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## QUESTION & ANSWER


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**Exam** : **MB-820**

**Title** : Microsoft Dynamics 365 Business Central Developer

**Version** : DEMO

1. Topic 1, Case Study Alpine Ski House

**Overview**
Alpine Ski House is a company that owns and operates hotels, restaurants, and stores.

Currently, the company uses the following software and interlace:
• Property management software (PMS) to manage hotel rooms
• On-premises accounting software to generate sales invoices and create purchase orders
• An API that allows restaurants and stores to obtain necessary information

Restaurants and stores use standalone software for point of sale (POS) devices. Each day, the POS terminals generate a text file of sales data and save the files in a serval folder. An account assistant must manually import the files to the current software tables to be processed by the system.
The general manager receives several reports monthly from department managers. The reports take too much time to prepare.
The company is moving from a different system to 8usiness Central online to manage the whole company.
The company plans to increase efficiency in every department by using APIs to obtain or share information between the different systems.
Each department involved in purchasing must be able to make purchase requests automatically and easily. The departments do not need access to the full ERP management system.
Alpine Ski House requires the development of several extensions for the planned improvements.
Business Central design patterns must be used to develop all extensions.

Alpine Ski House must develop the following pages:
• Pages that provide multiple configurations in a multistep dialog, like a wizard, to provide required information when the extensions are first installed
• Department-specific Role Center pages to show relevant information and pages with additional information
The IT department plans to use Power 61 to analyze departmental information. The database must be configured to provide optimal performance.

The housekeeping department requires the following to increase efficiency and help avoid data entry errors:
• A Housekeeping Role Center to minimize navigation to relevant areas In Business Central online and to show relevant information in it
• Pages to embed into a new Room page to show additional information about the Room entity
• A table named Room Incident for the housekeeping team to enter room issue information
• A Housekeeping canvas app that connects to an extension

The department requires the development of an extension with a new API page named RoomsAPI.
• The housekeeping team will use RoomsAPI to publish room details, update when work is complete, or provide repair notifications from the canvas app.
• This custom API page must expose a custom table named Rooms and have an ID 50000. The table

must be able to update from the PMS.
The PMS team must know the end to connect to the custom API.
• A developer provides the following details for the API page:
APIPublisher = 'alpine';
APIGroup - 'integration';
APIVersion - 'v2.6';
fntityName ■ 'room';
EntitySetName = 'rooms';
• The extension must be published in Business Central online and include a list page named Room List that includes all hotel rooms.
• Installation or updates to this extension must meet the following requirements: o Some web services must be published automatically.
o The version of the specified application's metadata must be obtained in AL language.
o The code required to perform tasks cannot be accessible from other parts of the application.

The Room Incident table information must include the following fields:
• Incident entry: An incremental number
• Room No.: A room from the Room table
• Incident Date: The work date
o The table definition in the Room Incident table must autofill the Incident Date when the housekeeping team inserts a new record.
o The value for Incident Date must be the work date configured in the Business Central online client.
• Status: Includes the following options lo identify the status of the incident:
o Open: When the Room Incident is created
o In Progress: When someone starts repair work
o Closed: When the incident is solved
• Incident Closing Date: Auto-updating field (when the status passes to Closed, the field will update with the work date)
• Incident Description: Text
• Image. Media data type
o The stored picture must be downloadable from a menu action.
o A Room Incident page must be developed to contain the download action.
To increase efficiency, the new system must manage the generated data from the restaurants and stores directly by using the API on the POS terminals.
• The company requires a code unit called from a job queue to read the information from the POS terminal APIs.
• The POS terminal information must be stored in a table named POS Information, have an ID 50100. and be editable on a page.
• The account manager requires an option on the menu of the page to run the process manually.

