MODULE 14: APPENDIX

Module Overview

This training material simulates the development activities that are included in the scope of a fictional Microsoft Dynamics NAV® 2013 implementation project for CRONUS International Ltd.

Each module addresses a specific set of Microsoft Dynamics NAV 2013 functions and concepts, and you then apply those concepts to the solution for CRONUS.

This Appendix provides the case study for the implementation project at CRONUS, and it helps you test the solution that you develop.

Objectives

- Present the case study for the CRONUS International Ltd. implementation project.
- Provide test scripts for the function testing of all customized functionality.

CRONUS International Ltd.

You are a certified Microsoft Dynamics NAV 2013 developer, and you work for a Microsoft Certified Dynamics Partner. The project is for the CRONUS International Ltd., software training center. Because of significant growth, CRONUS requires a new computer-based system so that it can store and integrate all its seminar, instructor, customer, and financial information in one solution.

The client currently uses a full suite of Microsoft Dynamics NAV granules under the parent company CRONUS International Ltd. For CRONUS to take advantage of its investment, and the existing functionality and flexibility of Microsoft Dynamics NAV, it decided to add a customized Seminar Management module to its current solution.

With this new module, CRONUS must be able to do the following:

- Track its master data.
- Register participants in its seminars.
- Create invoices for customers.
- Have an overview of its statistics.

The preliminary analysis of the processes is complete and the functional requirements document is prepared.

Seminars

CRONUS holds several seminars. Each seminar has a fixed duration, and a minimum and maximum number of participants. In some cases, seminars can be overbooked, depending on the capacity of the assigned room. If there are not a sufficient number of participants, each seminar can be canceled. The price of each seminar is fixed. However, the solution must also be able to assign additional expenses to an instance of a seminar, such as catering expenses or equipment rentals.

Also, additional comments for each seminar can be entered for required equipment or other particular requirements.

Each seminar is held in a seminar room. Some seminars are held in-house and some are held off-site. If a seminar is held in-house, a room must be assigned. For off-site rooms, the rental rate must also be tracked.

Instructors

Each seminar is taught by an instructor, who is a CRONUS employee or a subcontractor. It is important to keep track of instructor availability and capacity, to avoid any scheduling conflicts.

Participants

Seminar participants must be associated with customers. The application must also maintain additional participant information, such as contact information, and the history of previously attended seminars.

Registration

A customer can register one or more participants for a seminar. The registration information must include how the seminar is invoiced, for example, whether to include expenses or catering.

Invoicing

When each seminar is finished, the customers who have participants are automatically invoiced.

Reporting and Statistics

Reports and statistics for seminar registrations must be available. These include the following:

- List of the participants registered for a seminar
- Total costs for each seminar, distributed according to what can or cannot be charged to the customer
- Statistics for different time periods, for example—one month, last year, the current year and cumulatively.

Interfaces

The solution must be able to use email notification that can be sent to the participants in several situations, such as registration confirmation. The solution must also be able to use simple web services integration so that external systems, such as websites, can easily connect to Microsoft Dynamics NAV 2013 at CRONUS, and they can also access the scheduled seminar list, or submit seminar registrations electronically.

Other Requirements

To make the solution user-friendly for CRONUS, the solution must include the following:

- **Easy to learn** - The Seminar Management module must be easy to understand, and the terminology and symbols must be consistent with the rest of the program. This means that if the user knows how to use other areas of Microsoft Dynamics NAV 2013, he or she is also able to intuitively learn this solution.

- **Efficient** - Experienced users must be able to work with the program efficiently. This means that the mouse and the functions that are used most frequently can be accessed from the keyboard.
- **Clarity** - The user interface must be intuitive so that the least-experienced user can easily understand how the program functions.
- **Good error reporting** - The program must be built so that there are as few opportunities for error as possible. Error messages must explain the cause of the error and provide a suggestion about how the user can correct the error.
- **Design consistency** - Because the solution for the Seminar Management module can be sold as an add-on to other customers, it must follow the guidelines that are included in the Microsoft Dynamics NAV 2013 Developer and IT Pro Help.

Functional Requirements

Based on the analysis of the processes and the requirements at CRONUS, Simon, a business consultant at your company, has created the functional requirements document. It describes the requirements in a way that is easy to understand and verify.

The important functional and nonfunctional requirements for which you must design and develop a solution, in Microsoft Dynamics NAV 2013, are described in the following table.

ID	Requirement
NF-01	The solution must use the standard functionality of Microsoft Dynamics NAV 2013 wherever possible, and it must not duplicate functions already present in the application or cause redundant functionality.
NF-02	As long as there are no other requirements that contradict the proposed solution, any solution that proposes a standard functionality or the best practices of Microsoft Dynamics NAV 2013 is preferred.
NF-03	The solution must be consistent, user-friendly, and easy to learn and use. Any custom-built functionality must follow the standards, principles and best practices of Microsoft Dynamics NAV 2013, and must seamlessly integrate into the standard application.
NF-04	The solution must help users be productive so that they do not have to spend much time on searching and filtering.

