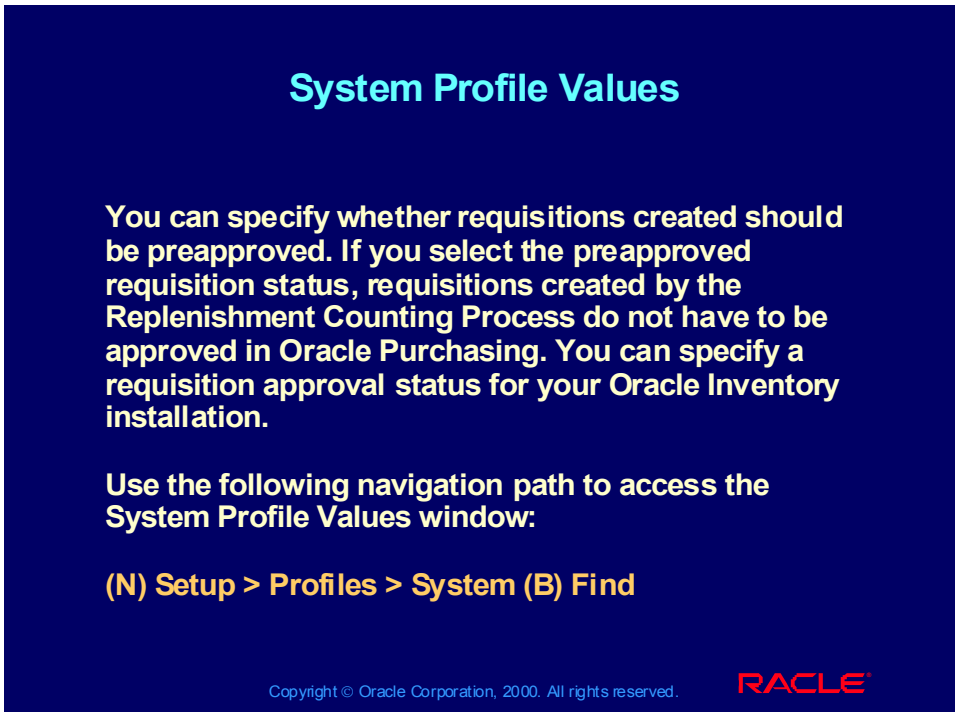

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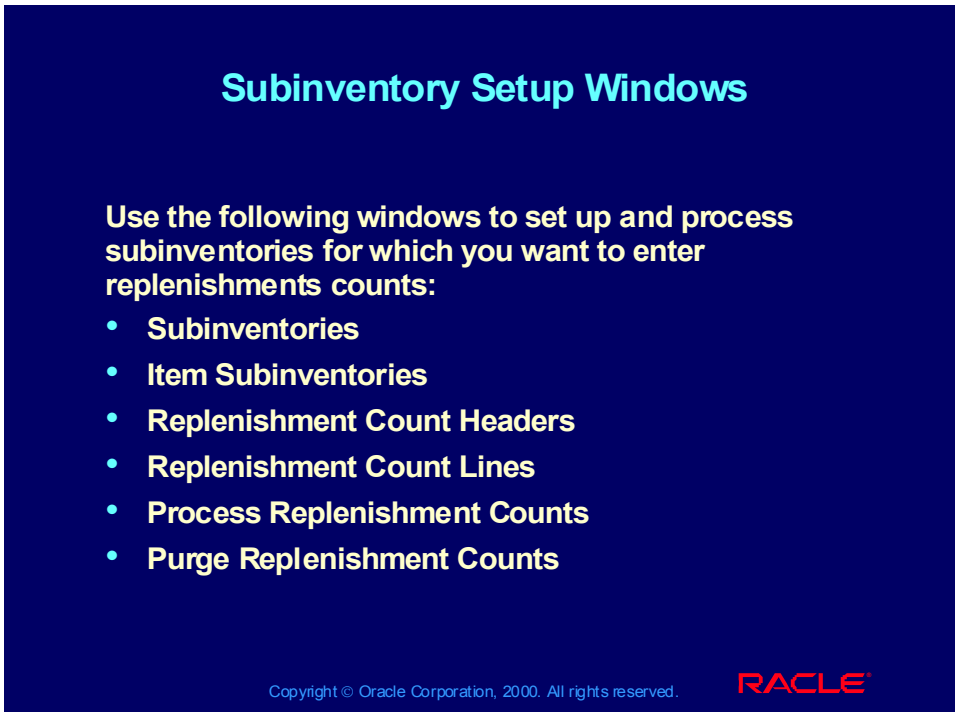

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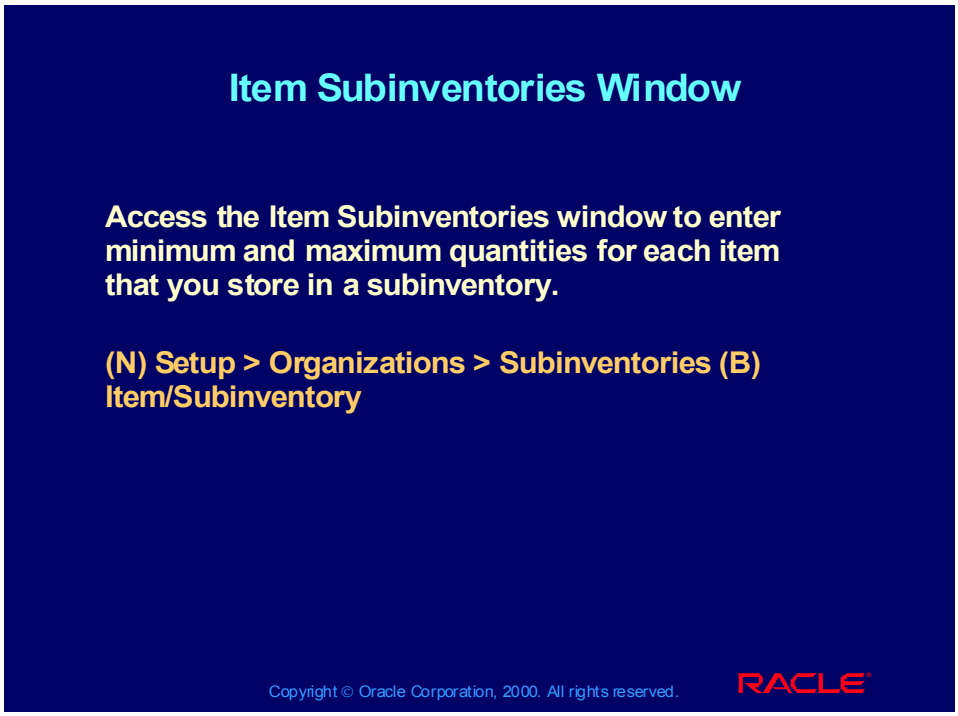
Item Subinventories Window



Specifying Min-Max Planning

To enter replenishment counts for an item, you must specify subinventory-level min-max planning for the item.

Entering Subinventory-Level Min-Max Minimum and Maximum Quantities

You can use the Min-max method to replenish subinventories. In one replenishment count entry method, you can order the min-max maximum quantity.

In another replenishment count entry method designed only for nontracked subinventories, you can enter an on-hand quantity, after which Oracle Inventory performs min-max calculations.

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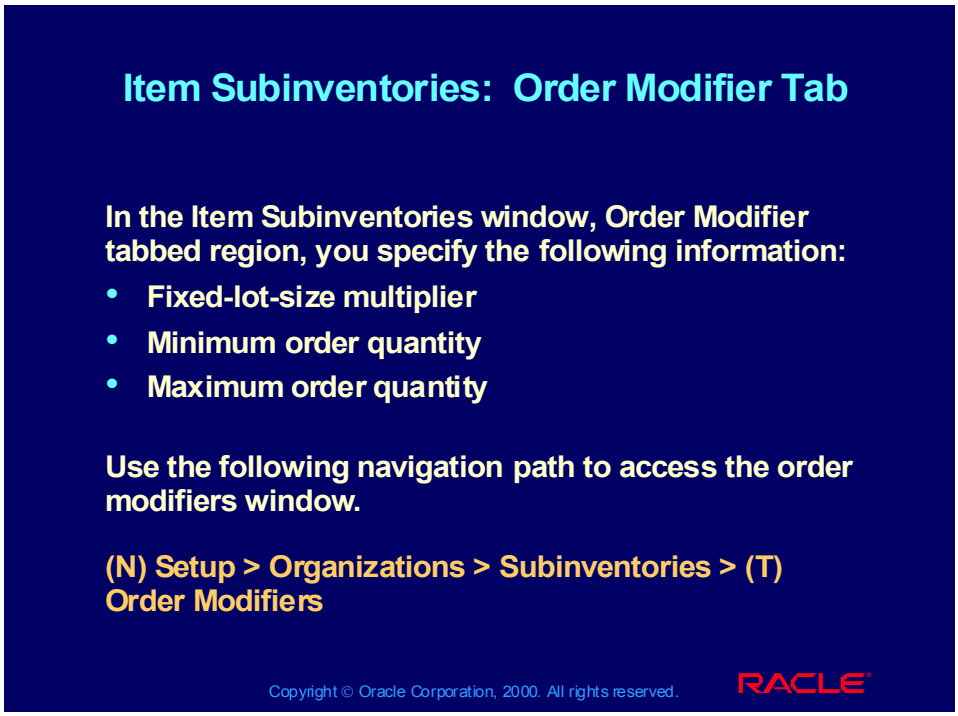

Entering Order Modifiers

Fixed-Lot-Size Multiplier

When you perform replenishment counting, Oracle Inventory calculates order quantities that are multiples of the fixed-lot-size multiplier.

Minimum Order Quantity

When you perform replenishment counting, Oracle Inventory calculates order quantities that are greater than the minimum order quantity.

Maximum Order Quantity

When you perform subinventory replenishment, Oracle Inventory calculates order quantities that are less than the maximum order quantity.

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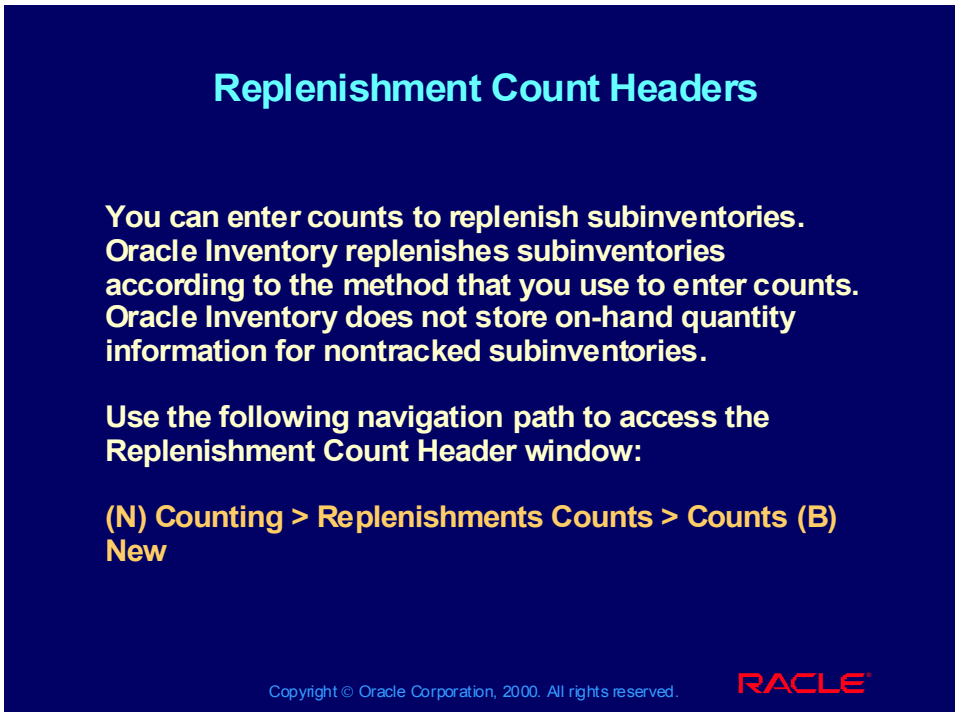

Entering Replenishment Count Header Information

In the Replenishment Count Header window, you enter a name and subinventory for which you want to perform replenishment counting.

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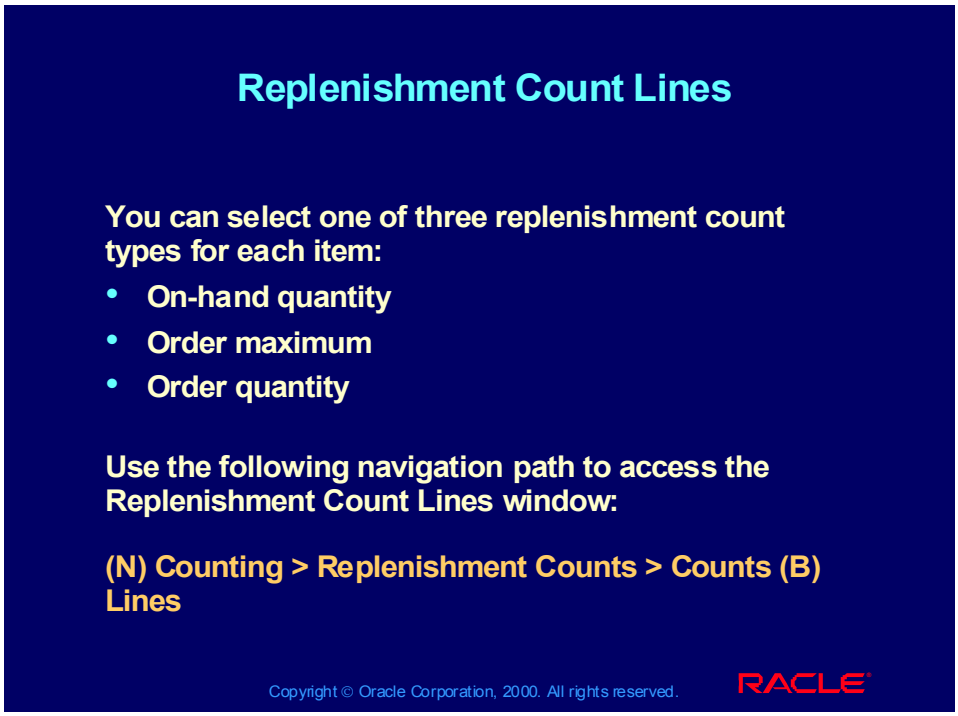

Entering Replenishment Count Lines

You must enter replenishment count header information to enter replenishment count lines for items that are associated with the subinventory that you specify.

On-Hand Quantity

This method is designed only for nontracked subinventories. The item for which you select this method must be a min-max planned item.

You can count the contents of the subinventory and then enter the on-hand quantity. Oracle Inventory uses the quantity that you enter to perform min-max comparisons and to generate requisitions.

Requisition quantities are constrained by fixed-lot multiple quantities, maximum order quantities, and minimum order quantities. Oracle Inventory uses the sourcing options defined for that item and subinventory combination.