To analyze the information received from the POS terminals, the company requires:
• A custom API named ticketAPI to export the information to Power BI
• Use of the Read Scale-Out feature to improve database performance
The purchasing department requites a new entity in Business Central online to log non-conformities of

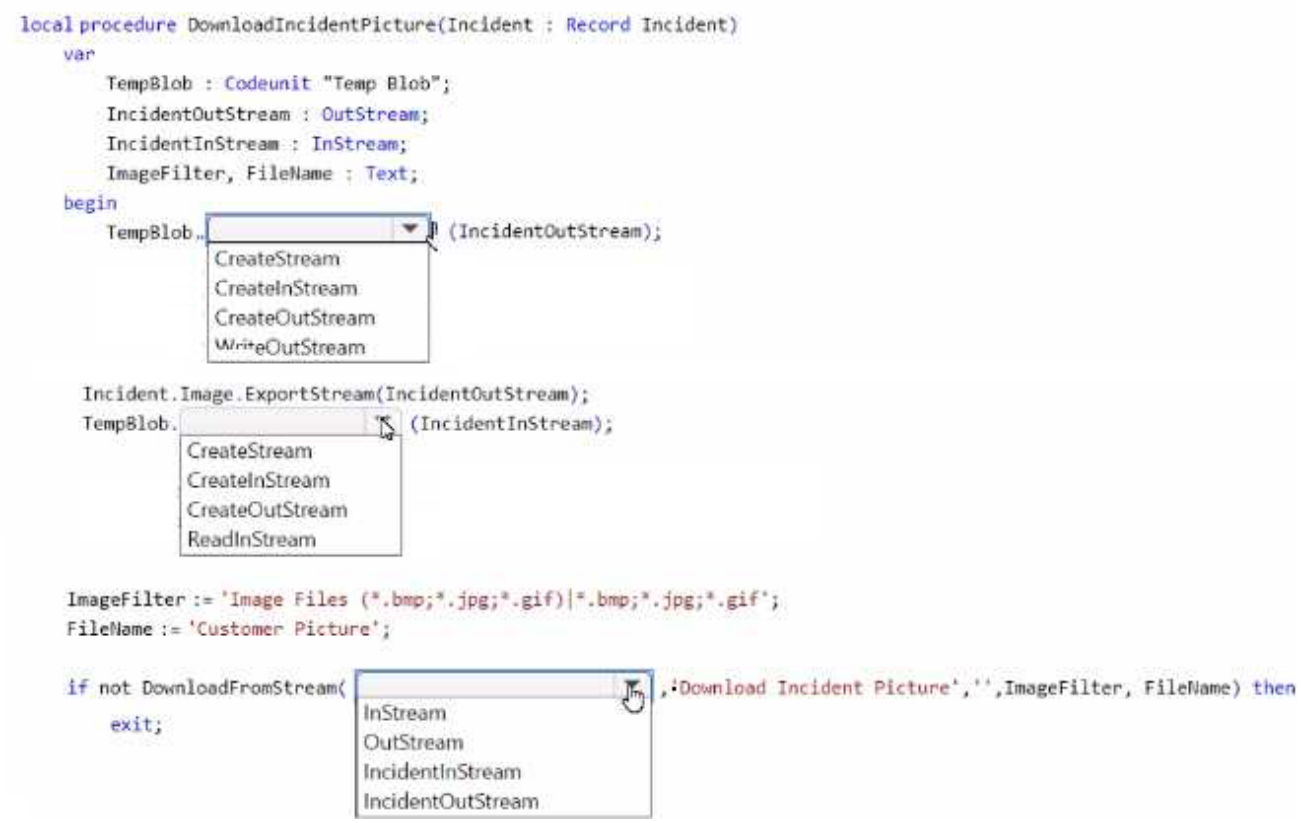
goods received from vendors.

The entity must be set up as follows:
• The non-conformity entity must have two tables:
o a header with common information
o one or more lines with the detailed received items that are non-conforming
• The entity requires a page named Non-conformity and a subpage named Non-Conformity Lines to store the information.
When a purchase order with incorrect quantity 01 quality issues is received, the entity must create a non-conformity document in the system.

