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QUESTION & ANSWER



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**Exam** : **70-491**

**Title** : Recertification for MCSD:  
Windows Store Apps using  
C#

**Version** : DEMO

## 1.Topic 1, Scenario 1

### Overview

Fabrikam, Inc. is a non-profit organization that manages three museums located in Miami, New York, and Seattle. All of the museums offer Wi-Fi connectivity and Internet access to visitors.

### Existing Environment

#### General Information

Fabrikam provides visitors with two pamphlets as they enter each museum. One pamphlet contains pictures of the different paintings in the museum. The other pamphlet contains pictures of the sculptures in the museum.

Visitors are encouraged to take pictures of the sculptures and the paintings.

Each museum has a kiosk that provides information to visitors about the exhibits. The kiosk uses a data access component that only runs on an x86 processor.

### Requirements

#### Business Goals

Fabrikam plans to provide a more interactive experience for the visitors.

Fabrikam purchases 200 Windows 8.1 RT devices for each museum. Fabrikam plans to develop an app to replace the paper pamphlets.

Fabrikam plans to minimize development effort and reuse the data access component, if possible.

#### General Requirements

Fabrikam identifies the following requirements for the app:

- The app must be available from the Windows App store.
- The app must be available to devices that run Windows 8.1 and Windows 8.1 RT.
- If a user switches to a different app, the new app must enter a Not Running state after 10 seconds.
- The app must provide users with the ability to share pictures with other apps.
- Users must be able to search for paintings and sculptures by name from within the app.
- When users type in search terms, the app must present users with a suggested list of painting and sculpture names.

#### Page Requirements

The app must have four pages: a main page, a group detail page, an item detail page, and a capture photo page.

#### Main Page:

- The main page must display grouped items.
- Once the users tap on a group on the main page, the app must open the group detail page.

- The main page must display all of the items for a selected group.

#### **Group Detail Page:**

- The group detail page must have two groups, named Paintings and Sculptures, and must display a list of the paintings and sculptures in the museum with the name and a small image of the item.
- The group detail page must display a list of all the items in the group. The list must contain the image and the name of the item.
- The app must have a second view of the group details that displays the name, a description, and an image of each item.
- Users must be able to use the mouse wheel or pinch gestures to move between the two views of the group detail page.

#### **Item Detail Page:**

- The item detail page must display the name, a full description, and a large image of the item.
- When the user taps the image of an item on the item detail page, an element named FoundNotFoundFlyout must be displayed. The FoundNotFoundFlyout element will be declared in the Resources section of the page.
- As an alternative to tapping an image on the item detail page, users must be able to use a check gesture to mark the item as found.

#### **Capture Photo Page:**

- A page named CapturePhoto will be created to capture and display pictures.
- When a picture is taken, its path must be saved in an application setting property named picturePath.
- Pictures must have an aspect ratio of 16 by 9.
- As new pictures are taken, the app must update the app tile to show the current number of pictures taken.
- A method named UpdatePictureCount will be called any time a new picture is saved. The method will take an integer parameter named pictureCount. The method will use NotificationExtensions library to handle updates.
- The tile will have a text block named outputText.

#### **DRAG DROP**

You need to recommend a solution to share images from the capture photo page.

You have the following code. (Line numbers are included for reference only.)

```
01 protected override bool GetShareContent(DataRequest request)
02 {
03     bool succeeded = false;
04     if (this.picturePath != null)
05     {
06
07         RandomAccessStreamReference imageStream =
08         RandomAccessStreamReference.CreateFromFile(this.picturePath);
09         requestData.Properties.Thumbnail = imageStream;
10         requestData.SetBitmap(imageStream);
11         succeeded = true;
12
13     }
14     else
15     {
16         request.FailWithDisplayText(
17             "Select an image you would like to share and try again.");
18     }
19     return succeeded;
20 }
```

Which code segments should you recommend inserting at lines 06 and 12? (To answer, drag the appropriate code segments to the correct locations. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

### Code Segments

```
List<IStorageItem> items = new List<IStorageItem>();  
items.Add(this.picturePath);  
requestData.SetDataProvider (items);
```

```
List<IStorageItem> items = new List<IStorageItem>();  
items.Add(this.picturePath);  
requestData.SetStorageItems (items);
```

```
DataPackage requestData = request.Source;  
requestData.Properties.Title = TitleInputBox.Text;  
requestData.Properties.ContentSourceApplicationLink =  
ApplicationLink;
```

```
DataPackage requestData = request.Data;  
requestData.Properties.Title = TitleInputBox.Text;  
requestData.Properties.ContentSourceApplicationLink =  
ApplicationLink;
```

### Answer Area

Line 06:

Code segment

Line 12:

Code segment

### Answer:

Line 06:

```
DataPackage requestData = request.Data;  
requestData.Properties.Title = TitleInputBox.Text;  
requestData.Properties.ContentSourceApplicationLink =  
ApplicationLink;
```

Line 12:

```
List<IStorageItem> items = new List<IStorageItem>();  
items.Add(this.picturePath);  
requestData.SetStorageItems (items);
```

Explanation:

Note: •

Scenario: The app must provide users with the ability to share pictures with other apps.