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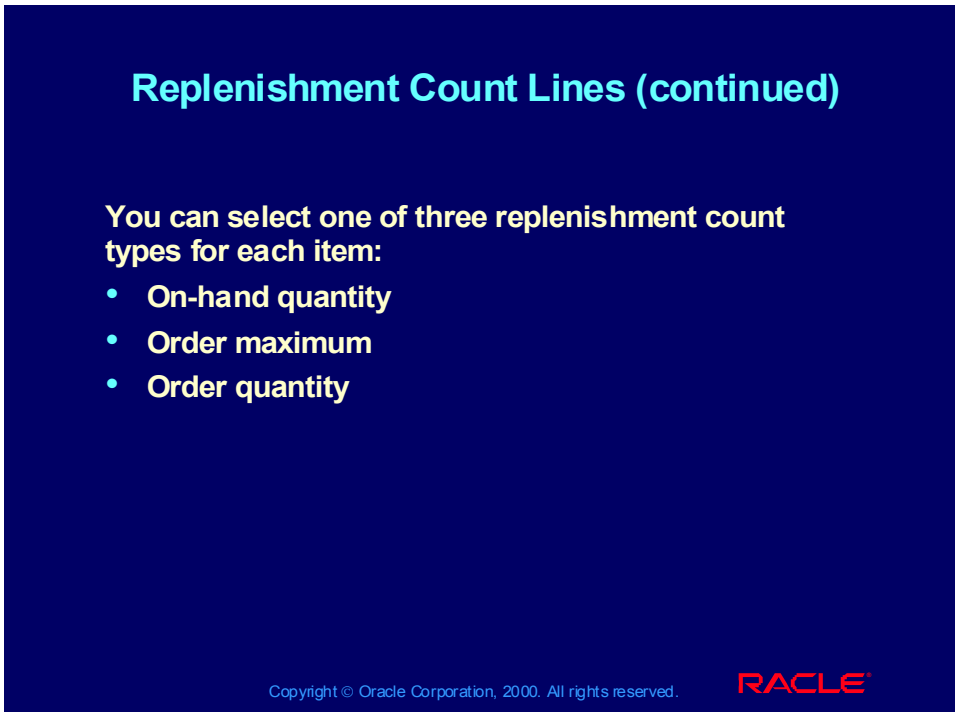

Explaining Replenishment Count Types (continued)

Order Maximum

The item for which you select this method must be a min-max planned item. Oracle Inventory generates a requisition in the min-max maximum quantity specific to that item and subinventory combination.

Requisition quantities are constrained by fixed-lot multiple quantities, maximum order quantities, and minimum order quantities. You cannot enter a quantity if you select this option.

Oracle Inventory uses the sourcing options defined for that item and subinventory combination.

Order Quantity

The item for which you select this method can be planned using any replenishment planning method. With the Order Quantity count type, Oracle Inventory generates a requisition for the quantity that you enter. Requisition quantities are constrained by fixed-lot multiple quantities, maximum order quantities, and minimum order quantities. Oracle Inventory uses the sourcing options defined for that item and subinventory combination.

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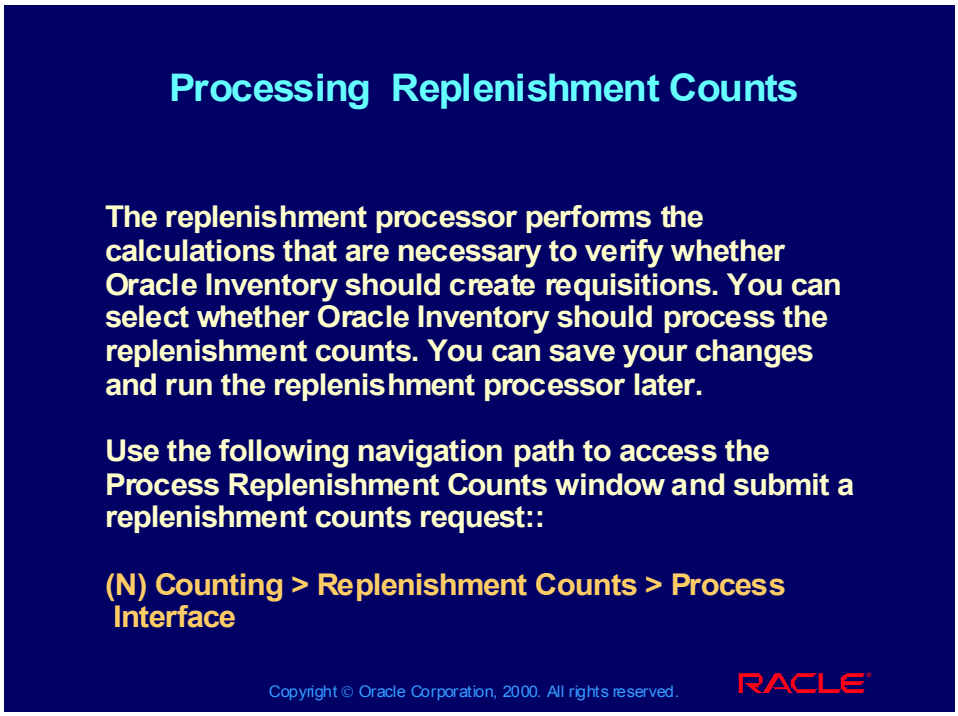

Entering Counts Using External Devices

You can use external data collection devices, such as bar code readers to enter replenishment counts. You can run the replenishment validator and processor after entering counts directly into the replenishment open interface.

Submitting the Replenishment Validator and Processor

The replenishment validator reads the count records that exist in the interface table. The interface table stores the counts that you enter with an external device. Oracle validates the items, subinventories, and counts, and then writes the records to the count tables. The replenishment count processor performs the calculations that are necessary to determine whether Oracle should create requisitions. Oracle creates internal or purchase requisitions according to each item's default sourcing options. Run the replenishment validator program before submitting the replenishment processor.

Purging Replenishment Counts

If you want to purge replenishment counts, use the following navigation path to access the Purge Replenishment Counts window:

(N) Counting > Replenishment Counts > Purge

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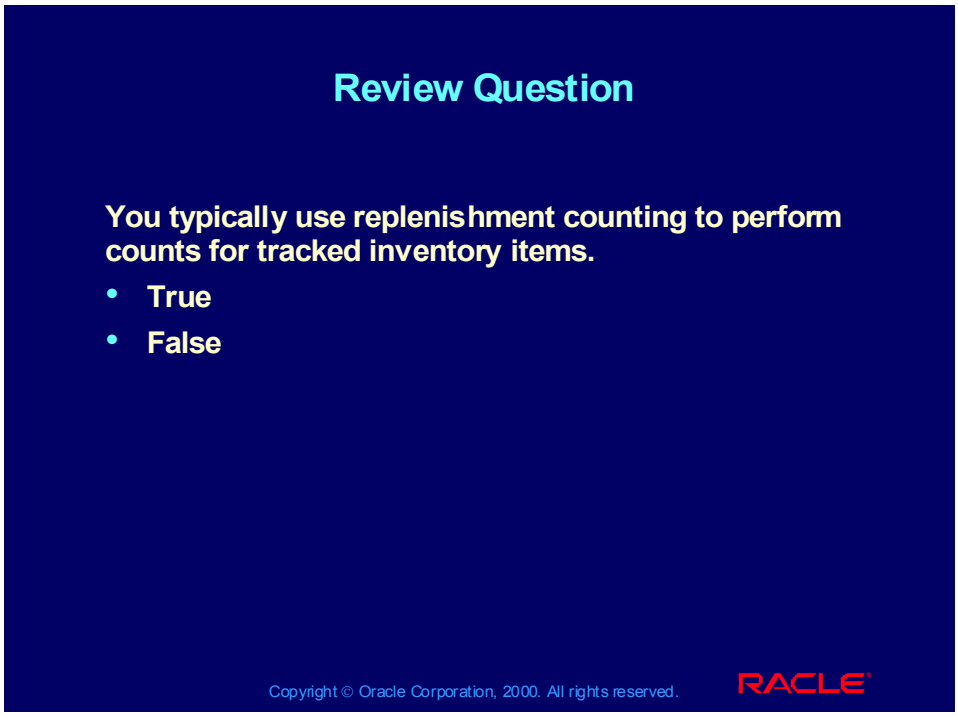

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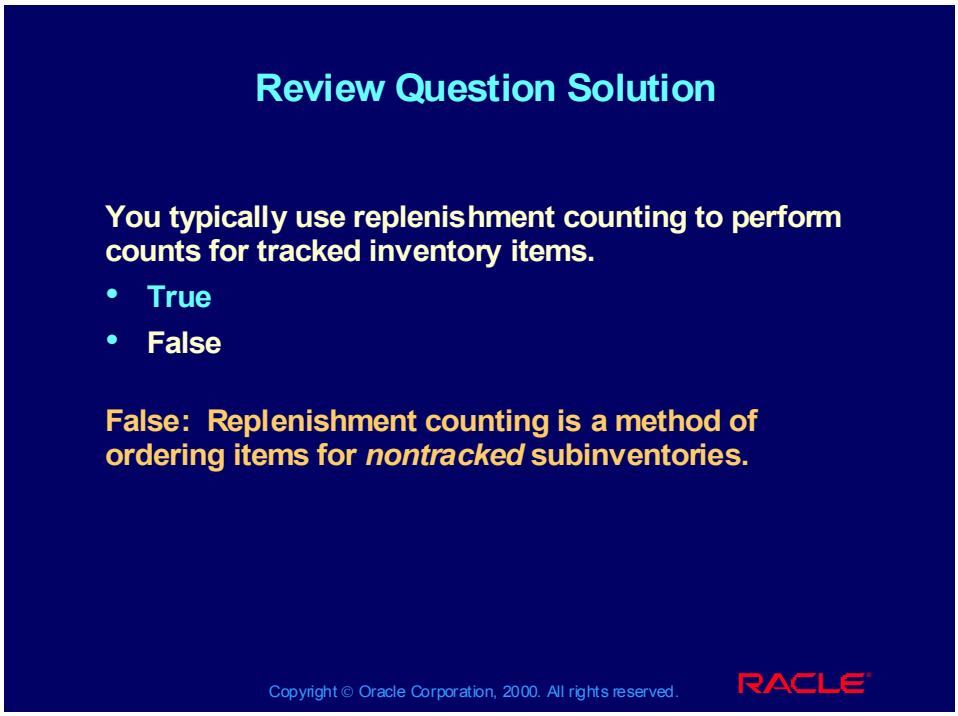

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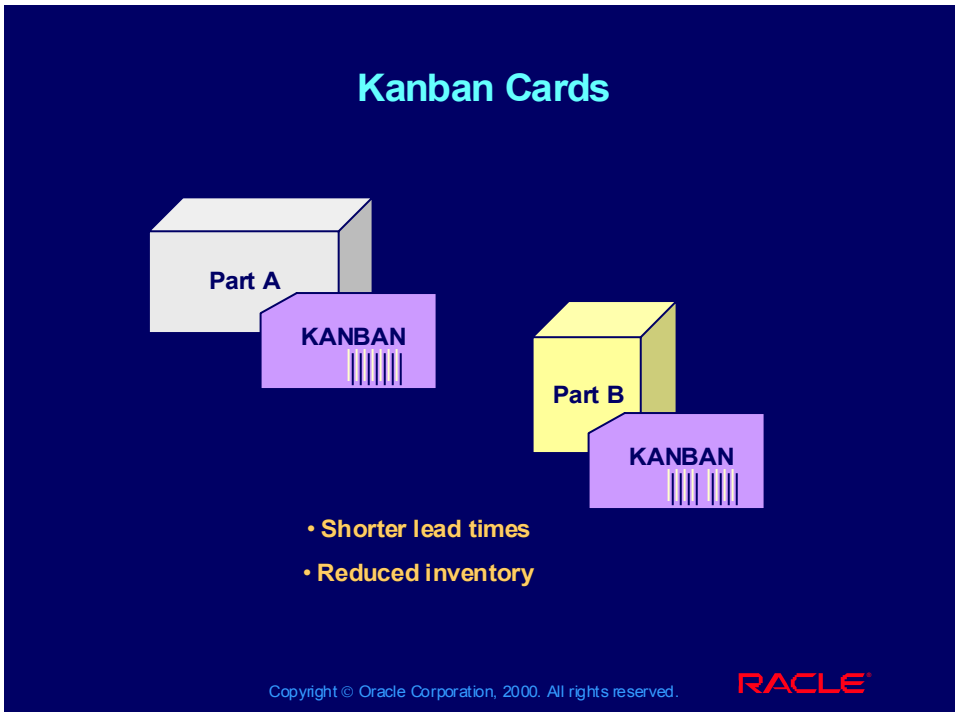

Describing Kanban Replenishment

Recall that a kanban system is a self-regulating pull system that leads to shorter lead times and reduced inventory. Kanban systems are typically applied to items with relatively constant demand and medium-to-high production volume.

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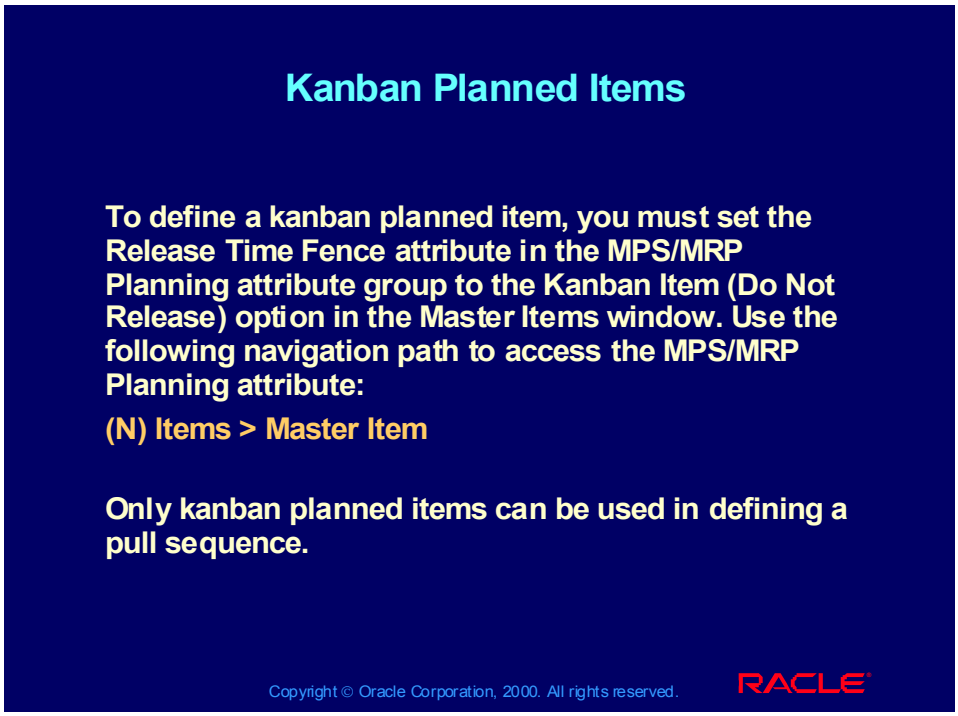

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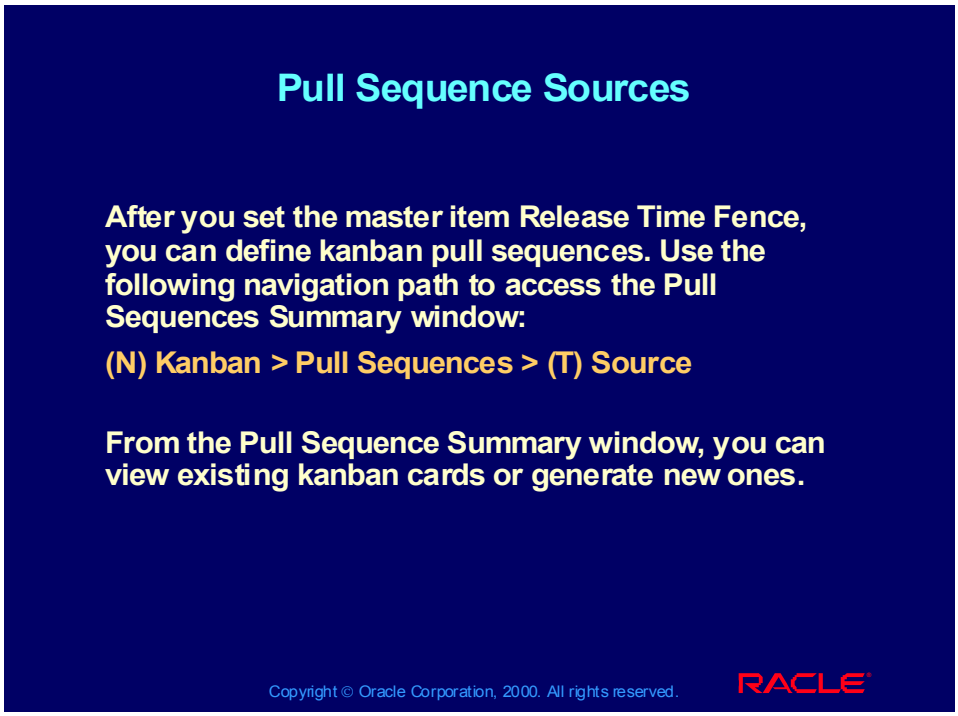

Defining Pull Sequence Sources

For every kanban planned item, you must define a pull sequence, which is a series of kanban locations that model the replenishment network on the shop floor. A kanban location can be a subinventory locator. The replenishment source for a kanban location can be another kanban location, a production line, or an external source. You can use locators even if locator control is turned off at the organization, and item levels.