The following information must be nick the document:
• Non-conformity Number: must use the No.
Series table from Business Central online to manage this field and use these features:
o Alphanumeric values
o Number format that includes "NO and the year as part of the number: for example, NC24-001
• Non-conformity Date: stores only the creation date
• Vendor No.: stores the number of the vendor that sent the items; only vendors from the company must be included
• Owner: code of an employee defined in the company
• Receipt No.: must meet the following conditions:
o Be an existing receipt No.
o Be received from the vendor indicated in the Vendor No. field
• Comments: can include comments with rich text and pictures to illustrate quality problems
• Status: includes nonconformity statuses, such as:
o Open
o Notified
o Closed
• Lines must contain the following details:
o Item No.: item received (for existing inventory items only)
o Description: item description
0 Quantity: non-conforming quantity
0 Non-conformity Type:
■ Quality
■ Quantity
■ Delivery date
The serial numbers of the non-conformities and the period in which they can be created must be in a configuration table and its corresponding page to allow them to be modified for the users.

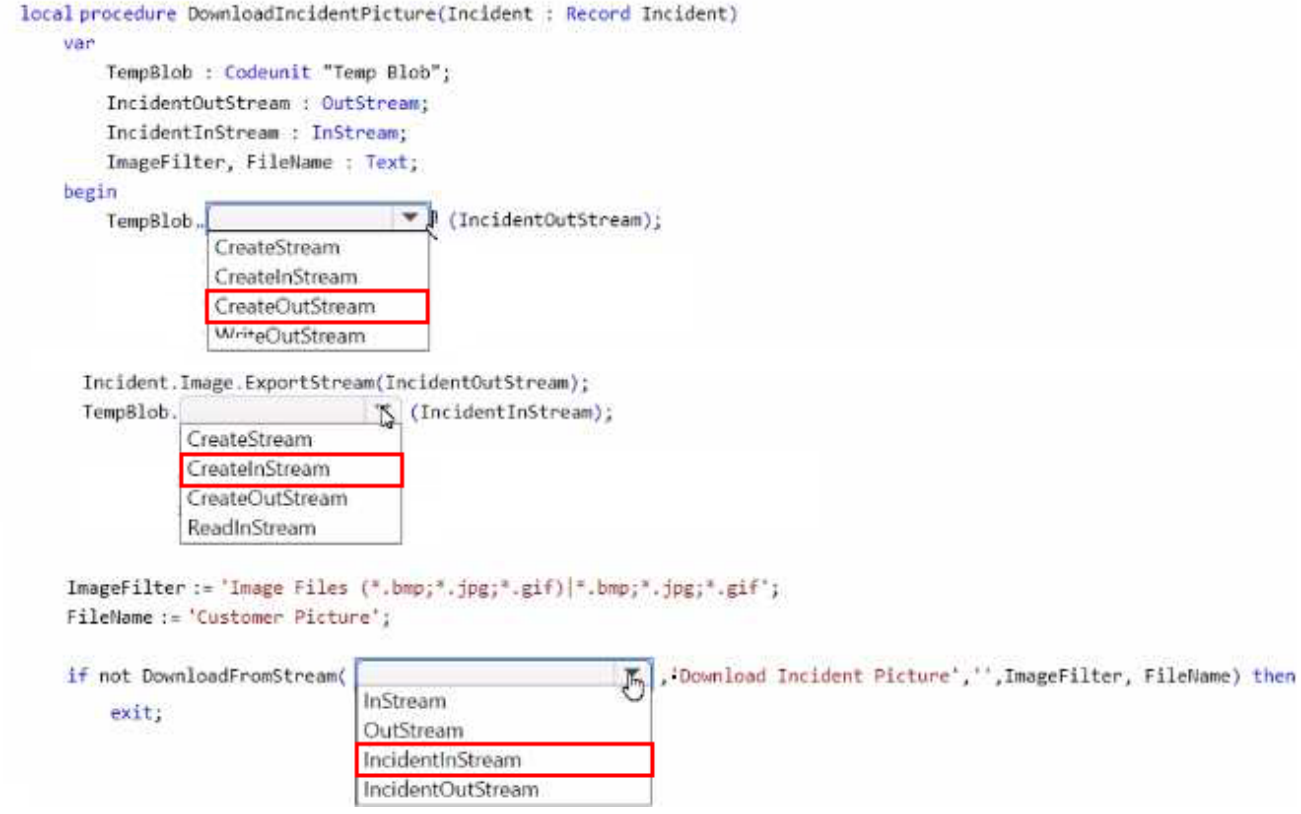
HOTSPOT
You need to download a stored picture from the Room Incident page.
How should you complete the code segment? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.