ID	Requirement
FS-01	There are many seminars. Each seminar has a fixed duration, and a minimum and maximum number of participants. In some cases, seminars can be overbooked, depending on the capacity of the assigned room. If there are not a sufficient number of participants, each seminar can be canceled. The price of each seminar is fixed.
FS-02	Each seminar is held in a seminar room. Some seminars are held in-house and some are held off-site. If a seminar is held in-house, a room must be assigned. For off-site rooms, the rental rate must also be tracked. For all types of rooms, the solution must track the maximum number of participants the room can hold.
FS-03	Each seminar is taught by an instructor, who is either a CRONUS International Ltd. employee or a subcontractor. For subcontractors, the subcontracting rate must also be tracked.
FA-01	The solution must be aware of and provide the tools to manage and plan for the availability and the capacity of both rooms and instructors.
FP-01	Participants are persons who participate in seminars. For each participant, the solution must track the name, address and contact details including, at minimum a telephone number and an email address.
FP-02	If multiple participants from the same company attend the same seminar, then only one invoice must be sent to that company, The invoice must include all the names of the participants.
FI-01	If a participant pays for the seminar, then he or she will receive the invoice. However, if the company pays for the seminar, then the company will receive the invoice.
FI-02	The solution must automatically generate invoices for participation in a seminar, based on the transaction history and the information that is available on the completed seminars. Generating invoices does not have to start automatically. It is acceptable for a user to start the process manually.

ID	Requirement
FR-01	Users must be able to schedule seminars. Each seminar has a starting date, an allocated seminar room, the assigned instructor, the minimum and the maximum number of participants, and the price. The minimum number of participants and the price information are obtained from the seminar master record. The maximum number of participants is obtained as the lower number of maximum participants of the seminar and the maximum participants of the room.
FR-02	A seminar cannot be scheduled to be held in a room that cannot hold at least the minimum number of participants for the seminar.
FR-03	If the maximum room number exceeds the maximum number of participants that are scheduled for the seminar, then the user who is maintaining the registrations can determine whether to register more participants. This number can be the room's maximum capacity. However, the user must be warned if he or she is registering more participants than the maximum number of participants that can be registered for the seminar.
FR-04	Users must be able to assign additional expenses to a scheduled seminar, such as catering expenses or equipment rentals.
FR-05	Users must be able to register one or more participants for scheduled seminars. For each registered participant, the user must be able to specify if additional expenses must be invoiced for this registration. The default is Yes.
FR-06	For each scheduled seminar, users must be able to enter additional comments, for example, to note the necessary equipment, or other special requirements.
FH-01	When a seminar is completed, users must be able to move the seminar registration information into the transaction history, and disable any further modification of this information.

ID	Requirement
FH-02	Transaction history for the seminars must include the details for the participants, instructors, the rooms that are involved with the seminars, and the information about additional charges. This information will be the basis for seminar cost analytical and statistical reporting.
FH-03	Seminar registration information must integrate with the availability planning functionality for instructors and rooms, and it must provide the basis for automatically invoicing the customers.
FI-01	After a seminar is confirmed, seminar managers must be able to send an automatic email confirmation to all registered seminar participants. The solution must use the existing CRONUS's SMTP server to send any email messages.
FI-02	Seminar managers must be able to easily customize the template for the seminar confirmation notification email. Additionally, they must be able to enter free text, and placeholders for the recipient's name, the seminar name, and the seminar starting date.
FI-03	The solution must let external applications connect to it, and read and write data by using industry-standard protocols.

Content Structure

Each module in this training material introduces a major feature or concept in Microsoft Dynamics NAV 2013, that you can use after you complete this course.

The modules in this training material are structured as follows:

- **Prerequisite Knowledge** – This section is at the beginning of each module. It shows standard Microsoft Dynamics NAV 2013 concepts that are relevant to the development tasks and the activities that you will perform in the labs.
- **Solution Design** – This section analyzes the requirements and defines the high-level design points. Additionally, it will help you map the customer requirements to the standard Microsoft Dynamics NAV 2013 functionality. It also shows the best practices, and helps you consider the different design choices and select the optimal one.

- **Solution Development** – This section translates the design points into the summary of the development tasks and the activities that you perform in the labs. It also shows the user interface of the solution that you develop so that you can visualize what the solution should resemble when you develop it.
- **Labs**: The labs guide you step-by-step through the development tasks that are summarized in the Solution Development section.