Kanbans can be sourced from an external supplier or an internal organization. A Supplier source type kanban triggers a purchase request to the supplier, while an Inter-org. source type kanban results in an inter-organization transfer.

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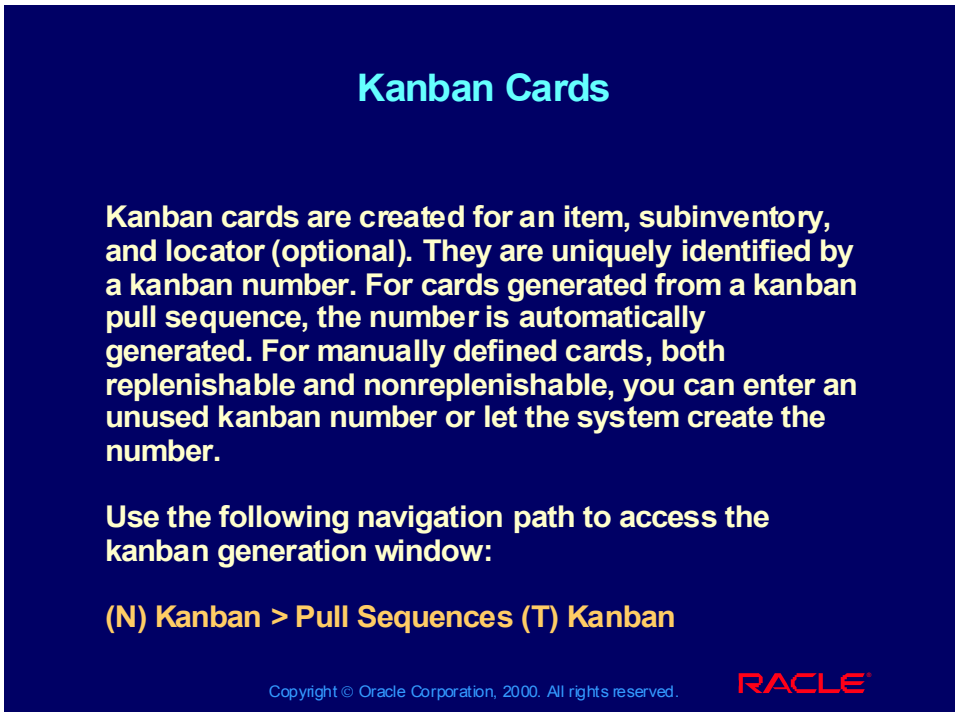

Describing Replenishment Cards

You cannot override the quantity for generated cards, but you can add additional cards or delete existing cards from the pull sequence to control the inventory in the replenishment chain.

A supply source defaults from the sourcing rules if a sourcing rule is available for the item and kanban location. Only the primary supplier, based on the split percentage and ranking, is used. You can manually override the quantity and supply source on a pull sequence only before the cards that have been printed. Changes to the pull sequence are not reflected until the old cards are deleted and new ones are created. Updates to the sourcing rules apply only to cards created after the update.

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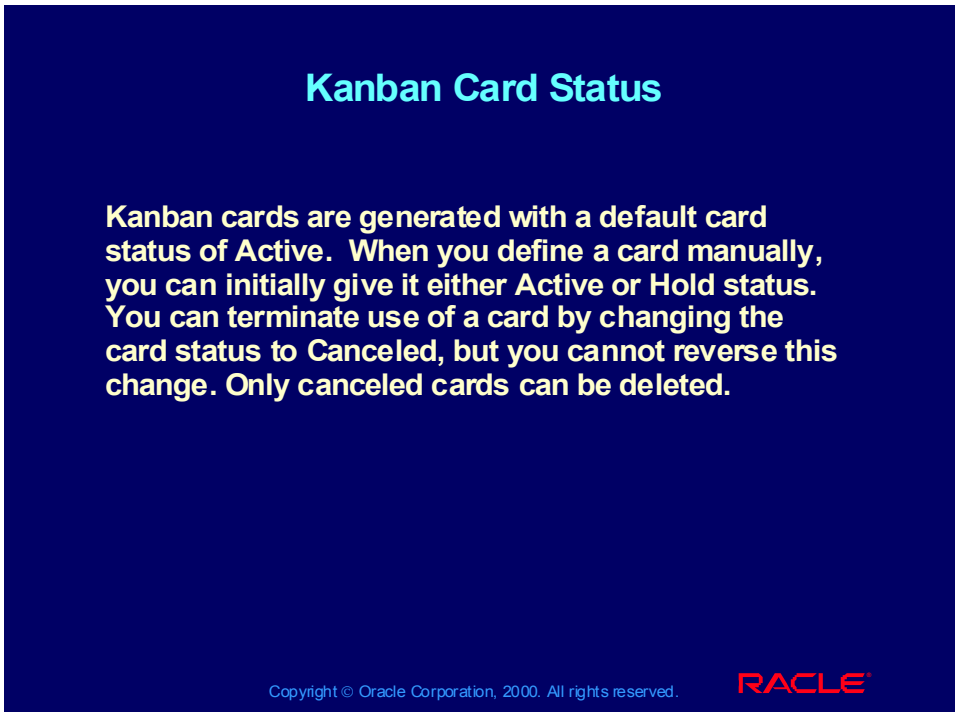

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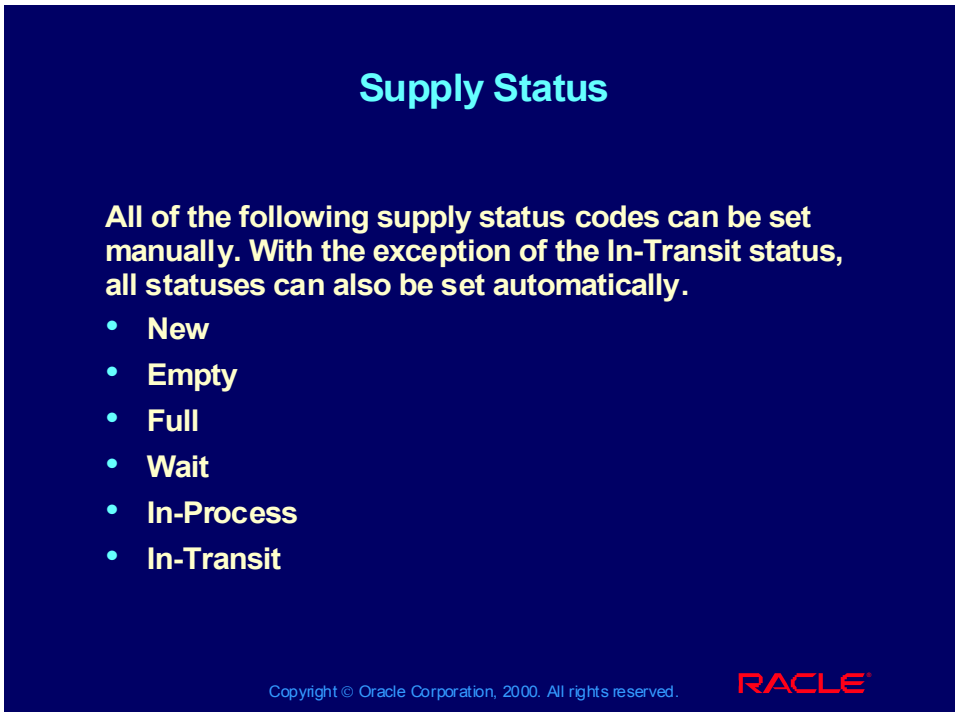

Describing Supply Statuses

The following table describes supply statuses in more detail:

Supply Status	Description
New	Indicates that the kanban has just been created and is not yet part of the replenishment chain
Empty	Indicates that the kanban is empty and that a replenishment signal has been generated
Full	Indicates that the kanban has been replenished
Wait	Indicates that the kanban is waiting until the minimum order quantity has been met by the aggregation of cards
In-Process	For the Supplier source type, indicates that the purchase order has been approved. For the Interorganization source type, indicates that the internal requisition has been approved.
In-Transit	Indicates that you have received an advanced shipping notice (ASN) that the kanban has shipped, but that you have not yet received it

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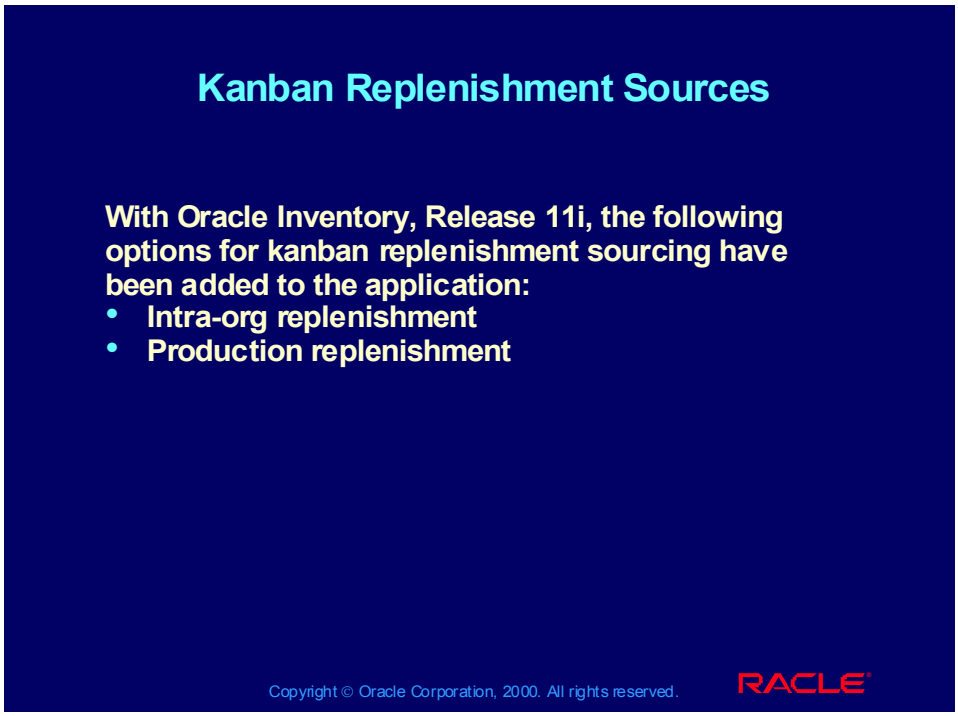

Describing Kanban Sources of Replenishment

If you specify a kanban replenishment source of intra-organization, then Oracle Inventory creates a preapproved move order that is referenced to the corresponding kanban card.

If you specify a kanban replenishment source of intra-organization, then Oracle Inventory creates a work order or repetitive schedule.

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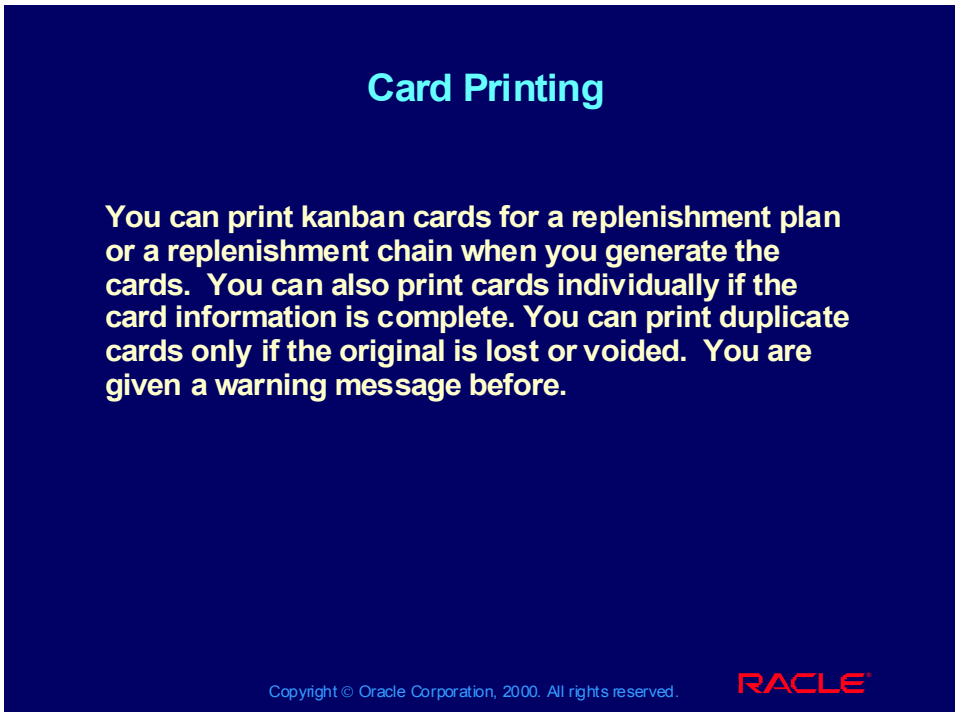

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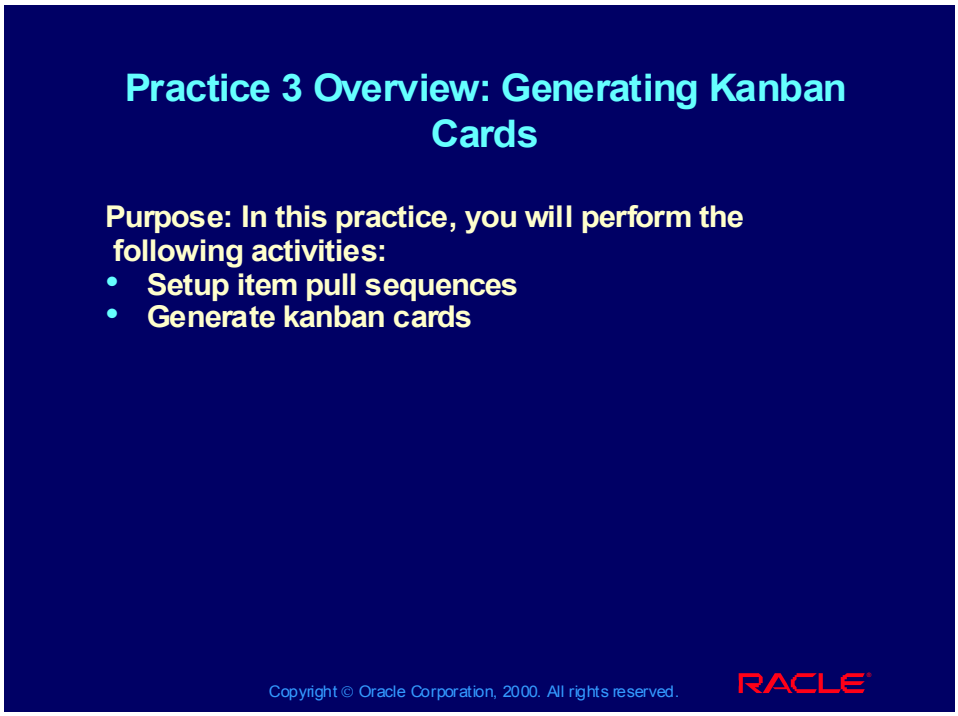

Practice 3: Generating Kanban Cards

Instructions

Note: Wherever you see XX, substitute your student number.