**InStream and OutStream**




## Answer:

**InStream and OutStream**




## Explanation:

```
var
TempBlob: Codeunit "Temp Blob";
IncidentOutStream: OutStream;
IncidentInStream: InStream;
ImageFilter, FileName: Text;
begin
// Initialize the TempBlob and streams TempBlob.CreateOutStream(IncidentOutStream);
Rec.Image.ExportStream(IncidentOutStream); // 'Rec' refers to the current Room Incident record
TempBlob.CreateInStream(IncidentInStream);
// Set the filters and filename for the image
ImageFilter := 'Image Files (*.bmp,*.jpg,*.jpeg,*.gif)|*.bmp;*.jpg;*.jpeg;*.gif'; FileName := 'Customer Picture';
// Prompt the user to download the image
if not DownloadFromStream(IncidentInStream, '', 'Download Incident Picture', '', ImageFilter, FileName) then
Error('Unable to download the image.');
end;
```

2.HOTSPOT
You need to create the codeunit to read the POS terminal APIs.
How should you complete the code segment? To answer, select the appropriate options in the answer area. NOTE; Each correct selection is worth one point.

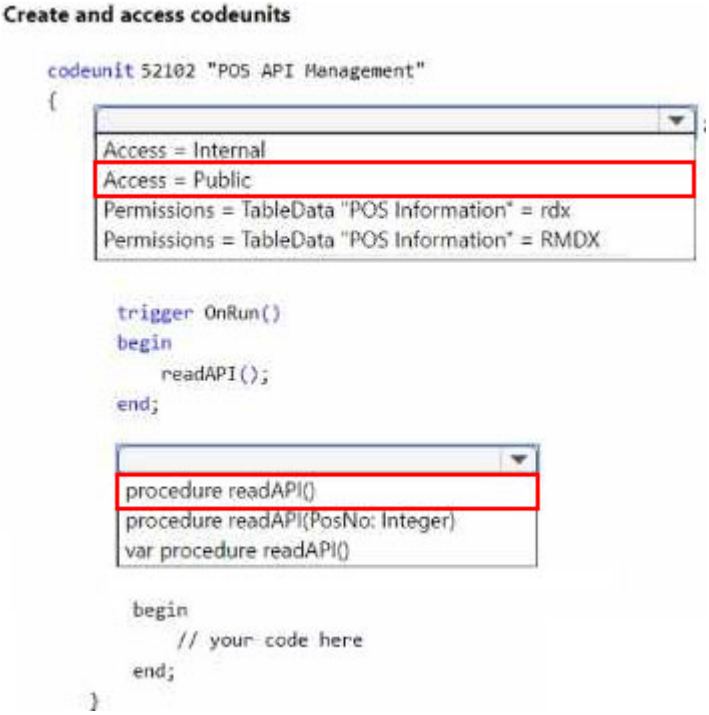
**Create and access codeunits**

```
codeunit 52102 "POS API Management"
{
    [Access = Internal | Access = Public | Permissions = TableData "POS Information" = rdx | Permissions = TableData "POS Information" = RMDX]

    trigger OnRun()
    begin
        readAPI();
    end;

    [procedure readAPI() | procedure readAPI(PosNo: Integer) | var procedure readAPI()]
    begin
        // your code here
    end;
}
```