Lab 14.1: Function Testing

Scenario

The labs in this training material focus mostly on the steps that are required to develop the solution and customize the standard Microsoft Dynamics NAV 2013 application. However, it is important for developers to make sure that the code and functionality that they create works, and complies with the requirements without having any issues. Developers do this by using the Function Testing process.

The labs in each module provide only the most important testing steps. However, you should always test the solution. One development task in the implementation project is to prepare the test scripts that developers, testers, or key users can follow to verify the functionality of the solution.

The test scripts presented here are just a suggestion, and are intended to help you test the solution as you develop it.

Exercise 1: Function Testing: Master Tables and Pages

Exercise Scenario

After you complete the labs that are in the Master Tables and Pages module, to prepare the necessary testing data subset, and to test the functionality of the master tables and pages, follow these steps.

Task 1: Creating No. Series

High Level Steps

1. Open the No. Series List page.
2. Create a number series for seminars.
3. Create a number series for seminar registrations.
4. Create a number series for posted seminar registrations.

Detailed Steps

1. Open the No. Series List page.
   a. Start Microsoft Dynamics NAV 2013 client for Windows.
   b. Click **Departments > Administration > Application Setup > General > No. Series**.
2. Create a number series for seminars.
   a. Click **New**.
   b. In the **Code** field, type “SEM”.
   c. In the **Description** field, type “Seminars”.
   d. Select the **Default Nos.** and **Manual Nos.** check boxes.

   e. Click **Navigate** > **Lines** to open the **No. Series Lines** page.
   f. In the **Starting No. field**, type “S0001”.
   g. Click **OK** to close the **No. Series Lines** page.

3. Create a number series for seminar registrations.
   a. Click **New**.
   b. In the **Code** field, type “SEM-R”.
   c. In the **Description** field, type “Seminar Registrations”.
   d. Select the **Default Nos.** and **Manual Nos.** check boxes.
   e. Click **Navigate** > **Lines** to open the **No. Series Lines** page.
   f. In the **Starting No. field**, type “3001”.
   g. Click **OK** to close the **No. Series Lines** page.

4. Create a number series for posted seminar registrations.
   a. Click **New**.
   b. In the **Code** field, type “SEM-R+”.
   c. In the **Description** field, type “Posted Seminar Registrations”.
   d. Select the **Default Nos.** and **Manual Nos.** check boxes.
   e. Click **Navigate** > **Lines** to open the **No. Series Lines** page.
   f. In the **Starting No.** field, type “301001”.
   g. Click **OK** to close the **No. Series Lines** page.
   h. Click **OK** to close the **No. Series** page.

Task 2: Testing Seminar Setup

High Level Steps

1. Run the **Seminar Setup** page and switch to the Edit mode.
2. Configure the number series for seminars, seminar registrations, and posted seminar registrations.

Detailed Steps

1. Run the **Seminar Setup** page and switch to the Edit mode.
   a. In Object Designer, select the **Seminar Setup** page.
   b. Click **Run**.
   c. In the **Seminar Setup** page, click **Edit**.

2. Configure the number series for seminars, seminar registrations, and posted seminar registrations.
   a. In the **Seminar Nos.** field, type “SEM”.
   b. In the **Seminar Registration Nos.** field, type “SEM-R”.
   c. In the **Posted Seminar Registration** Nos. field, type “SEM-R+”.

Task 3: Testing the Seminar List and the Seminar Card

High Level Steps

1. Run the **Seminar List** page.
2. Create a new Seminar.
3. Create another seminar.
4. Create one more seminar.
5. Enter a comment line about each seminar.

Detailed Steps

1. Run the **Seminar List** page.
   a. In Object Designer, select the **Seminar List** page.
   b. Click **Run**.

2. Create a new Seminar.
   a. Click **New**.

Note: *This must open the* ***New – Seminar Card*** *page. If the* ***New – Seminar Card*** *page does not open, then the* ***CardPageID*** *property is not defined correctly in the* ***Seminar List*** *page.*

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   b. Click the **Name** field.

Note: *After you leave the* ***No.*** *field, the application must assign the number automatically. This verifies that the number series functionality works as expected.*

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   c. Enter the following information in the card.

Field	Value
Name	80436 C/SIDE Introduction
Seminar Duration	5
Minimum Participants	4
Maximum Participants	12
Gen. Prod. Posting Group	MISC
Seminar Price	1500

Note: *After you enter these values, the Search Name, VAT Prod. Posting Group, and the Last Date Modified fields are automatically updated.*

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   d. Do not close the **Seminar Card** page.

3. Create another seminar.
    a. Click **New**.
    b. Click the **Name** field.
    c. Enter the following information in the card.