1. Use the Source, Kanban, and Planning tabs to set up a pull sequence for your item that has been kanban enabled.

(N) Kanban > Pull Sequences

- Organization — M1 - Seattle Manufacturing
- Item — Select your kanban enabled item
- Subinventory — Stores
- Locator — 99.110.50 (or provided by the instructor)
- Supplier — Advanced Networking Devices
- Supplier Site — Santa Clara
- Calculate field — Number of cards

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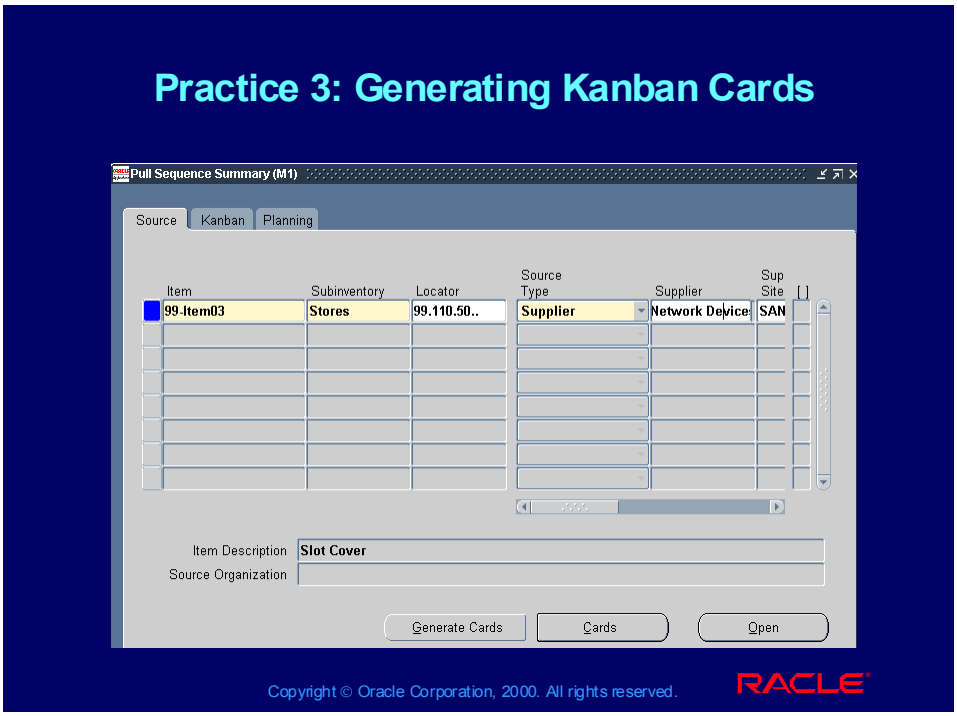

Practice 3: Generating Kanban Cards

1. (Continued from Step 1 on the previous page).
   - Size 10
   - Cards 10
   - Minimum Quantity 20
   - Lead time 3
   - Allocation % 75
   - Safety Stock 1

   When you finish entering the pull sequence information, save your work.
2. Click the Generate Cards button to generate your kanban cards.
3. Click the Cards button to view your kanban cards for accuracy.
4. For the first two cards, click the Open button to view all of the details for the selected cards.
5. For the first card, click the Replenish button to generate a replenishment signal and to verify that the supply status is now Wait.
6. For the second card, click the Replenish button to generate a replenishment signal and to verify that the supply status of the card is Empty.

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Agenda

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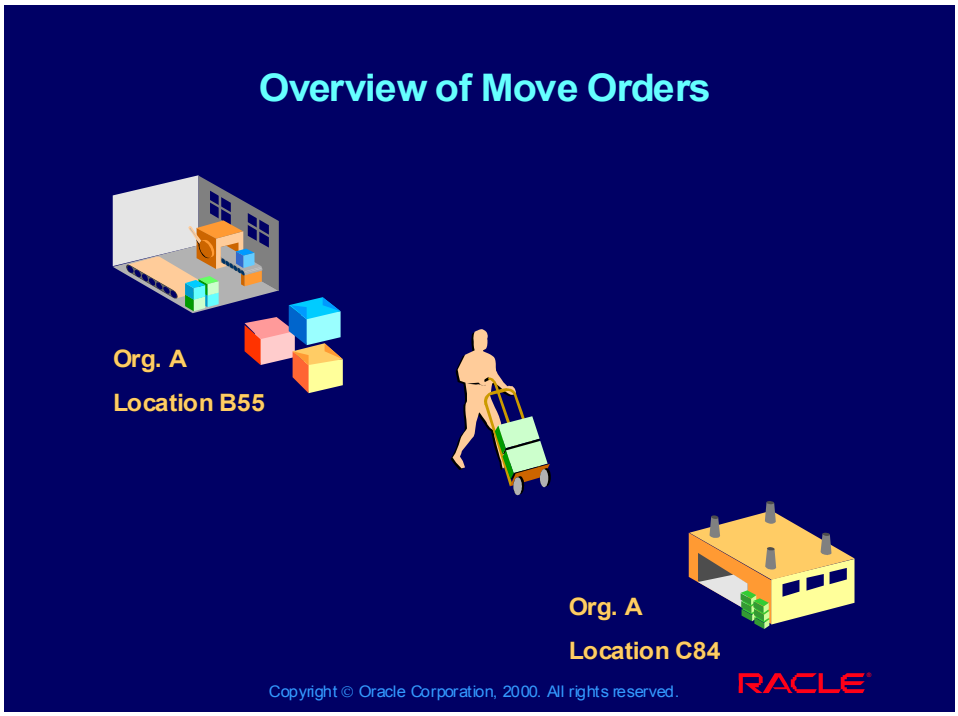

Describing Move Orders

Move orders are requests for the movement of material within a single organization. Move orders enable planners and facility managers to request the movement of material within a warehouse or facility for purposes, such as replenishment, material storage relocations, and quality handling. You can generate move orders either manually or automatically depending n the source type that you use.

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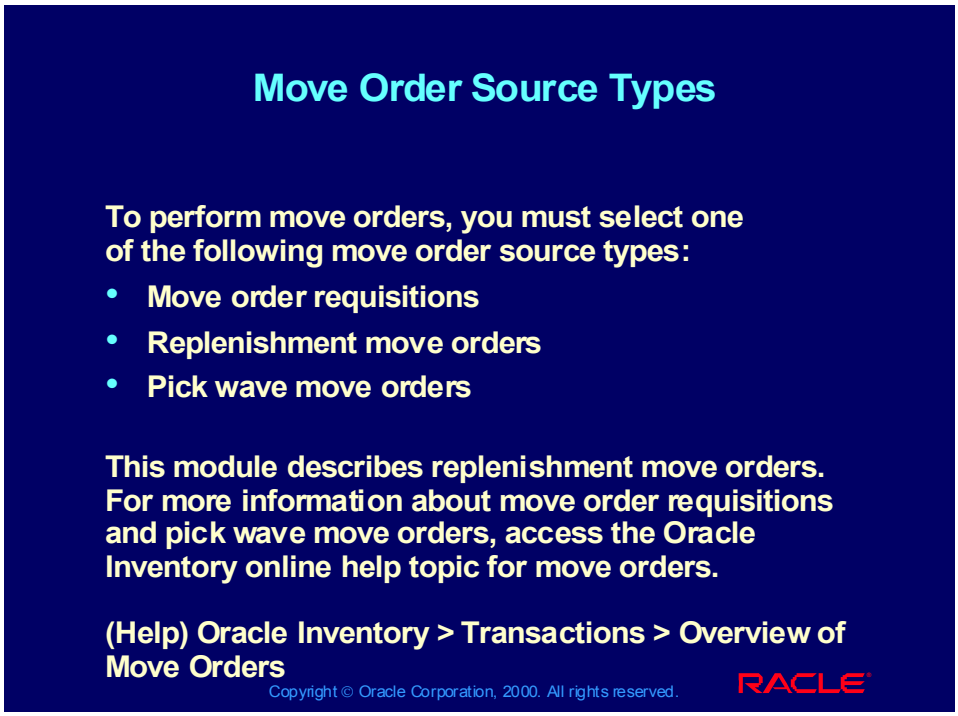
Move Order Source Types



Setting the Inventory Source Type

For Min-max planning and replenishment counting, you can set the subinventory source type at the following levels:

- Master/Organization Items
- Subinventory
- Item Subinventory

For kanban pull sequence cards, you set the subinventory source type at the Pull Sequence level.

After you set up the subinventory source type and other move order attributes, Oracle Inventory will automatically create a preapproved move order when you run the corresponding planning report, such as the Min-Max Planning report.

For more information about specifying the inventory source type and setting up move orders, access the following Oracle Inventory online help:

(Help) Oracle Inventory > Overview of Move Orders > Setting Up Move Orders

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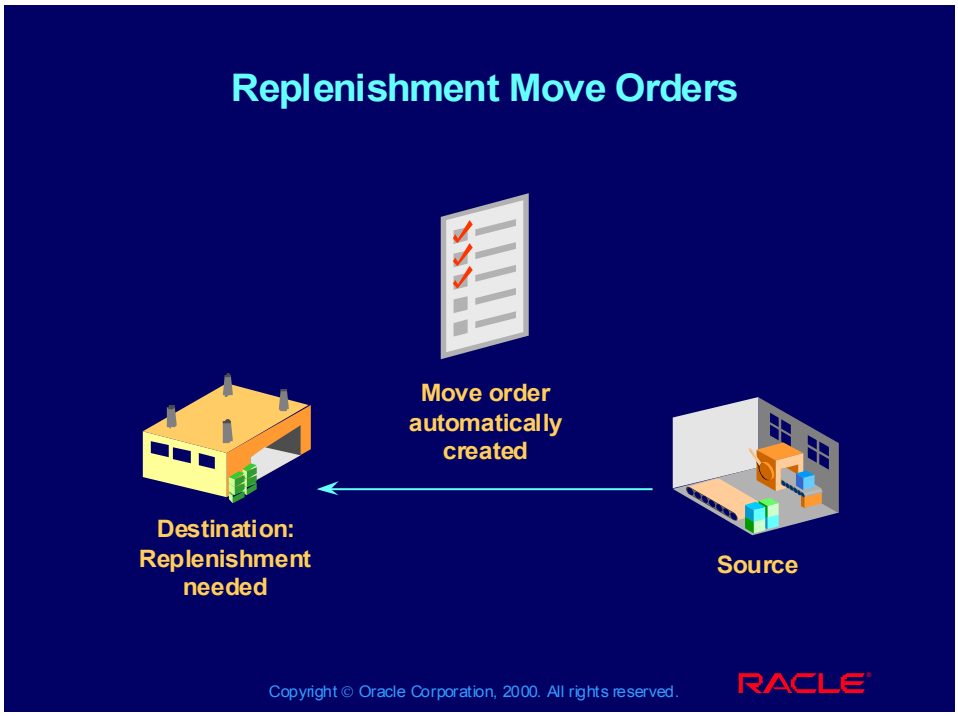

Describing Replenishment Move Orders

Oracle Inventory enables you to automatically create pre-approved move orders using any of the following replenishment planning methods:

- Min-Max planning
- Replenishment counting
- Kanban replenishment

When using one of these planning methods, Oracle Inventory generates move orders if the material is sourced from another inventory location within the organization.

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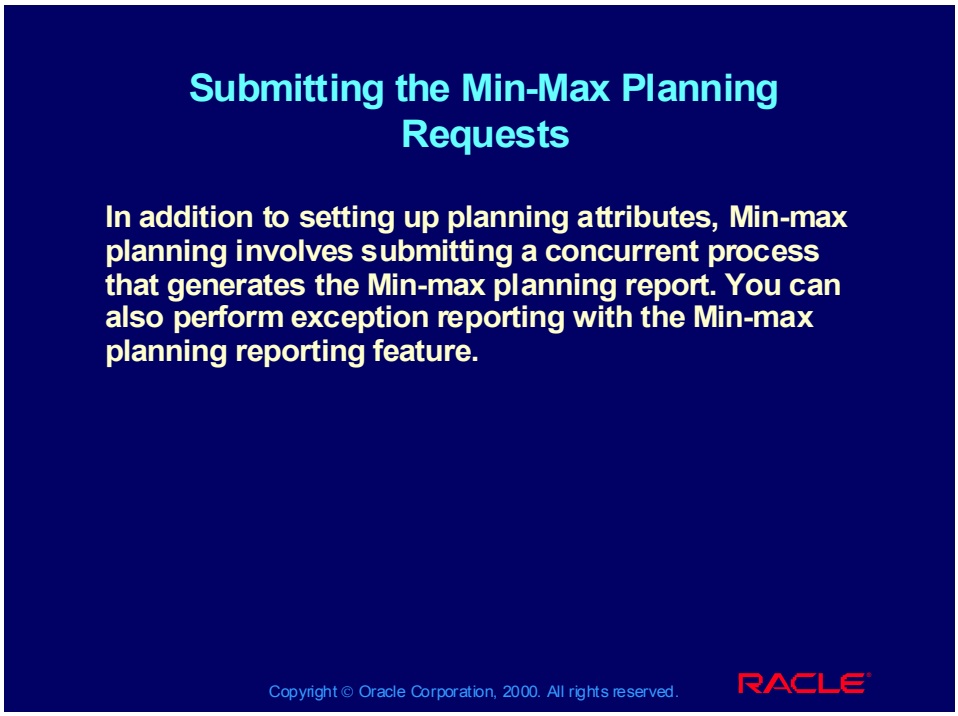

Submitting the Min-Max Planning Report

When you submit the Min-max planning report, you must specify a number of parameters, including parameters that address the following:

- Nettable subinventories
- Demand quantities
- On-order quantity information
- Requisitions and WIP unrealized jobs
- Exception reporting

Using Nettable Subinventories

Oracle Inventory enables you to use on-hand quantities that exist in either nettable or non-nettable subinventories, or both.