**Answer:**




**Explanation:**

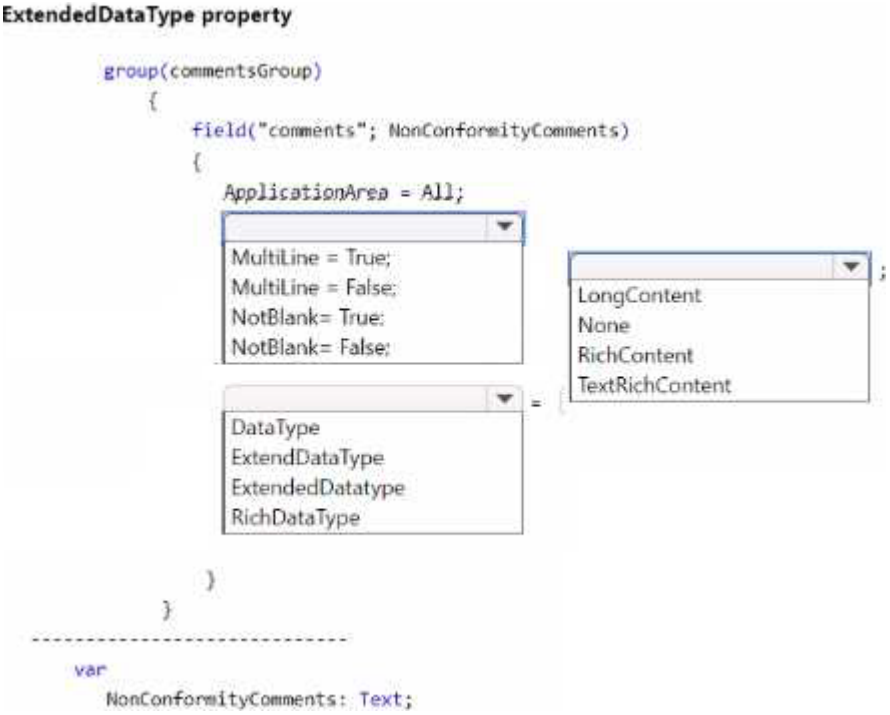
codeunit 52102 "POS API Management"
{
Access = Public;
Permissions = TableData "POS Information" = rwdx;
trigger OnRun()
begin
readAPI();
end;
procedure readAPI()
begin
// Your code here to read from the POS API
end;
}

3.HOTSPOT

You need to define the properties of the comments field of the Non-conformity page.

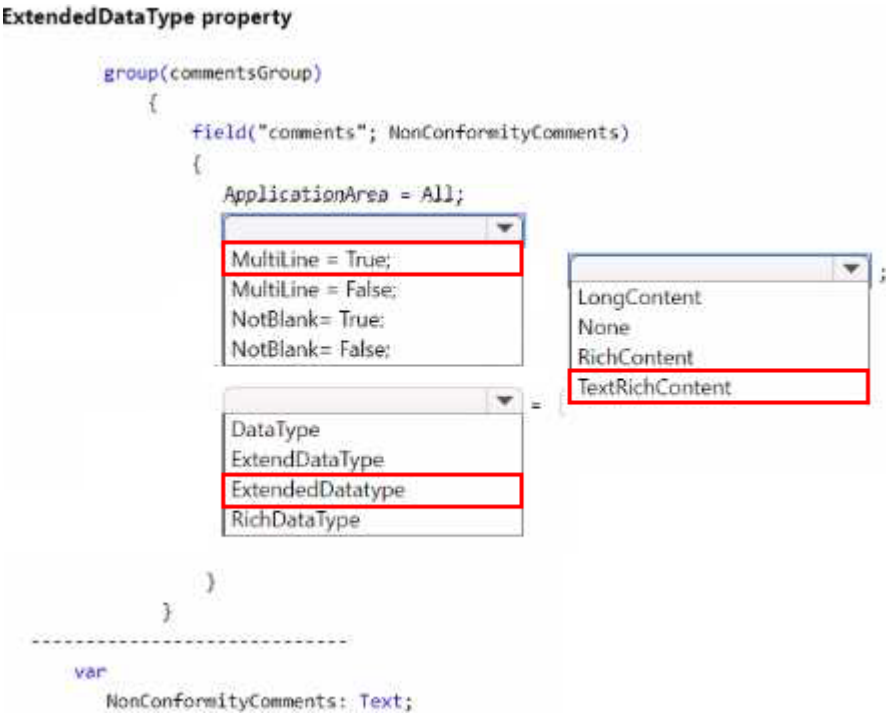
How should you complete the code segment? To answer, select the appropriate options in the answer area. NOTE; Each correct selection is worth one point.