Field	Value
Name	80437 C/SIDE Solution Development
Seminar Duration	5
Minimum Participants	4
Maximum Participants	10
Gen. Prod. Posting Group	MISC
Seminar Price	2000

    d. Do not close the **Seminar Card** page.

4. Create one more seminar.
    a. Click **New**.
    b. Click the **Name** field.
    c. Enter the following information in the card.

Field	Value
Name	80450 Microsoft Dynamics Sure Step
Seminar Duration	3
Minimum Participants	6
Maximum Participants	12
Gen. Prod. Posting Group	MISC
Seminar Price	999

    d. Click **OK** to close the **Seminar Card** page.
    e. Do not close the **Seminar List** page.

5. Enter a comment line about each seminar.
    a. Select seminar 80436, and then click **Navigate** > **Comments**.
    b. In the **Comment Sheet** page, in the **Comment** field, type "Students must be familiar with programming".
    c. Click **OK** to close the **Comments Sheet** page.
    d. Select seminar 80437, and then click **Navigate** > **Comments**.
    e. In the **Comment Sheet** page, in the **Comment** field, type "Students must have completed 80436".
    f. Click **OK** to close the **Comments Sheet** page.
    g. Select seminar 80450, and then click **Navigate** > **Comments**.

h. In the **Comment Sheet** page, in the **Comment** field, type "Project management knowledge required".
i. Click **OK** to close the **Comments Sheet** page.
j. Close the **Seminar List** page.

Task 4: Testing the Resource Card

High Level Steps

1. Run the **Resource Card** page.
2. Create a resource.
3. Create another resource.
4. Set the **Quantity Per Day** to eight for the LINDA and TIMOTHY resources.

Detailed Steps

1. Run the **Resource Card** page.
   a. In Object Designer, select the **Resource Card** page.
   b. Click **Run**.

2. Create a resource.
   a. In the **Resource Card** page, click **New**.
   b. In the **New – Resource Card** page, enter the following information.

Field	Value
No.	VENICE
Name	Room "Venice"
Type	Machine
Quantity Per Day	8
Gen. Prod. Posting Group	SERVICES
Unit Price	60
Maximum Participants	15

   c. In the **Base Unit of Measure** field, show the drop-down list box, and then click the **New** link in the drop-down list box (do not click **New** in the ribbon).
   d. In the **Select – Resource Unit of Measure** page, in the **Code** field, type "HOUR".
   e. Click **OK** to accept the change and close the **Select – Resource Unit of Measure** page.

3. Create another resource.
    a. Create a new resource by following the same steps that you used for the VENICE room. Enter the same information in the card, except for the following fields.

Field	Value
No.	DUBROVNIK
Name	Room "Dubrovnik"
Type	Machine
Maximum Participants	10

    b. Press **CTRL+SHIFT+D**.
    c. In the **Edit Dimension Set Entries** page, enter the following dimension.

Field	Value
Dimension Code	BUSINESSGROUP
Dimension Value Code	INDUSTRIAL

    d. Close the Edit Dimension Set Entries and Resource Card pages.

4. Set the **Quantity Per Day** to eight for the LINDA and TIMOTHY resources.
    a. In Object Designer, run the **Resource List** page.
    b. Select the LINDA resource.
    c. Click **Edit**.
    d. In the **Quantity Per Day** field, type "8".
    e. Press CTRL+SHIFT+D.
    f. In the **Edit Dimension Set Entries** page, enter the following dimension.

Field	Value
Dimension Code	SALESPERSON
Dimension Value Code	LM

    g. Close the **Edit Dimension Set Entries** page.
    h. Click **OK** to close the **Resource Card** page.
    i. Repeat these steps for the TIMOTHY resource.

Exercise 2: Function Testing: Documents

Exercise Scenario

After you complete the labs in the Documents module, to test the functionality of the documents, follow these steps.

Task 1: Testing the Seminar Registration

High Level Steps

1. Run the **Seminar Registration List** page.
2. Create a new seminar registration.
3. Create one more seminar registration.

Detailed Steps

1. Run the **Seminar Registration List** page.
   a. In Object Designer, select the **Seminar Registration List** page.
   b. Click **Run** to open the **New** – **Seminar Registration** page.

2. Create a new seminar registration.
   a. Click **New**.
   b. Enter the following information in the **New – Seminar Registration** page.

Field	Value
Starting Date	01/07/13
Seminar No.	S0001

Note: *After you select the* ***Seminar No.****, the default values for the seminar are copied into the fields in the* ***Seminar Registration*** *page.*

   c. In the **Room Resource No.** type "DUBROVNIK". A confirmation dialog box that asks about the maximum number of participants is shown.
   d. Click **Yes** to confirm the number of participants. The **Maximum Participants** field is set to 10.
   e. In the **Instructor Resource No.** field type "LINDA".
   f. In the **Lines** subpage, enter the following information.