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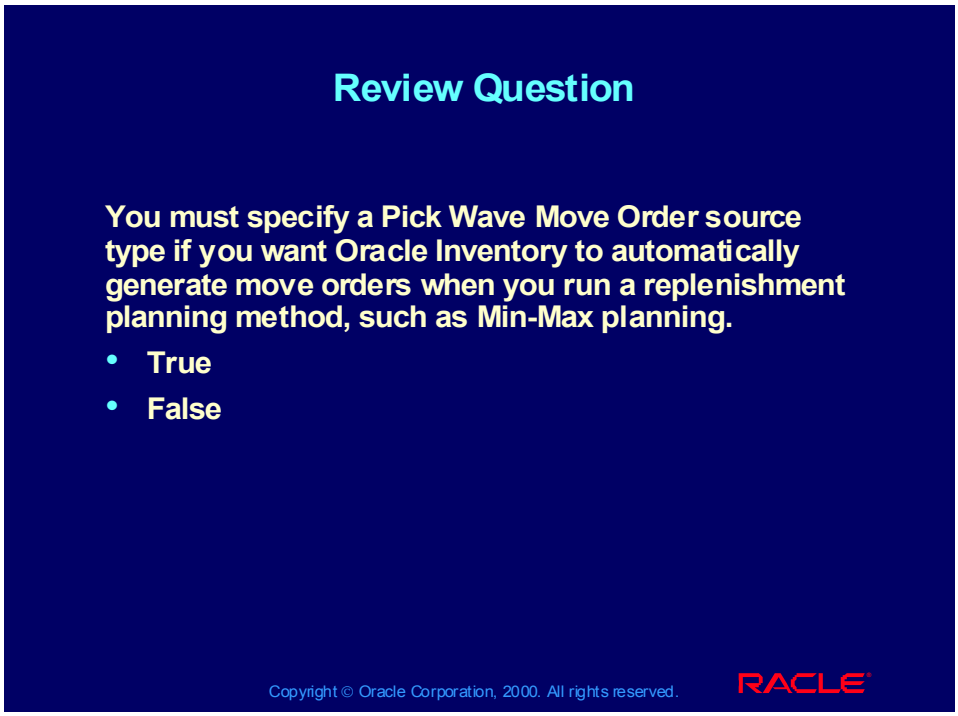

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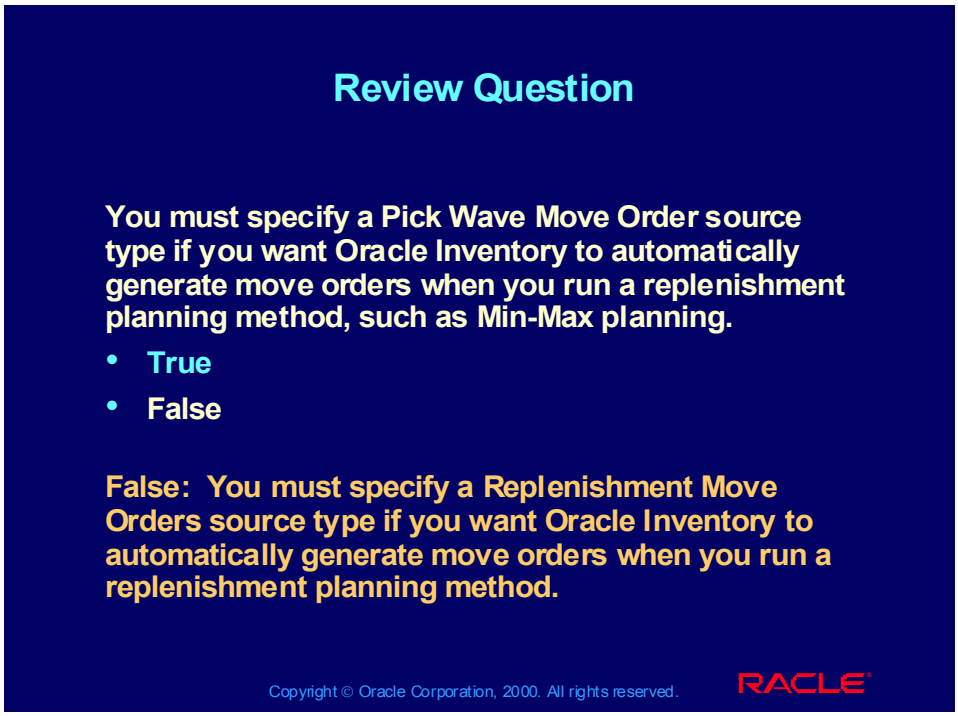

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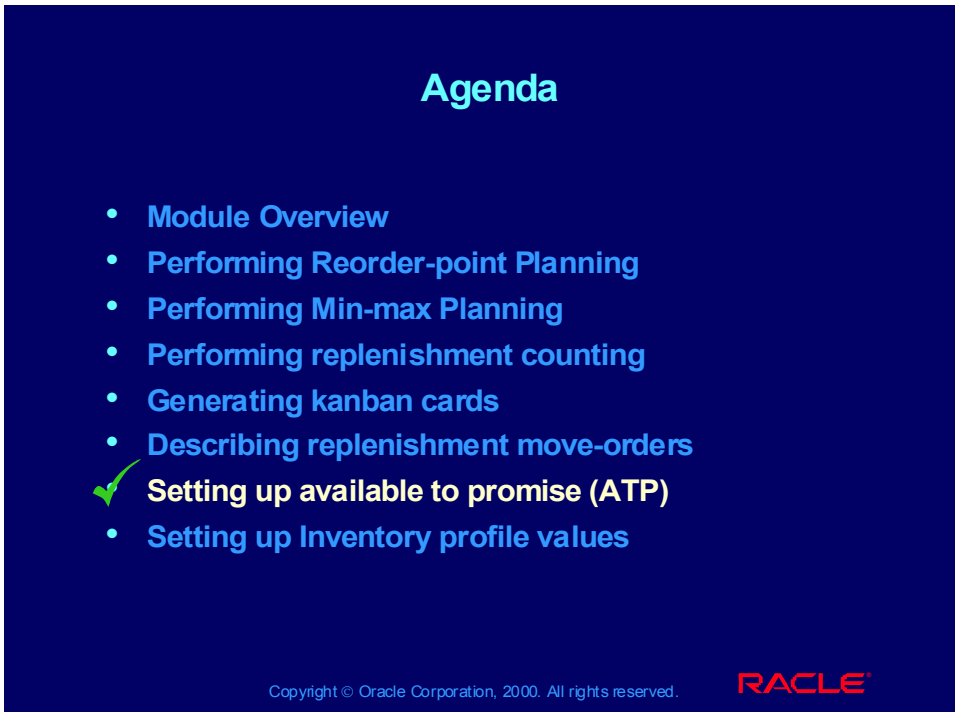

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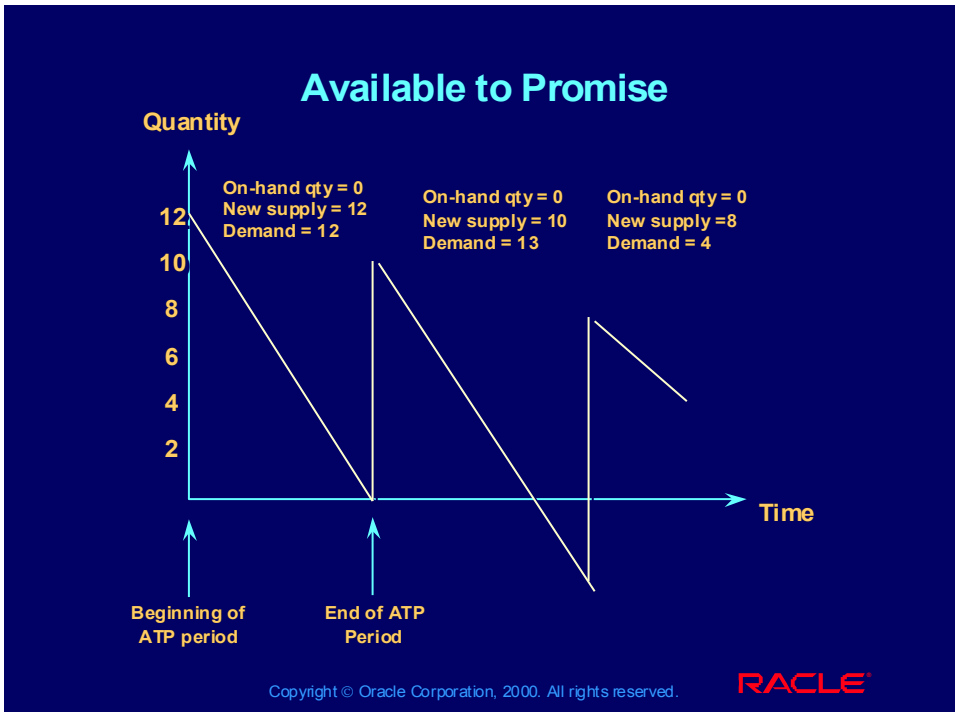
Available to Promise



Describing Available to Promise

Available to promise (ATP) represent the quantity available for sale at any given period. The basic formula for ATP is

ATP quantity = on-hand quantity + supply - demand - shortage

Note: The shortage in the second period is covered in the third period by using the concept of forward consumption of shortage, which is a concept explained later in this module.

The following table provides period ATP quantities for the example shown in the slide:

Periods ➔	**1**	**2**	**3**
Beginning on-hand quantity	0	0	0
New supply	12	10	8
Period demand	12	13	4
Period ATP	0	- 3	1

Oracle Inventory enables you to define different rules that govern what is considered supply and demand.

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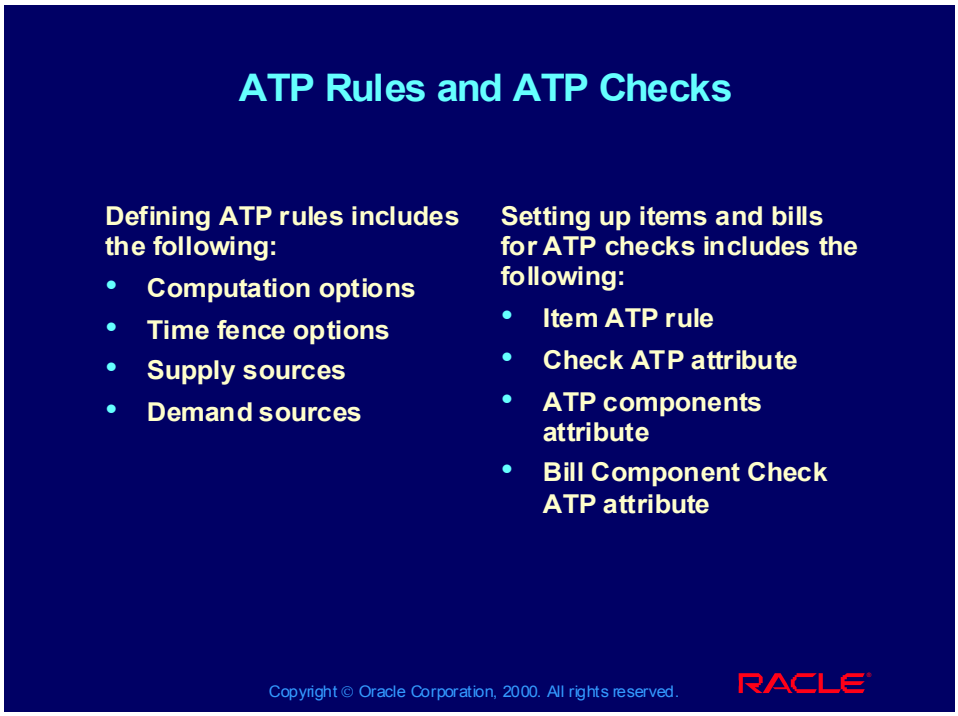

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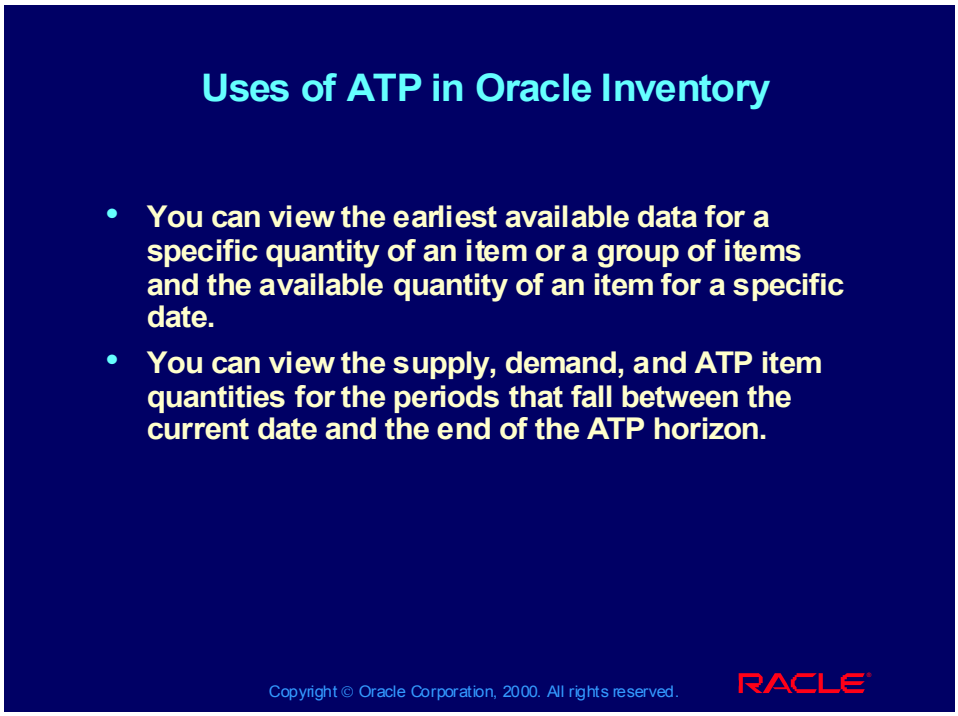

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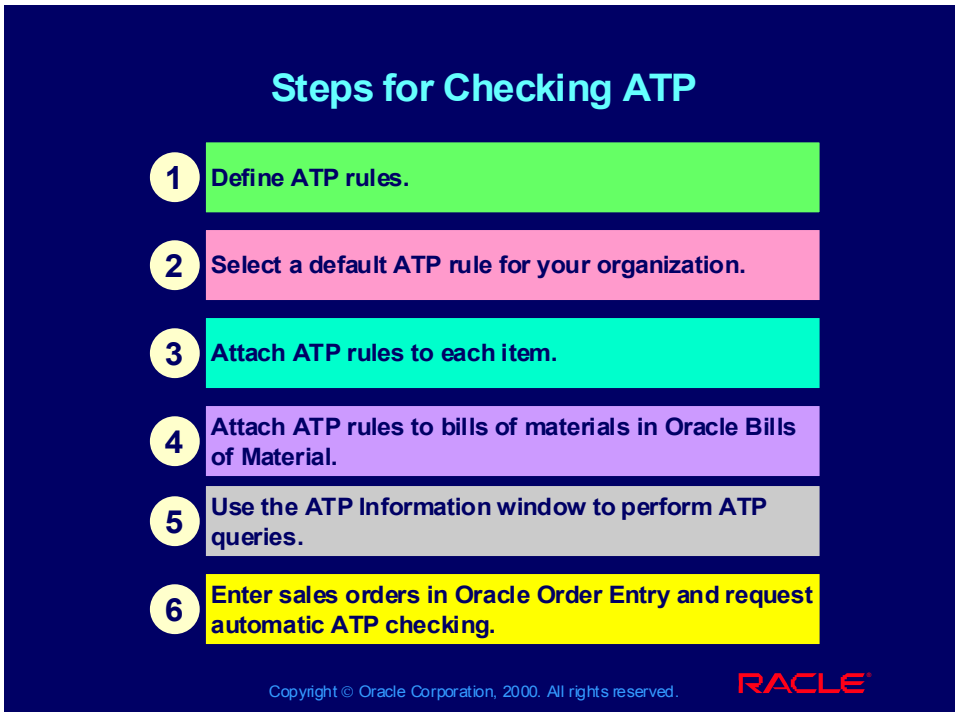
Steps for Checking ATP



Checking ATP

Note: Oracle Inventory displays the organization-level default ATP rule whenever you perform ATP queries in your organization.