**ExtendedDataType property**




**Answer:**

**ExtendedDataType property**




4.You need to define the data types for the fields of the N on-conformity table.
Which two data types should you use? Each correct answer presents part of the solution. NOTE: Each correct selection is worth one point.
A. Integer for the N on-conformity Number field
B. Date Time for the Non-Conformity Date field
C. Char for the Non-Conformity Number field

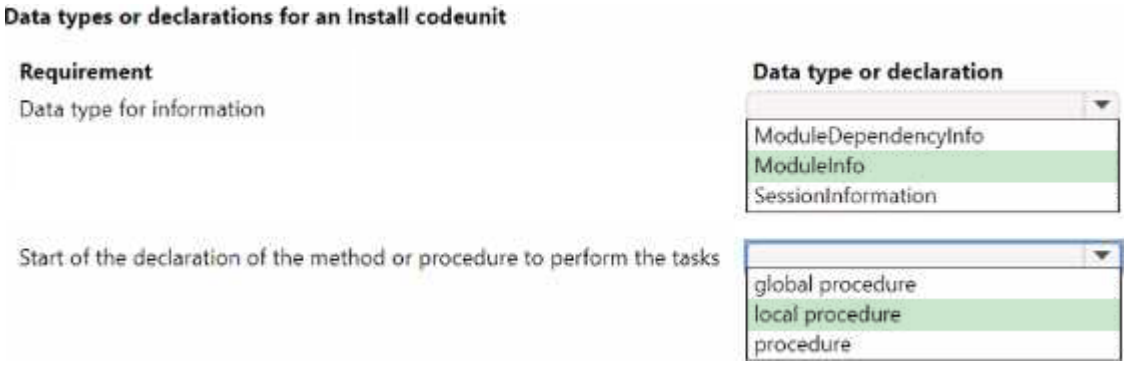
D. Date for the Non-Conformity Date field
E. Code for the Non-Conformity Number field
**Answer:** DE
**Explanation:**
In Business Central, fields in tables are assigned specific data types that determine the kind of data they can store. For the Non-conformity table mentioned in the case study, the following data types should be used:
Date for the Non-Conformity Date field: This is because the Non-conformity Date field is required to store only the date when the non-conformity was recorded. The Date data type is appropriate for storing dates without times.
Code for the Non-Conformity Number field: The Non-conformity Number field is described to use alphanumeric values with a format that includes "NC" and the year, like "NC24-001". In Business Central, the Code data type is used for fields that store alphanumeric keys. It is a text field with a limited length, which makes it suitable for number series that contain letters and numbers.
Other options are not suitable:
A. Integer for the Non-conformity Number field: This would not be appropriate because the Non-conformity Number includes alphanumeric characters and not just integers.
B. Date Time for the Non-Conformity Date field: This is not correct because there is no requirement to store the time alongside the date.
C. Char for the Non-Conformity Number field: Char data type is not typically used in Business Central for number series or identifiers. The Code data type is preferred for this purpose.

5.HOTSPOT
You need to create the Install codeunit that is requited in the extension used for installing or updating the Housekeeping app.
Which data type or declaration should you use? To answer, select the appropriate options in the answer area. NOTE; Each correct selection is worth one point.

**Data types or declarations for an Install codeunit**

| Requirement | Data type or declaration |
|---|---|
| Data type for information | ModuleDependencyInfo<br>ModuleInfo<br>SessionInformation |
| Start of the declaration of the method or procedure to perform the tasks | global procedure<br>local procedure<br>procedure |

**Answer:**




**Explanation:**

For the Install codeunit required for the extension used for installing or updating the Housekeeping app, you should use the following data type and declaration:

Data type for information: ModuleInfo

Start of the declaration of the method or procedure to perform the tasks: local procedure

In AL language, which is used for developing extensions in Business Central, an Install codeunit is a special type of codeunit that is used to handle installation or upgrade logic for an extension. ModuleInfo is a data type that contains information about the current extension, such as its version. It is typically used within the OnInstallAppPerCompany or OnUpgradePerCompany triggers of an Install codeunit to determine if the app is being installed for the first time or upgraded.

A local procedure within an Install codeunit is a method that is only accessible within the codeunit itself. It is not visible to other objects or extensions. This is suitable for tasks that are internal to the installation process and should not be exposed globally.

These selections align with the requirements of handling installation and update procedures in a controlled and encapsulated manner within Business Central extensions.