Bill-to Customer No.	Participant Contact No.
10000	CT100140
10000	CT100156
10000	CT200136
01445544	CT100218

Note: *Verify that the content of the* ***Customer Details*** *FactBox updates, depending on the value of the* ***Bill-to Customer No.*** *field.*

   g. Click **Navigate** > **Comments**.

h. In the **Edit – Seminar Comment Sheet** page, enter the following comment: “This is the first time this instructor teaches this seminar”.

i. Close the **Seminar Comment Sheet** page.

3. Create one more seminar registration.

a. Click **Home** > **New**.

b. Enter the following information.

Field	Value
Starting Date	01/07/13
Seminar No.	S0003
Instructor Resource No.	TIMOTHY
Room Resource No.	VENICE

c. In the **Lines** subpage, enter the following information.

Bill-to Customer No.	Participant Contact No.
01121212	CT100132
01454545	CT100152
34010100	CT100230

d. Click **Navigate > Charges**.

e. In the **Edit – Seminar Charges** page, enter the following information.

Field	Value
No.	MARK
Quantity	4

f. Close the **Edit – Seminar Charges**, the **Resource Registration**, and the **Resource List** pages.

Exercise 3: Function Testing: Posting

Exercise Scenario

To test the functionality that you developed in the Posting module, follow these steps.

Task 1: Testing the Source Code Setup Page

High Level Steps

1. Run the **Source Code Setup** page.

Detailed Steps

1. Run the **Source Code Setup** page.
    a. In Microsoft Dynamics NAV 2013 client for Windows, click **Departments > Administration > Application Setup > Financial Management > Trail Codes > Source Code Setup**.
    b. Expand the **Seminar Management** FastTab.
    c. In the **Seminar** field show the drop-down list box.
    d. Click **New**.
    e. In the **Select – Source Codes** page, enter the following information.

Field	Value
Code	SEM
Description	Seminar

    f. Click **OK** to accept the selection.
    g. Make sure that the **Seminar** field contains “SEM”.
    h. Close the **Source Code Setup** page.

Task 2: Testing the Seminar Posting Codeunits

High Level Steps

1. Run the **Seminar Registration List** page.
2. Try posting a seminar registration.
3. Correct the error and retry posting.
4. Edit and try posting another seminar registration.
5. Correct the error and retry posting the seminar registration.

Detailed Steps

1. Run the **Seminar Registration List** page.
    a. In Object Designer, select the **Seminar Registration List** page.
    b. In the **Seminar Registration List** page, select the seminar registration for the 80436 seminar.

2. Try posting a seminar registration.
   a. Press **F9** to start the posting process.
   b. In the confirmation dialog box, click **Yes**.
      - A run-time error occurs stating that the Status must be equal to “Closed”.
   c. Click **OK** to close the error message.

3. Correct the error and retry posting.
   a. Click **Edit**.
   b. In the **Seminar Registration** page, change the Status to Closed.
   c. Again, in the **Seminar Registration** page, click **F9** to start posting.
   d. In the confirmation dialog box, click **Yes**.
   e. In case there is an error message saying: “The combination of dimensions used in 3001, line no. 40000 is blocked. Dimension combinations BUSINESSGROUP - INDUSTRIAL and SALESCAMPAIGN - WINTER can't be used concurrently.” Follow these steps:
      i. Select the fourth line in the Lines and select **CTRL+SHIFT+D** to open the “Edit Dimensions Set Entries” window.
      ii. In the “Edit Dimensions Set Entries” window select the row containing “SALESCAMPAGN” and select Delete.
      iii. Answer **Yes** to “Delete Dimension Set Entry?”
      iv. Close the “Edit Dimension Set Entries” window.
      v. Again, in the **Seminar Registration** page, click **F9** to start posting.

   f. In case there’s an error message saying “The length of the string is 21, but it must be less than or equal to 20 characters. Value: CONTOSO\ADMINISTRATOR” follow these steps:
      i. In the Development Environment, in the Object Designer, select table **Posted Seminar Reg. Header** and click Design.
      ii. In the Table Designer, in the field **User ID** set **Length** to **50**.
      iii. Close and Save the Table Designer.
      iv. Repeat these steps for tables: **Seminar Ledger Entry** and **Seminar Register**.
      v. Again, in the **Seminar Registration** page, click **F9** to start posting.

g. A progress dialog box appears which shows the posting process. After posting is completed, the dialog box disappears.
h. After posting is completed, the **Seminar Registration** page closes automatically.
i. The **Seminar Registration** that you posted disappears from the **Seminar Registration List** page.