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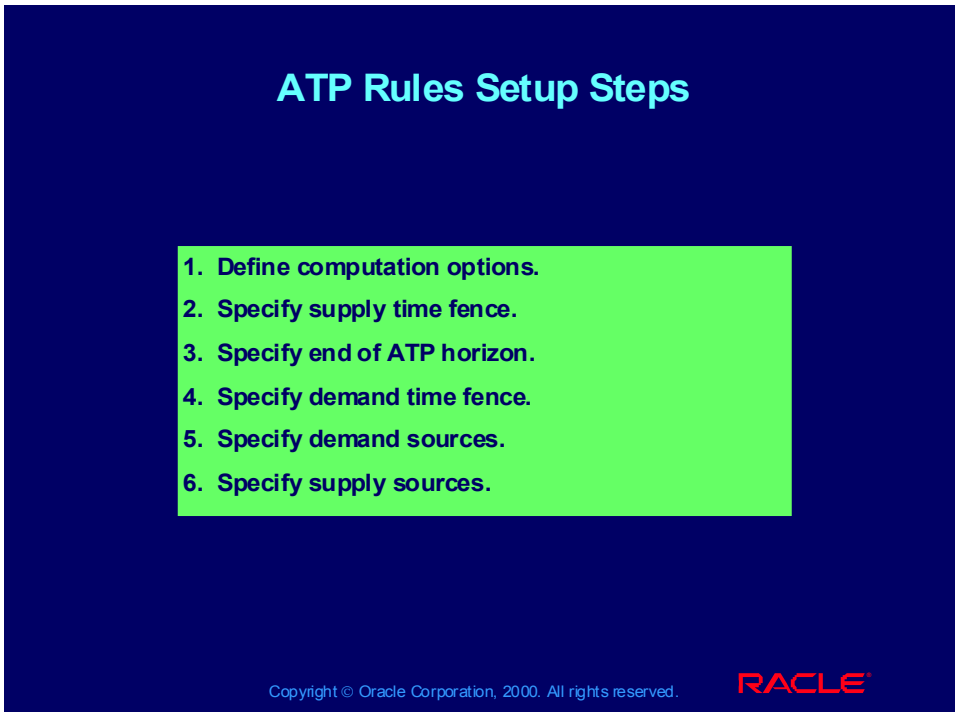
ATP Rules Setup Steps



Defining an ATP Rule

Use the following navigation path to access the ATP Rules window:

(N) Setup > Rules > Available to Promise

You can use the following equation to calculate the ATP quantity for each supply period.

Period ATP = (period supply) – (period demand)

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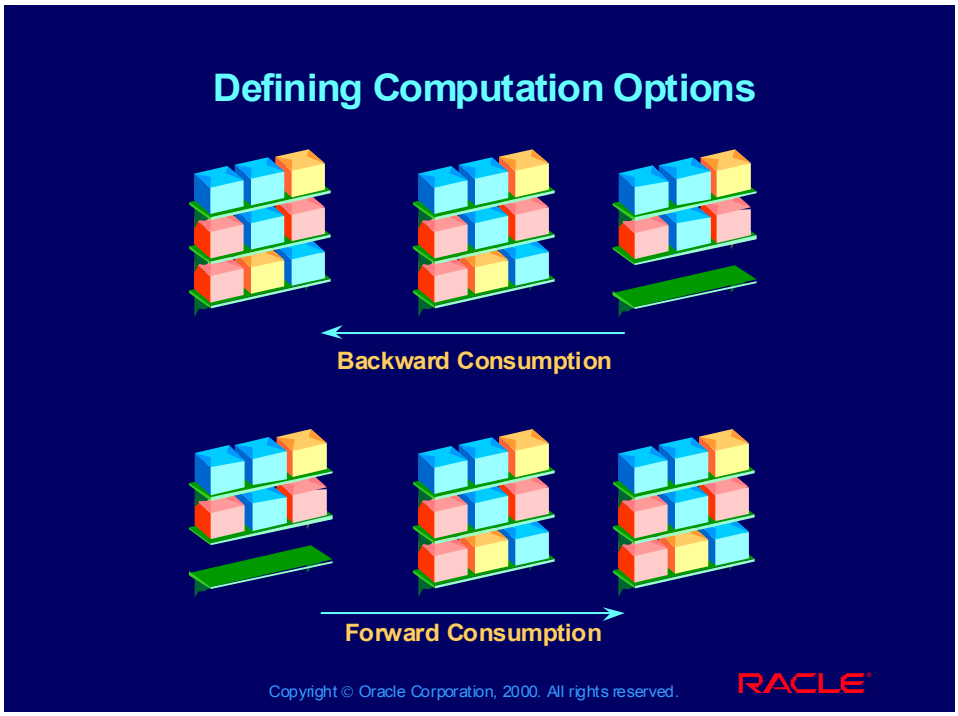

Describing ATP Consumption Options

When you define ATP rules, you must specify computation options. Computation options govern how to calculate the ATP quantity in each period. You can use computation options individually or in combination.

Forward Consumption of Shortage

You can calculate ATP information by using a surplus quantity of an item from future ATP periods to cover an earlier period shortage. If the period ATP is negative, then you can go forward through the supply periods, one at a time, and subtract the shortage from the available quantity. You can keep going forward until the shortage disappears or you run out of periods.

Backward Consumption of Shortage

You can calculate ATP information by using the surplus quantity of an item from prior ATP periods to cover a period shortage. If the period ATP is negative, you can go backward through the supply periods, one at a time, and subtract the shortage from the available quantity. You can keep going backward until the shortage disappears or you run out of periods.

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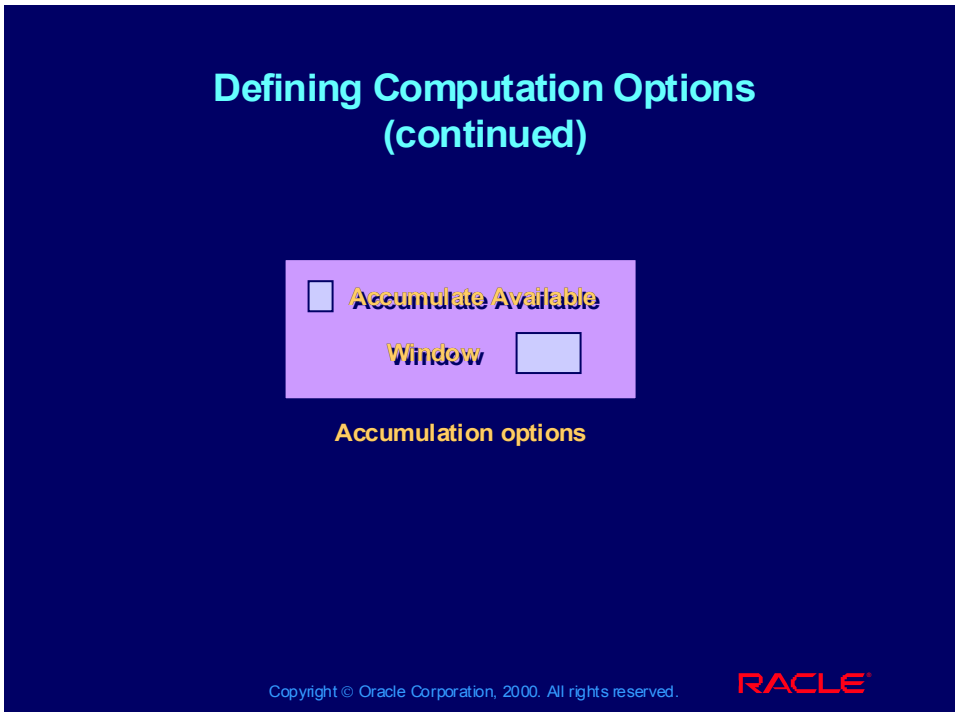

Determining ATP using Accumulation Options

You can use the Accumulate Available option to calculate ATP by carrying over the available quantity of an item from one ATP period to the next. **Note:** This option assumes backward consumption of shortage.

Entering an Accumulation Window

You can also enter the number of workdays by which to limit the accumulation of available supply. The Accumulation Window is measured in workdays based on the organization calendar and exception set.

The Accumulation Window option prevents the commitment of near-term supply to orders that have requirement dates far into the future. The Accumulation Window applies to only the following two computation options:

- Accumulate Available
- Backward Consumption

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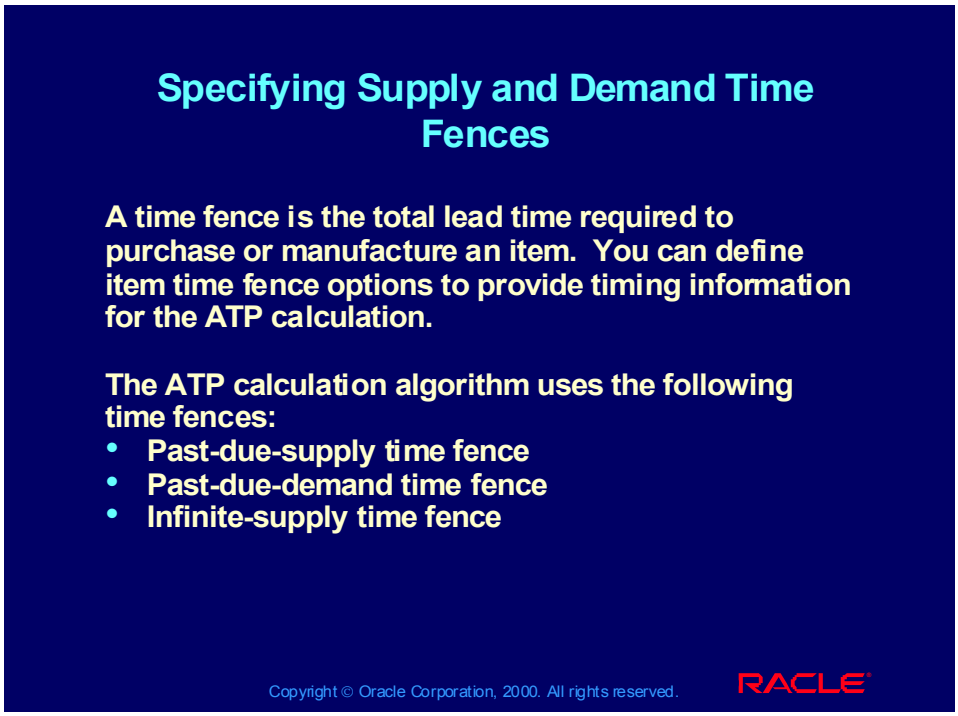

Entering Past Due Supply and Demand Days

Past-Due-Supply Days

The ATP process does not consider any supply scheduled before the past-due-supply time fence date. The ATP process considers all supply from the beginning of the past-due-supply time fence date to the current date as supply for the current date.

Past-due-supply time fence date = (current date) – (past-due-supply days)

Past-Due-Demand Days

The ATP process does not consider any demand scheduled before the past-due-demand time fence date. The ATP process considers all demand from the beginning of the past-due-demand time fence date to the current date as demand for the current date.

Past-due-demand time fence = (current date) – (past-due-demand days)

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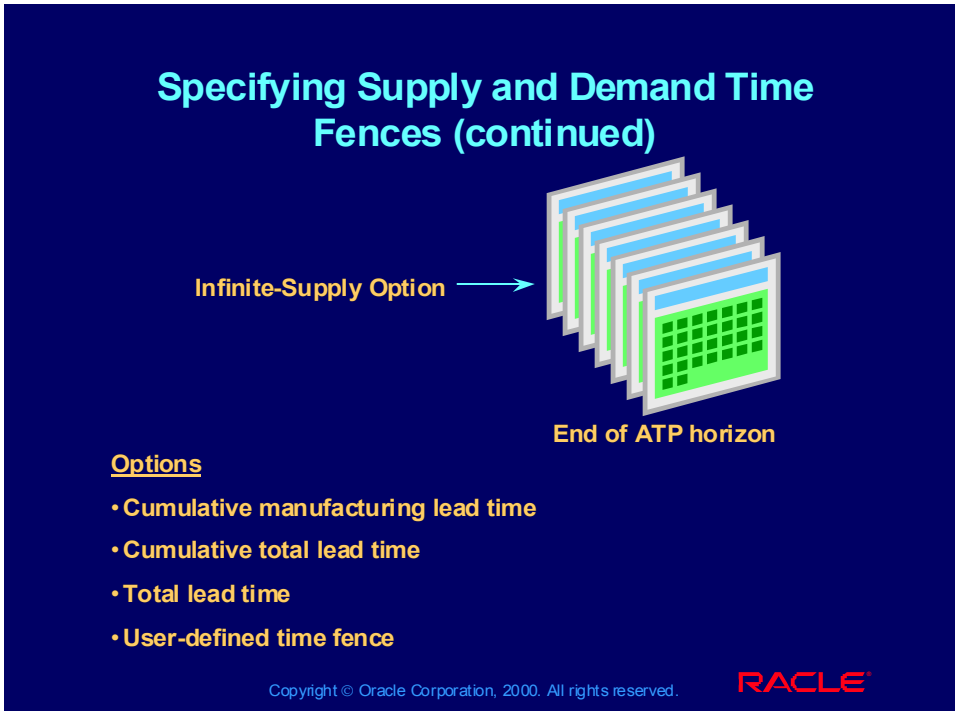

Selecting an Infinite-Supply Option

The infinite-supply time fence date is the end of the ATP horizon. Oracle Inventory does not consider supply sources scheduled on or after this date in ATP calculations. The infinite-supply option represents the total time beyond which the ATP process assumes that infinite supply is available to cover any scheduled demand.

You can select one of the following infinite-supply options:

- Cumulative manufacturing lead time: The manufacturing lead time of an assembly plus the largest adjusted cumulative manufacturing lead time of its components
- Cumulative total lead time: The total lead time of an assembly plus the largest adjusted cumulative total lead time of its components
- Total lead time: The sum of the preprocessing, processing, and postprocessing lead times of an item
- User-define time fence: A lead time that you specify for the item

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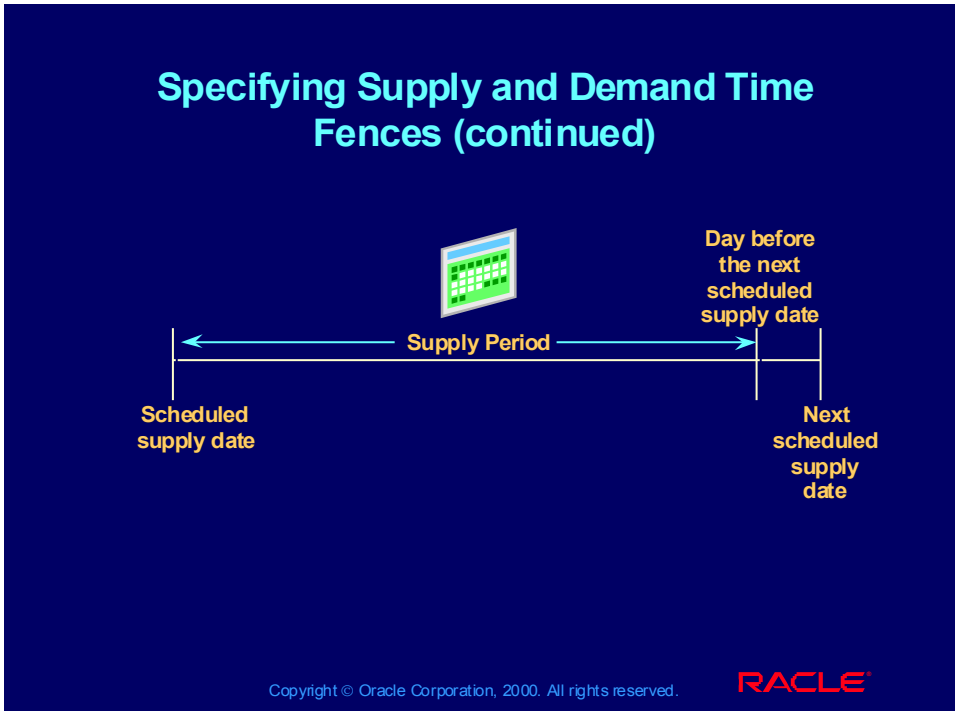

Specifying a Supply Period

Oracle Inventory designates a period as beginning on a scheduled supply date and ending on the day before the next scheduled supply date. A supply period can cover several days or be a minimum of one day.

If supply occurs on a nonworkday, the ATP calculation considers that supply as belonging to the next workday. If multiple supply events occur on the same day, the ATP process considers the total supply.