### 2.DRAG DROP

You need to write code for the method that will be called when a user takes a picture. (Develop the

solution by arranging the code snippets. You will need all of the code snippets.)

	Answer Area
<pre>CameraCaptureUI dialog =     new CameraCaptureUI();</pre>	
<pre>}</pre>	
<pre>dialog.PhotoSettings.CroppedAspectRatio =     new Size(16, 9);</pre>	
<pre>StorageFile file =     await dialog.CaptureFileAsync     (CameraCaptureUIMode.Photo);</pre>	
<pre>BitmapImage image = new BitmapImage(); image.SetSource(stream); CapturedPhoto.Source = image; appSettings [picturePath] = file.Path;</pre>	
<pre>IRandomAccessStream stream =     await file.OpenAsync     (FileAccessMode.Read);</pre>	
<pre>if (file != null) {</pre>	

**Answer:**

Box 1: ↕

```
CameraCaptureUI dialog =  
    new CameraCaptureUI();
```

Box 2: ↕

```
dialog.PhotoSettings.CroppedAspectRatio =  
    new Size(16, 9);
```

Box 3:↵

```
StorageFile file =  
    await dialog.CaptureFileAsync  
    (CameraCaptureUIMode.Photo);
```

Box 4:↵

```
if (file != null)  
{
```

Box 5:↵

```
IRandomAccessStream stream =  
    await file.OpenAsync  
    (FileAccessMode.Read);
```

↵

Box 6:↵

```
BitmapImage image = new BitmapIm  
age();  
image.SetSource(stream);  
CapturedPhoto.Source = image;  
appSettings  
[picturePath] = file.Path;
```

Box 7:↵

```
}
```

### 3.HOTSPOT

You need to write code to comply with the search requirements of the item detail page.

You have the following code:



```

public sealed partial class ItemDetail : Page
{
    private SearchPane searchPane;
    private static readonly string[] suggestionList =
    {
        "Painting1", "Painting2", "Painting3", "Painting4",
        "Sculpture1", "Sculpture2", "Sculpture3", "Sculpture4"
    };
    public ItemDetail()
    {
        this.InitializeComponent();
        searchPane = Target 1
    }
    private void OnSearchPaneSuggestionsRequested(SearchPane sender,
        SearchPaneSuggestionsRequestedEventArgs e)
    {
        var queryText = e.QueryText;
        if (!string.IsNullOrEmpty(queryText))
        {
            var request = e.Request;
            foreach (string suggestion in suggestionList)
            {
                if (suggestion.StartsWith(queryText,
                    StringComparison.CurrentCultureIgnoreCase))
                {
                    request.SearchSuggestionCollection.Target 2
                }
            }
        }
    }
    protected override void Target 3(NavigationEventArgs e)
    {
        searchPane.SuggestionsRequested +=
            new TypedEventHandler<SearchPane,
            SearchPaneSuggestionsRequestedEventArgs>
            (OnSearchPaneSuggestionsRequested);
    }
    protected override void Target 4(NavigationEventArgs e)
    {
        searchPane.SuggestionsRequested -=
            new TypedEventHandler<SearchPane,
            SearchPaneSuggestionsRequestedEventArgs>
            (OnSearchPaneSuggestionsRequested);
    }
}

```

Which code snippets should you insert in Target 1, Target 2, Target 3, and Target 4 to complete the code?  
(To answer, select the correct code snippet from each drop-down list in the answer area.)

Answer Area

Target 1:

Target 2:

Target 3:

Target 4:

**Answer Area**

Target 1:   
 new SearchPane();  
 SearchPane.GetForCurrentView();  
 SearchPane.Show();

Target 2:   
 AppendQuerySuggestion(suggestion);  
 AppendQuerySuggestions(suggestion);  
 AppendResultSuggestion(suggestion);

Target 3:   
 OnLaunched  
 OnNavigateFrom  
 OnNavigateTo  
 OnSuspend

Target 4:   
 OnLaunched  
 OnNavigateFrom  
 OnNavigateTo  
 OnSuspend

**Answer:**

**Answer Area**

Target 1:   
 new SearchPane();  
 SearchPane.GetForCurrentView();  
 SearchPane.Show();

Target 2:   
 AppendQuerySuggestion(suggestion);  
 AppendQuerySuggestions(suggestion);  
 AppendResultSuggestion(suggestion);

Target 3:   
 OnLaunched  
 OnNavigateFrom  
 OnNavigateTo  
 OnSuspend

Target 4:   
 OnLaunched  
 OnNavigateFrom  
 OnNavigateTo  
 OnSuspend

#### 4.Topic 2, Scenario 2

##### Overview

Fabrikam, Inc. is a realtor in the United States.