4. Edit and try posting another seminar registration.
   a. In the **Seminar Registration List** page, select the seminar registration for the 80450 seminar.
   b. Click **Edit**.
   c. In the **Seminar Registration** page, change the Status to Closed.
   d. Click **OK** to close the **Seminar Registration** page.
   e. In the **Seminar Registration List** page, click **F9** to start posting.
   f. In the confirmation dialog box, click **Yes**.
   g. A run time error occurs stating that the **Bill-to Customer No.** field must have a value in the Seminar Journal Line. This occurs because you are posting a seminar charge where the **Bill-to Customer No.** field is empty.
   h. Click **OK** to close the error message.

5. Correct the error and retry posting the seminar registration.
   a. In the **Seminar Registration List**, click **Navigate** > **Charges**.
   b. In the **Edit – Seminar Charges** page, in the **Bill-to Customer No.** field, type "01121212".
   c. Click **OK** to close the page.
   d. In the **Seminar Registration List** page, click **F9** to start posting.
   e. In the confirmation dialog box, click **Yes**.
   f. After posting is completed, the seminar registration disappears from the list.
   g. Close the **Seminar Registration List**.

Task 3: Testing the Posted Pages

High Level Steps

1. Test the **Posted Seminar Reg. List** page.
2. Test the **Seminar Registers** page.
3. Test the **Resource Ledger Entries** page.

Detailed Steps

1. Test the **Posted Seminar Reg. List** page.
    a. In Object Designer, select the **Posted Seminar Reg. List** page.
    b. Click **Run**.
    c. Verify that there are two posted seminar registrations in the list.
    d. Select the first posted registration. It must be for the 80436 seminar.
    e. Click **Navigate > Comments**.
    f. Verify that a comment line is present.
    g. Click **Navigate > Charges**.
    h. Verify that there are no lines.
    i. Double-click the second posted registration, for the 80450 seminar to open the **Posted Seminar Registration** page.
    j. Verify that there are three seminar registration lines.
    k. Click **Navigate > Charges**.
    l. Verify that there is one line for the MARK resource.
    m. Close the **View – Seminar Charges, Posted Seminar Registration,** and **Posted Seminar Reg. Lis**t pages.

2. Test the **Seminar Registers** page.
    a. In Object Designer, select the **Seminar Registers** page.
    b. Click **Run**.
    c. Verify that there are two lines, and that they have today's date, your User ID, and the source code SEM.
    d. Verify that **From Entry No.** and **To Entry No.** are 1 through 6, and 7 through 12.
    e. Select the second line.
    f. Click **Seminar Ledger**.
    g. The **View – Seminar Ledger Entries** page opens. It shows six entries—three entries for participants, and one for the charge, instructor, and each room.
    h. Close the **Seminar Ledger Entries** page.

3. Test the **Resource Ledger Entries** page.
    a. In Object Designer, select the **Resource Registers** page.
    b. Click **Run**.
    c. In the **Resource Registers** page, scroll down to the last line.
    d. Verify that the last two lines have the source code SEM.
    e. Select the last line, and then click **Resource Ledger**.
    f. Verify that two lines are shown, one for TIMOTHY, and one for VENICE.

g. Verify that both lines have a value in the **Seminar No.** and **Seminar Registration No.** fields.

h. Close the **Resource Ledger Entries** and **Resource Registers** pages.

Exercise 4: Function Testing: Feature Integration

Exercise Scenario

To test how different features of the Seminar Management solution integrate together and with the standard Microsoft Dynamics NAV 2013 application, follow these steps.

Task 1: Testing the Seminar List and the Seminar Card

High Level Steps

1. Test how to create a new Seminar Registration from the **Seminar List**.
2. Test how to run the **Seminar Registration List** page for a specific seminar.
3. Test how to run the **Seminar Ledger Entries** page for a specific seminar.

Detailed Steps

1. Test how to create a new Seminar Registration from the **Seminar List**.
    a. In Object Designer, select the **Seminar List** page.
    b. Click **Run**.
    c. In the **Seminar List** page, select the 80437 seminar.
    d. Click **Actions > Seminar Registration**. The **New – Seminar Registration** page opens.
    e. Click the **Starting Date** field. The **Seminar No.** field is automatically set to the **No.** of the **Seminar** record for which you created a new registration. Also, all other default fields related to the **Seminar No.** field are populated automatically.
    f. Close the **Seminar Registration** page.
    g. In the **Seminar List** page, select the 80450 seminar.
    h. Click **Actions** > **Seminar Registration**.
    i. Click the **Starting Date** field.
    j. Close the **Seminar Registration** page.

2. Test how to run the **Seminar Registration List** page for a specific seminar.
    a. In the **Seminar List** page, select the 80437 seminar.
    b. Click **Navigate > Registrations**.
    c. Verify that only one Seminar Registration is shown.

   d. Do not close the **Seminar List** page.