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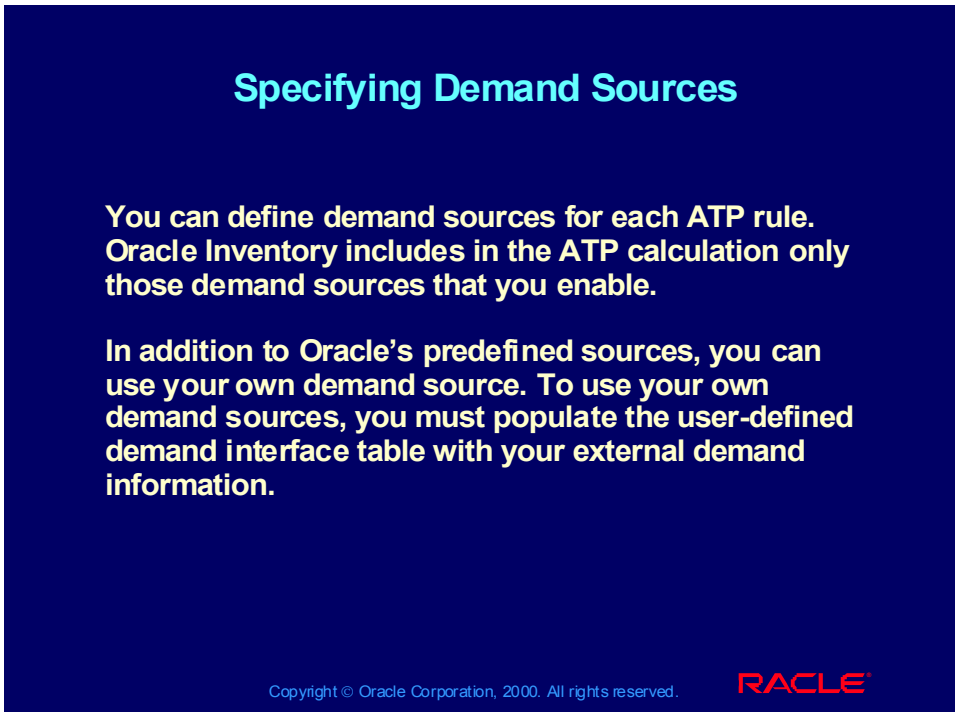

Describing ATP Demand

ATP demand is the sum of all demand quantities in the supply period. If demand occurs on a nonworkday, the ATP calculation considers that demand as belonging to the previous workday.

ATP by Demand Class Checkbox

If you select the ATP by Demand Class check box, the ATP calculation considers only supply and demand for a particular demand class. The demand class feature enables you to forecast, plan, and promise based on subdivisions of your demand. For example, a demand class might represent a large customer or a group of related customers.

If you select ATP by Demand Class, Oracle Inventory considers only the following sources of supply:

- Discrete MPS
- Repetitive MPS
- Discrete WIP
- Repetitive WIP
- Nonstandard WIP

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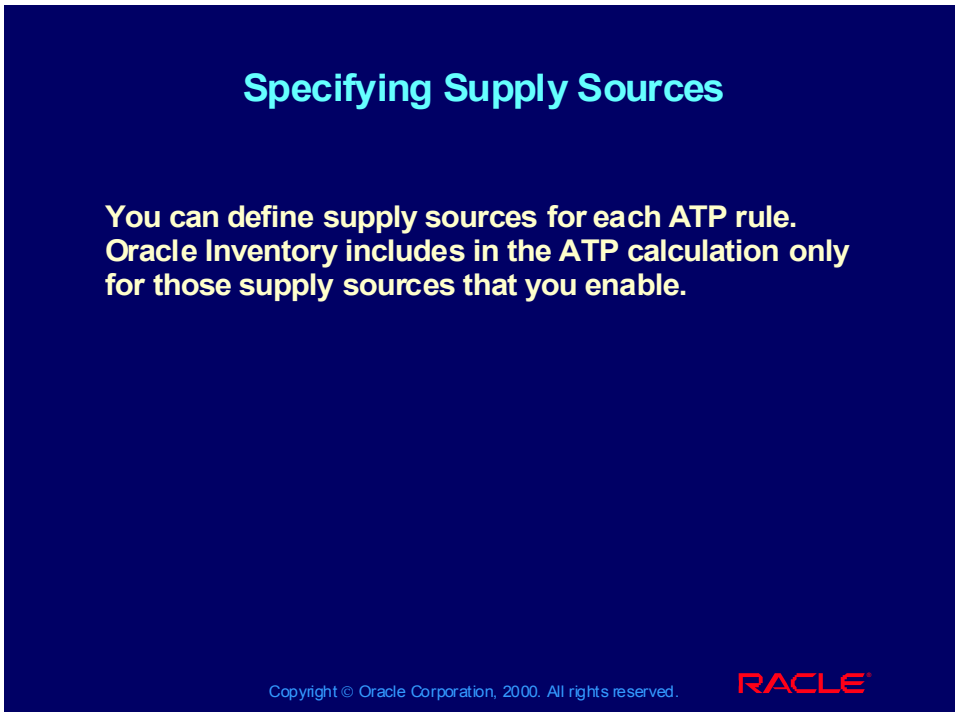

Using the Available On-Hand Quantity as the Supply Source

You can decide whether to include available on-hand quantity as a source of supply. However, you should not typically use available on-hand quantity as supply in make-to-order and assemble-to-order environments.

Including User-Defined Supply as a Supply Source

In addition to Oracle's predefined supply sources, you can use your own supply source. However, you must populate the user-defined supply interface table with your external supply information.

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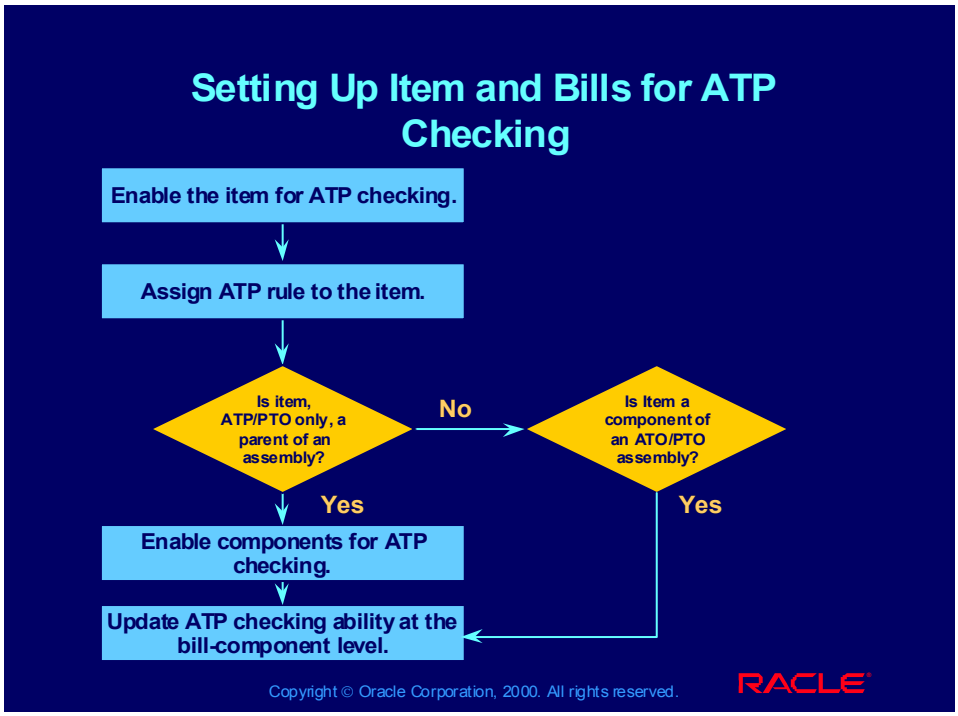
Setting Up Item and Bills for ATP Checking



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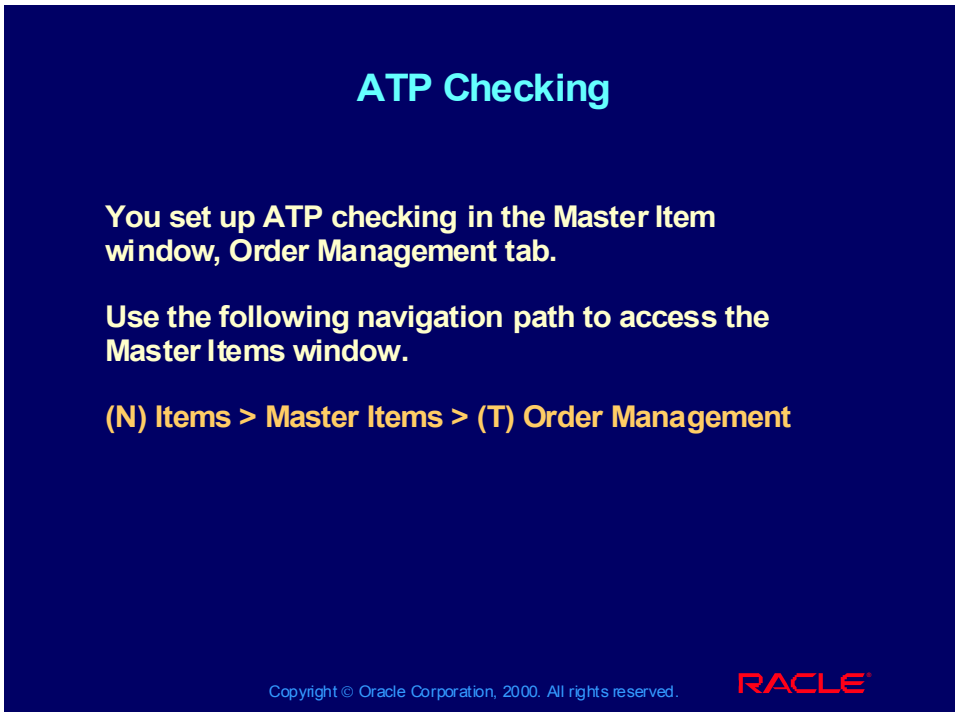

Enabling ATP Checking When Placing a Demand

If you enable the Check ATP attribute, the item must pass an ATP test before you can place a demand for it in Oracle Order Management. When you place a demand for the item in Oracle Order Management, the ATP process checks to see if there is sufficient quantity.

If you decide not to enable the Check ATP attribute, then you can place a demand for the item even if there is not sufficient stock to satisfy the demand. You should not enable the Check ATP attribute for items that are noncritical, rarely out of stock, on a short manufacturing cycle, or replenishable on short notice.

Specifying an Item ATP Rule

Oracle Inventory uses the ATP rule that you assigned to check ATP when you place a demand for the item in Oracle Order Management. If you do not specify an ATP rule for the item, the ATP process uses the organization-level default ATP rule that you enter in the Organization Parameters window.

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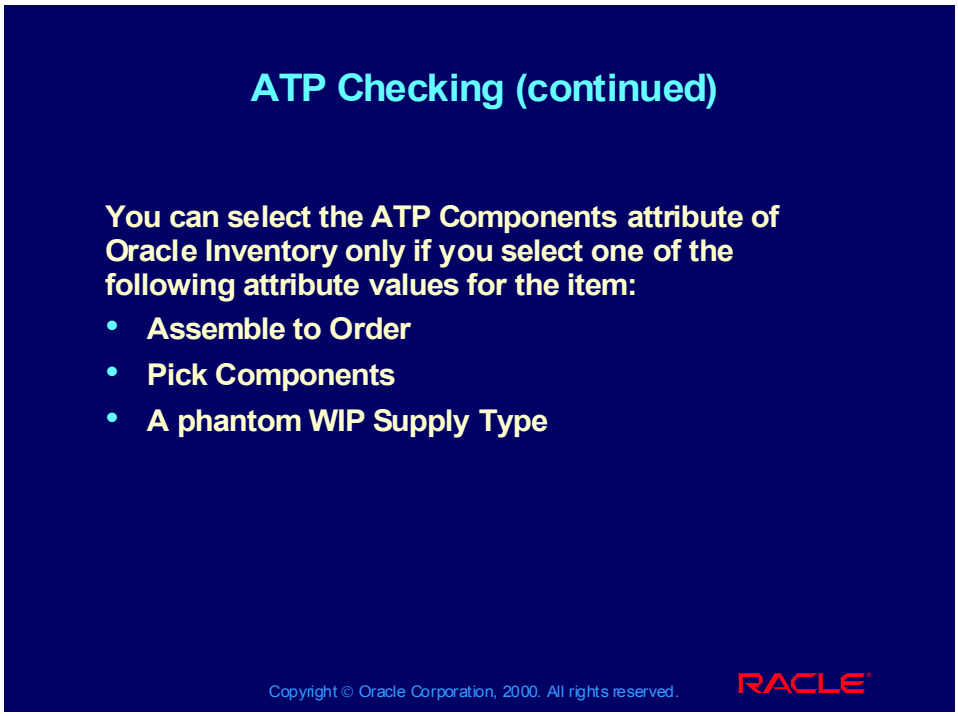

Selecting the ATP Components Attribute

If you enable the ATP Components attribute for an assembly, you can place a demand for the assembly only if all of the components with the enabled Check ATP attribute at the bill-component level pass the ATP check. If you enable the Check ATP attribute for the assembly, then the assembly must also pass the ATP check before you can place a demand for it.

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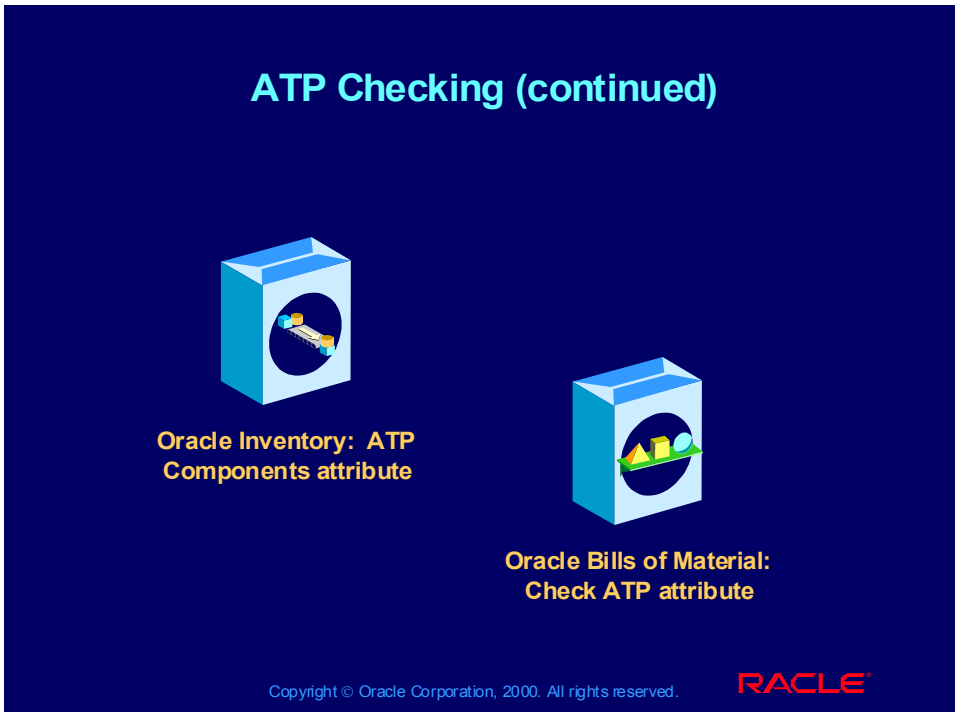

Setting the Check ATP attribute at the Bill Level

Use the following navigation path to access the Bill of Material window:

Navigate to the Oracle Bills of Material application, (N) Bills > Bills.

If an item is a component in a bill of material, you can change the value of the Check ATP attribute, at the bill-component level, to something other than what you set at the master-item level.

If you enabled the Check ATP attribute when you defined the item, you can decide whether to enable or disable the component Check ATP attribute.

If you decide not to enable the Check ATP attribute when you defined the item, Oracle Inventory does not enable the bill component Check ATP attribute.

This enables you to set up items that require passing ATP checks when ordered directly, but that do not require passing ATP checks when they are components of an assembly.