Fabrikam grants its customers access to a web site, where they can search for houses for rent and for sale. Its customers can enter basic requirements, such as location, number of rooms, dimensions, and a

price range. The web site displays a list of houses that meet the customers' criteria. The customers can then view more details about each house and can add a listing to a favorites list.

## Requirements

### Business Goals

Fabrikam plans to provide a more interactive experience for its customers. Fabrikam is creating a video tour for each listing. The video tours can be used to visit the property virtually.

Fabrikam plans to create a Windows Store app on Windows 8.1 RT and Windows 8.1 Pro devices.

### General Requirements

Fabrikam identifies the following general requirements for the app:

- The app interface must be available in English, Spanish, and French.
- The app must provide the customers with the ability to perform searches the same way that the current web site does.
- It is expected that the customers will view more than 3,000 pictures annually. The main page of the app must show a list of the last 10 pictures that were viewed.
- If pictures are added to a listing that is in a customer's favorites list, the pictures must be downloaded automatically from Microsoft Azure. This must occur if the app is suspended or not running.

### Printing Requirements

Customers must be able to print the details of a listing from the details page by clicking a button within the app. You plan to add the following XAML markup to the listing details page:

```
<Button x:Name="btnPrint" Content="Print" Click="InvokePrint" />.
```

### Video Tour Requirements

Fabrikam identifies the following requirements for the video tours:

- Customers must be able to play the video tour on a different device by using a button within the app.
- When a customer clicks the details of a listing, the app must start downloading the video tour in the background.
- When the app starts, the app must verify whether there are any pending downloads, and resume any paused downloads.
- The last five viewed video tours that are not on the customer's favorites list must be cached for subsequent viewing.
- Customers must be able to download all of the video tours for the properties that they added to their favorites list.

- The property details page must contain a MediaElement control that will be used to play the video tour of the property.
- When downloading the video tours, the app must remain responsive, and each download must be processed on a separate thread.

### Package appxmanifest

```
01 <Extension Category="windows.backgroundTasks"
02   EntryPoint="Tasks.DownloadPictures">
03 <BackgroundTasks>
04
05 </BackgroundTasks>
06 </Extension>
```

### DRAG DROP

You add a MediaElement named VideoTour and a button named playToButton to the properties details page.

You need to ensure that video tours can be played to other devices.

You have the following code: (Line numbers are included for reference only.)

```
01 PlayToManager playToManager = null;
02 CoreDispatcher dispatcher = null;
03 protected override void OnNavigatedTo(NavigationEventArgs e)
04 {
05     dispatcher = Window.Current.CoreWindow.Dispatcher;
06     playToManager = PlayToManager.Target 1 ();
07     playToManager.SourceRequested += playToManager_SourceRequested;
08 }
09 void playToManager_SourceRequested(PlayToManager sender,
10     PlayToSourceRequestedEventArgs args)
11 {
12     var deferral = args.SourceRequest.GetDeferral();
13     var handler = dispatcher.RunAsync(CoreDispatcherPriority.Normal, () =>
14     {
15         args.SourceRequest.SetSource(VideoTour.Target 2);
16         deferral.Complete();
17     });
18 }
19 private void playToButton_Click(object sender, RoutedEventArgs e)
20 {
21     playToManager.Target 3 ();
22 }
```

Which elements should you include in Target 1, Target 2 and Target 3 to complete the code? (To answer, drag the appropriate elements to the correct targets in the answer area. Each element may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

Elements	Answer Area
GetForCurrentView	Target 1: <input type="text" value="Element"/>
PlayRequested	Target 2: <input type="text" value="Element"/>
PlayToSource	Target 3: <input type="text" value="Element"/>
ShowPlayToUI	
SourceSelected	

**Answer:**

Target 1:

Target 2:

Target 3:

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.media.playto.aspx>

### 5.HOTSPOT

You need to verify whether the app conforms to the Windows Store requirements.

What command should you run? (To answer, select the appropriate options in the answer area.)

Answer Area

-appxpackagepath C:\app\re.appx

-reportoutputpath C:\reports\report.xml

Answer Area

-appxpackagepath C:\app\re.appx

appcert.exe  
appcertui.exe  
fusagent.exe

reset  
test

-reportoutputpath C:\reports\report.xml

-apptype  
-appusage  
-testid

Desktop  
desktopdevice  
windowstoreapp

**Answer:**

### Answer Area

<input type="text"/>	<input type="text"/>	-appxpackagepath C:\app\re.appx
appcert.exe appcertui.exe fusagent.exe	reset test	
<input type="text"/>	<input type="text"/>	-reportoutputpath C:\reports\report.xml
-apptype -appusage -testid	Desktop desktopdevice windowstoreapp	

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/hh694081.aspx>