3. Test how to run the **Seminar Ledger Entries** page for a specific seminar.
   a. In the **Seminar List** page, select the 80436 seminar.
   b. Press **CTRL+F7**.
   c. Verify that six Seminar Ledger Entry records are shown.
   d. Do not close the **Seminar Ledger Entry** page.

Task 2: Testing the Navigate Feature

High Level Steps

1. Navigate to all records that are created for a **Seminar Ledger Entry**.

Detailed Steps

1. Navigate to all records that are created for a **Seminar Ledger Entry**.
   a. In the **Seminar Ledger Entry** page, click **Navigate**.
   b. A dialog box appears and it shows the counting progress.
   c. After the progress dialog box closes, the **Navigate** page opens.
   d. Verify that three lines are shown— one for each **Res. Ledger Entry**, **Posted Seminar Reg. Header**, and **Seminar Ledger Entry** tables.
   e. Select the **Posted Seminar Reg. Header** line, and then click Show. The **Posted Seminar Registration** page opens.
   f. Click **Close**.
   g. Select the **Seminar Ledger Entry** line, and then click **Show**. The **Seminar Ledger Entries** page opens.
   h. Click **Close**.
   i. Close the **Seminar Ledger Entries**, and the **Seminar List** pages.

Exercise 5: Function Testing: Dimensions

Exercise Scenario

To test the dimensions functionality and to verify that the Seminar Management solution integrates with the standard dimension management features, follow these steps.

Task 1: Testing Default Dimensions

High Level Steps

1. Test how to assign default dimensions to multiple **Seminar** records.
2. Test how to assign default dimensions to a single **Seminar** record.

3. Test how to copy the default dimensions from the **Seminar** and the **Resource** records to the **Seminar Registration** records.
4. Test how to post with dimensions.

Detailed Steps

1. Test how to assign default dimensions to multiple **Seminar** records.
   a. In Object Designer, select the **Seminar List** page.
   b. Click **Run**.
   c. In the **Seminar List** page, select all seminars.
   d. Click **Navigate > Dimensions > Dimensions-Multiple**.
   e. In the **Default Dimensions-Multiple** page, click **New**.
   f. Enter the following default dimensions.

Dimension Code	Dimension Value Code
DEPARTMENT	SALES
BUSINESSGROUP	OFFICE

   g. Close the **Default Dimensions-Multiple** page.

2. Test how to assign default dimensions to a single **Seminar** record.
   a. Double-click the 80437 seminar.
   b. In the **Seminar Card** page, press **CTRL+SHIFT+D**.
   c. Delete the BUSINESSGROUP dimension.
   d. For the DEPARTMENT dimension, clear the **Dimension Value** field, and set **Value Posting** to the code Mandatory.
   e. Close the **Default Dimensions** and the **Seminar Card** pages.

3. Test how to copy the default dimensions from the **Seminar** and the **Resource** records to the **Seminar Registration** records.
   a. In the **Seminar List** page, select the 80436 seminar.
   b. Click **Actions > Seminar Registration**.
   c. In the **New – Seminar Registration** page, click the **Starting Date field**.
   d. Press **CTRL+SHIFT+D**.
   e. Verify that the **Edit Dimension Set Entries** page contains the BUSINESSGROUP and DEPARTMENT dimensions.
   f. Close the **Edit Dimension Set Entries** and the **New – Seminar Registration** pages.
   g. In the **Seminar List** page, select the 80437 seminar.
   h. Click **Actions > Seminar Registration**.
   i. Click the **Starting Date** field.
   j. Press **CTRL+SHIFT+D**.

k. Verify that the **Edit Dimension Set Entries** page is empty, and then close it.
l. In the **Instructor Resource No.** field, type "LINDA".
m. In the **Room Resource No.** field, type "DUBROVNIK".
n. Press **CTRL+SHIFT+D**.
o. Verify that the **Edit Dimension Set Entries** page contains the values for the BUSINESSGROUP and the SALESPERSON dimensions.
p. In the **Lines** subpage, in the **Bill-to Customer No.** field, type "10000", and in the **Participant Contact No.** field, type "CT100140".
q. Set the **Starting Date** to 01/21/13.
r. Set the Status to Closed.