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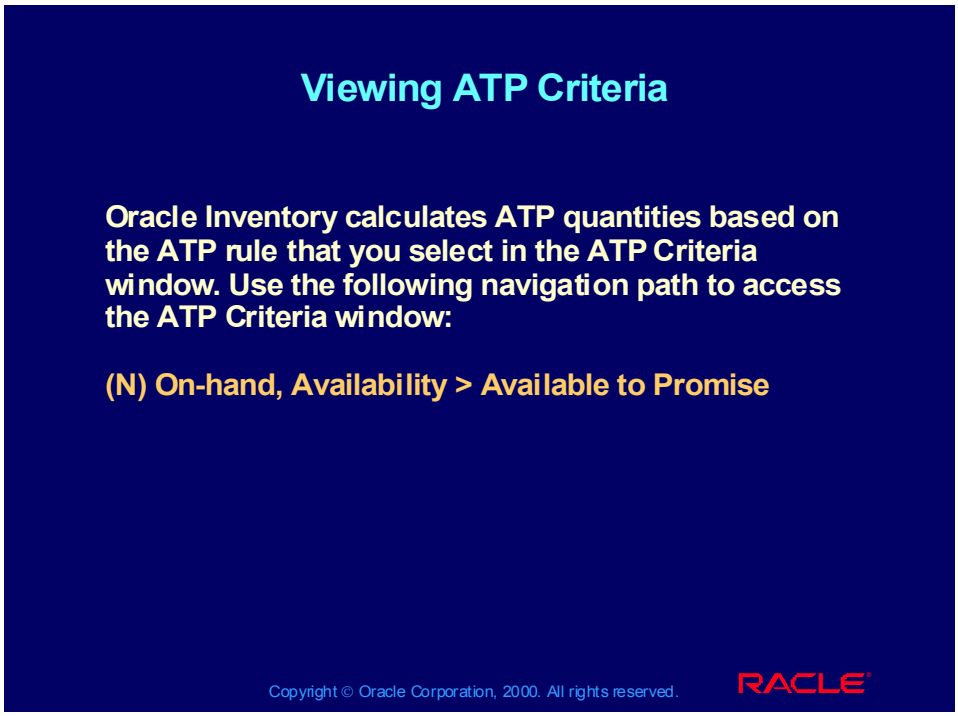

Viewing ATP Information for Individual Items

When you set up ATP criteria, you must specify the following information:

- Required quantity
- Required date

Oracle Inventory then displays the following ATP results:

- Earliest date on which the required quantity will be available
- ATP quantity for the required date

Viewing ATP Information for a Group of Items

Oracle Inventory returns the date when all for the items in the group will be available. You can view the ATP result and supply and demand detail for each item by navigating to the ATP by Period and Supply/Demand Detail windows, respectively.

Viewing ATP Information for a Demand Class

You can view ATP information for individual items and groups of items that belong to a particular demand class.

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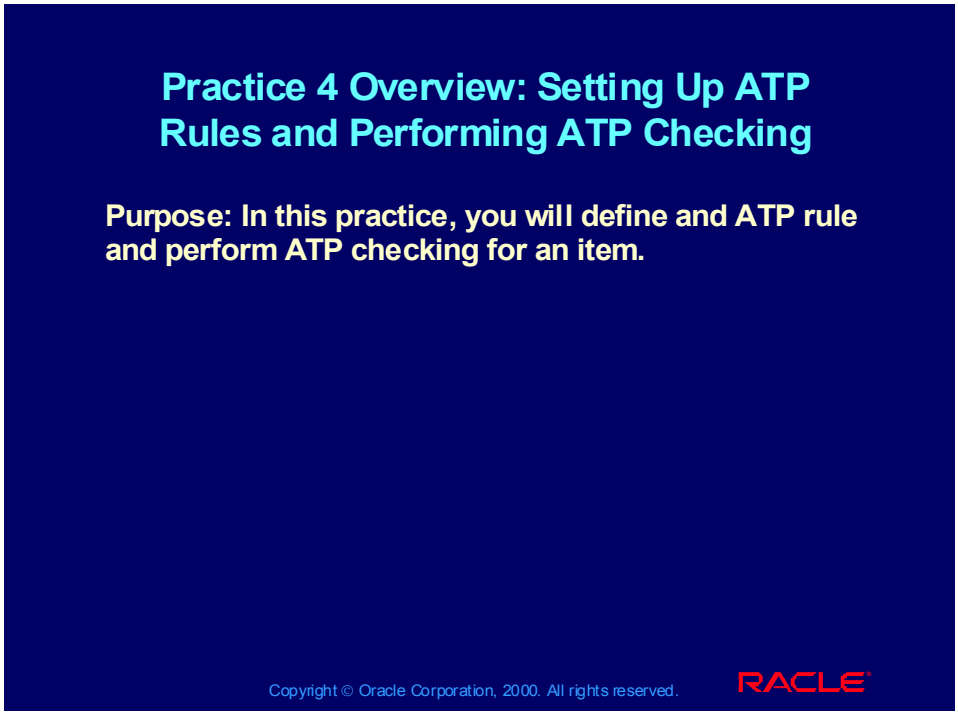
Practice 4 Overview: Setting Up ATP Rules and Performing ATP Checking



Practice 4: Setting Up ATP Rules and Performing ATP Checking Instructions

Note: Wherever you see XX, substitute your student number.

1. Define an ATP rule.

   (N) Setup > Rules > Available to Promise

   - Name XX-ATP Rule
   - Description Your ATP rule
   - Accumulate Available Leave blank (no)
   - Past due demand days 50
   - Past due supply days 50
   - Infinite supply option User defined time fence
   - Infinite supply days 15
   - ATP by demand class No
   - Leave all other options as is
   - Save your work. (M) File > Save

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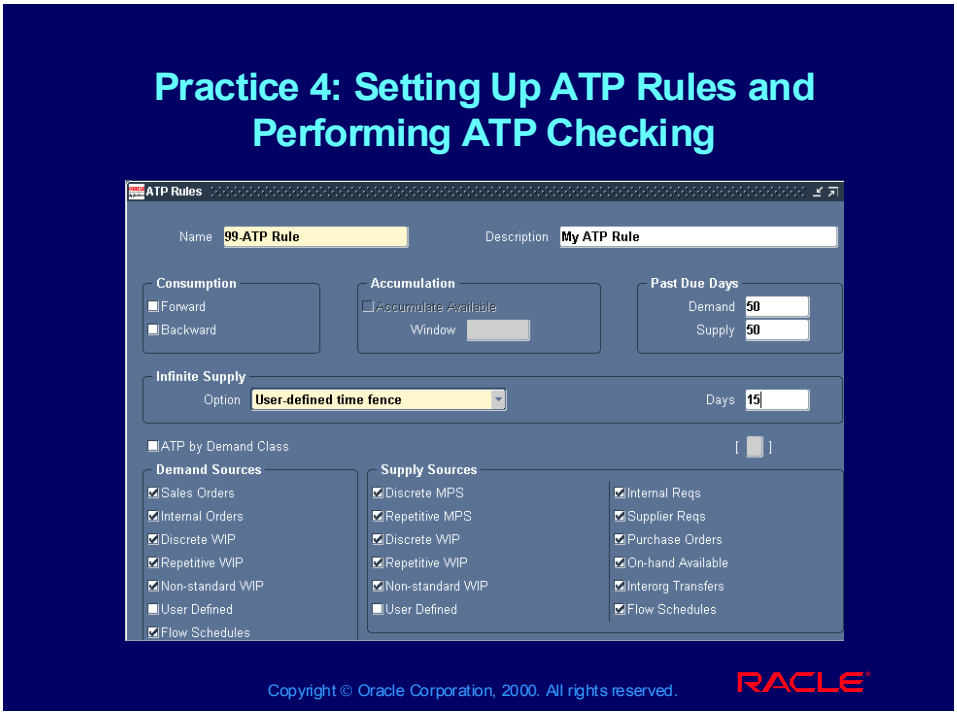
Practice 4: Setting Up ATP Rules and Performing ATP Checking



Practice 4: Setting Up ATP Rules and Performing ATP Checking

2. Apply your ATP rule to one of your items that has existing stock.

   (N) Items > Master Items

   - Enter your stocked item in the Find window and then click the Find button.
   - In the ATP Rule field, select your ATP rule from the list of values.

3. Check the ATP using your rule.

   (N) On-Hand Availability > Available to Promise

   - Default ATP rule — Your ATP rule
   - Click the ATP Criteria button
     - Double click the item field — Select your item from Step 2
     - Quantity — 1000
     - Required Day — 1 week from today
   - Click the ATP Results button to view your results

4. Can you promise 1000 of these items on the date that you entered?____
5. How many can you promise on that date?_____
6. When can you promise the rest?_____

Page down to review ATP information by period and by supply and demand.

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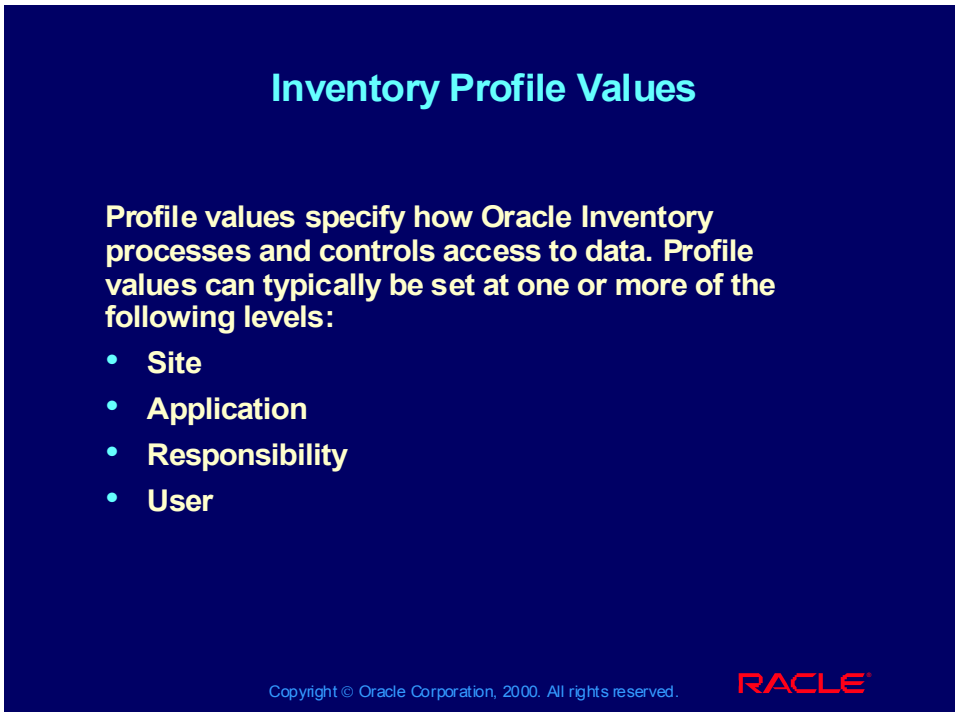

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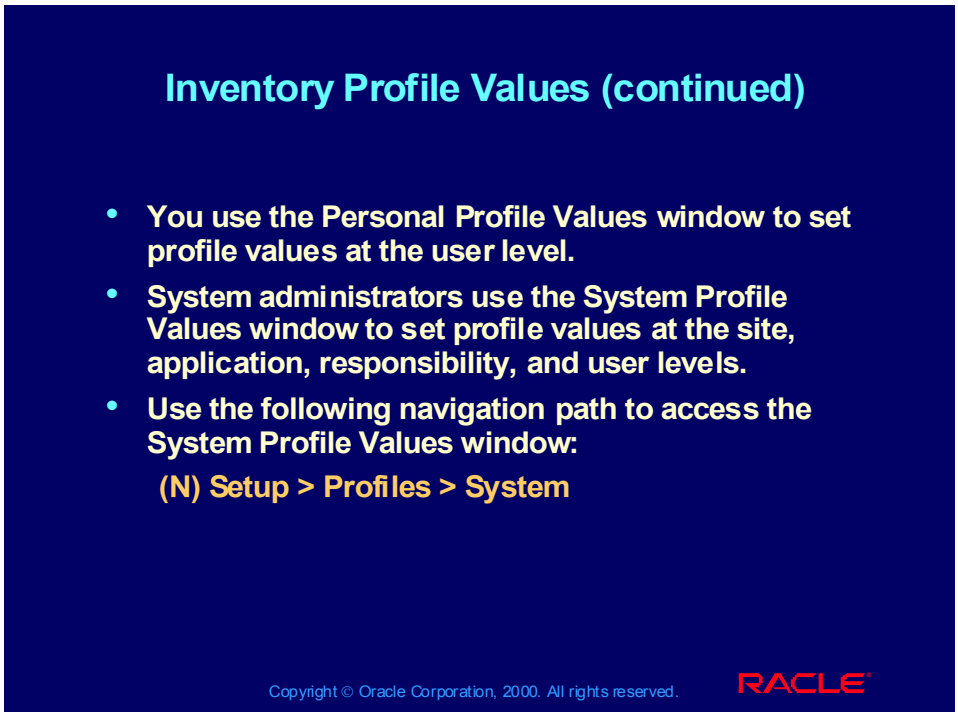

Setting Up System Profile Values

Use the Find feature in the System Profile Value window to locate the following system profile values that you should set up for Oracle Inventory planning:

- Min-max Reorder Approval
- RC Line Failure
- RC Requisition Approval
- Enter Replenishment Count form

Setting Up Personal Profile Values

Use the following navigation path to access the personal profile values that you should set up for Oracle Inventory planning:

(N) Setup > Profiles > Personal

- Min-max Reorder Approval
- RC Line Feature
- RC Requisition Approval
- Enter Replenishment Count form

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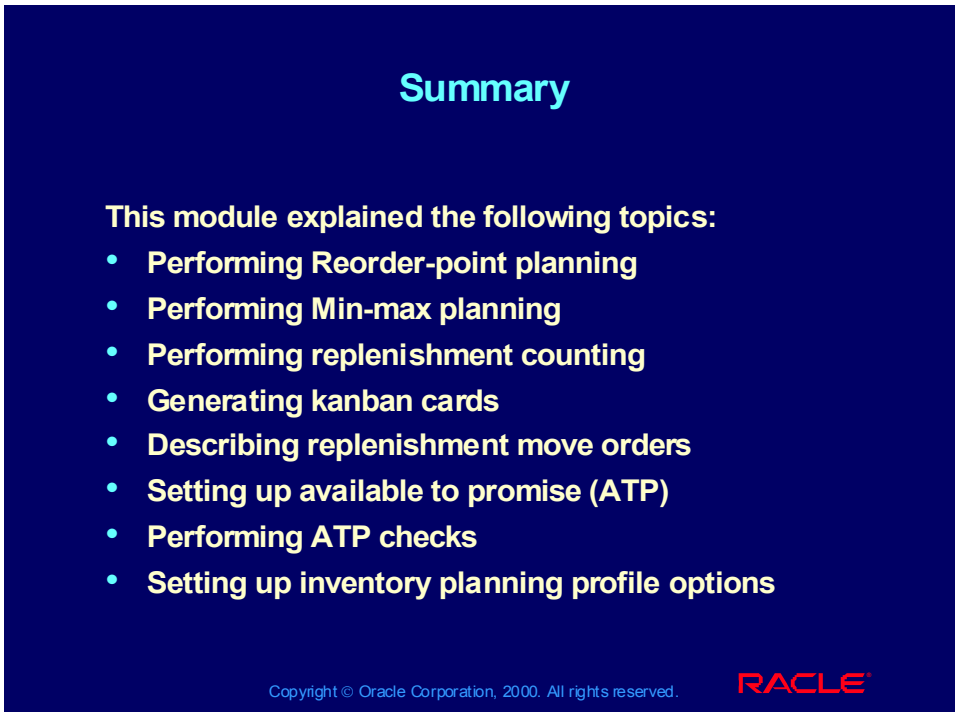

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