4. Test how to post with dimensions.

a. Click **Post**.
b. In the confirmation dialog box, click **Yes**.
   - A run-time error occurs, stating that you must specify the **Dimension Value Code** for the DEPARTMENT dimension. This occurs because you specified that the DEPARTMENT dimension has the Mandatory code setting in the default dimensions configuration for the 80437 seminar.

c. Click **OK** to close the error message.
d. Press **CTRL+SHIFT+D.**
e. To the dimension set, add the DEPARTMENT dimension, with the value of SALES. Close the **Edit Dimension Set Entries** page.
f. A confirmation dialog box asks whether you want to update the dimensions for the lines.
g. Click **Yes** to continue.
h. In the **Lines** subpage, click **Line** > **Dimensions**.
i. Verify that there are AREA, BUSINESSGROUP, CUSTOMERGROUP, DEPARTMENT, and SALESPERSON dimensions. The AREA and CUSTOMERGROUP dimensions come from customer 10000.
j. Close the **Edit Dimension Set Entries** page.
k. Press **F9**.
l. Click **Yes** to continue.
m. Close all open pages.

Task 2: Testing Posted Dimensions

High Level Steps

1. Test posted document dimensions.
2. Test the seminar ledger entries dimensions.

Detailed Steps

1. Test posted document dimensions.
   a. In Object Designer, select the **Posted Seminar Reg. List** page.
   b. Click **Run**.
   c. Select the last posted seminar in the list.
   d. Press **CTRL+SHIFT+D**.
   e. Verify that the BUSINESSGROUP, DEPARTMENT, and the SALESPERSON dimensions are present. Close the **Dimension Set Entries** page.
   f. Click **View**.
   g. In the **Posted Seminar Registration** page, in the **Lines** subpage, click **Line** > **Dimensions**.
   h. Verify that the AREA, BUSINESSGROUP, CUSTOMERGROUP, DEPARTMENT, and the SALESPERSON dimensions are present.
   i. Close the **Dimension Set Entries** page.

2. Test the seminar ledger entries dimensions.
   a. Click **Navigate**.
   b. In the **Navigate** page, select the **Seminar Ledger Entry** line, and then click **Show**.
      - The **Seminar Ledger Entries** page opens, with three lines.
   c. Select the first line.
   d. Press **CTRL+SHIFT+D**, and verify that there are five dimension lines present.
   e. Close the **Dimension Set Entries** page.
   f. Select the second line.
   g. Press **CTRL+SHIFT+D**, and verify that there are three dimension lines present.
   h. Close the **Dimension Set Entries**, the **Seminar Ledger Entries**, and the **Navigate** pages.

Exercise 6: Function Testing: RoleTailoring

Exercise Scenario

After you develop the Role Center and the Department pages, to verify the functionality, follow these steps.

Task 1: Testing the Role Center

High Level Steps

1. Set page **123456740 Seminar Manager Role Center** as the default Role Center.
2. Test activities.
3. Test My Seminars.

Detailed Steps

1. Set page **123456740 Seminar Manager Role Center** as the default Role Center.
   a. Start Microsoft Dynamics NAV 2013 client for Windows, if it's not already open.
   b. In the menu select **Departments, Administration, Application Setup, RoleTailored Client, Profiles**.
   c. Click **New** to create a new profile.
   d. In the New – Profile Card type **SEMINAR MANAGER** in the **Profile ID** and type **1234567840** in the **Role Center ID**.
   e. Click **OK** to close.
   f. In the menu select **Departments, Administration, Application Setup, RoleTailored Client/User Personalization**.
   g. Select **CONTOSO\ADMINISTRATOR** in the list and then click **Edit**.
   h. Set the **Profile ID** to **SEMINAR MANAGER**.
   i. Click **OK** to close the page.
   j. Restart Microsoft Dynamics NAV 2013 client for Windows.

2. Test activities.
   a. In the **Seminar Manager Activities** part, click the **Planned** cue.
   b. Verify that the **Registrations, Planned** list place is shown.
   c. Click **Role Center**.
   d. In the **Seminar Manager Activities**, click **New**.
   e. Verify that the **New – Seminar Registration** page is shown, and then close it.

3. Test My Seminars.
    a. In the **My Seminars** list part, click **Manage List**.
    b. In the **Edit – My Seminars** page, select the 80436 seminar, and then click **OK**.
    c. Verify that in the **My Seminars** list part there is a line for the 80436 seminar.
    d. In the **My Seminars** list part, click **Open**.
    e. Verify that the **Edit – Seminar Card** page opens for the 80436 seminar.
    f. Close the **Edit – Seminar Card** page.

Task 2: Testing the Search Field

High Level Steps

1. Search for the **Seminar Registers** page.

Detailed Steps

1. Search for the **Seminar Registers** page.
    a. In the **Search** field, type "Seminar Registers".
    b. Click the **Seminar Registers** page.
    c. Verify that the **Seminar Registers** list place shows.

Module Review

Module Review and Takeaways

CRONUS International Ltd. is a fictional company that is in the process of implementing Microsoft Dynamics NAV 2013. This module presented a summary of the company's functional requirements.

When testing functionality, you frequently must enter test information to verify that customized behavior matches the customer's requirement. This module showed sample steps you can follow to test the application as you progress through the course.