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# Microsoft

## 70-485 PRACTICE EXAM

Advanced Windows Store App Development using C#

## **Product Questions: 163/5CS**

### **Case Study: 1**

#### **Scenario Margie's Travel**

##### **Background**

You are developing a Windows Store media sharing app for the sales and marketing team at Margie's Travel. The app will allow team members to download documents and media about current and proposed products and services from the company's cloud-based media manager service. Team members will be able to add new content to the cloud service and to print and share content.

##### **Business Requirements**

###### **Behavior:**

- Team members must be able to download product information data sheets, marketing materials, and product demonstration video clips from the company's server.
- Team members must be able to select and upload multiple files that contain new and modified content as a batch.
- Team members must be able to stream video clips to other devices in the vicinity of the team member's device. The app will not support the streaming of photographs.
- The app must allow team members to pause, restart, or cancel uploads and downloads of files. The app must report both the progress and completion status of these operations. It must also return results about upload and download operations.

###### **User Interface:**

- The app must include a photo viewer. When photos are added or deleted in the photo viewer window, they must animate in and out of the field of view. Remaining photos must move to fill the empty space created when photos are deleted. The photo viewer must support semantic zoom.
- The app must display information on the lock screen of the device. The information must include text-based alerts and a value indicating the number of pending file downloads.

##### **Technical Requirements**

###### **Behavior:**

- The company has an existing component named VideoProcessor. This component compresses video clips and performs other processing before the video clips are uploaded to the media manager service. The component was written with managed code. The VideoProcessor component will also be used by Windows Store apps developed in HTML5 and JavaScript. The apps must be able to call the overload of the ProcessVideo() method that accepts a string and a Boolean value as parameters.
- When a team member selects a video clip to download, the app must download the file as a background task. After a download has started, the app should maintain the network connection to the server even when the app is suspended.

###### **User Interface:**

- The app must include a custom photo viewer control. The control will be updated frequently and may be deployed separately from the rest of the app. The photo viewer control must support templates

and styles.

### **User Interface:**

- The app must include a custom photo viewer control. The control will be updated frequently and may be deployed separately from the rest of the app. The photo viewer control must support templates and styles.
- The app must use a Grid control as the root layout control. The photo viewer must be placed in the second row of the grid.
- The appearance of the app must change when the app is in snapped mode. The first row of the root layout grid must not change height. The second row must fill all available space.
- Available video clips must be displayed in an extended ListView control class named DownloadedVideoList.
- The template for the DownloadedVideoList is already defined.
- New video clips should be added to DownloadedVideoList when the DownloadVideoQ method completes.
- New video clip items in the DownloadedVideoList should color change periodically to alert the team member.

### **Application Structure**

Relevant portions of the app files are as follows. (Line numbers in the code segments are included for reference only and include a two-character prefix that denotes the specific file to which they belong.)

**App.xaml.cs**

```
AP01 cts= new CancellationTokenSource();
AP02 private List<DownloadOperation> MyPendingDownloads;
AP03 private async Task HandleMyPendingDownloads(DownloadOperation download,
bool start)
AP04 {
AP05     MyPendingDownloads.Add(download);
AP06     Progress<DownloadOperation> progressCallback = new
Progress<DownloadOperation>(DownloadProgress);
AP07     if(start)
AP08     {
AP09         await download.StartAsync().AsTask(cts.Token, progressCallback);
AP10     }
AP11     else
AP12     {
AP13         await download.AttachAsync().AsTask(cts.Token, progressCallback);
AP14     }
AP15 }
AP16 private async void UploadContent()
AP17 {
AP18     FileOpenPicker picker = new FileOpenPicker();
AP19
AP20     List<BackgroundTransferContentPart> uploadGrp = new
List<BackgroundTransferContentPart>();
AP21     for(int fileNum = 0; fileNum < files.Count; fileNum++)
AP22     {
AP23         BackgroundTransferContentPart uploadItem= new
BackgroundTransferContentPart("File"+ fileNum,
files[fileNum].Name);
AP24         uploadItem.SetFile(files[fileNum]);
AP25         uploadGrp.Add(uploadItem);
AP26     }
AP27     BackgroundUploader uploader = new BackgroundUploader();
AP28
AP29     await HandleUploadAsync(upload, true);
AP30 }
```

### VideoProcessor.cs

```
IP01 public class VideoProcessor
IP02 {
IP03
IP04     public VideoProcessor(int videoID)
IP05     {
IP06         ...
IP07     }
IP08
IP09     public VideoProcessor(string videoName)
IP10    {
IP11        ...
IP12    }
IP13
IP14
IP15     public void ProcessVideo(string videoName, string videoType)
IP16    {
IP17        ...
IP18    }
IP19
IP20     public void ProcessVideo(string videoName, bool compressFile)
IP21    {
IP22        ...
IP23    }
IP24 }
```

### MainPage.xaml

```
MP01 <Grid x:Name="LayoutRoot">
MP02   <Grid.RowDefinitions>
MP03     <RowDefinition Height="100"/>
MP04     <RowDefinition Height="200"/>
MP05   </Grid.RowDefinitions>
MP06   <VisualStateManager.VisualStateGroups>
MP07
MP08   </VisualStateManager.VisualStateGroups>
MP09 </Grid>
```

### MainPage.xaml.cs

```
MC01 private PlayToManager ptMgr = PlayToManager.GetForCurrentView();
MC02
MC03 protected override void OnNavigatedTo(NavigationEventArgs e)
MC04 {
MC05
MC06
MC07 }
MC08 private void SourceRequestHandler(PlayToManager sender,
    PlayToSourceRequestedEventArgs e)
MC09 {
MC10
MC11     e.SourceRequest.SetSource(mediaElement.PlayToSource);
MC12 }
MC13 public void StartNewVideoAnimation()
MC14 {
MC15     NewVideoStoryboard.Begin();
MC16 }
MC17 public void DownloadVideo(string videoName)
MC18 {
MC19     ...
MC20     videoList.Items.Add(videoName);
MC21 }
```

### Question: 1

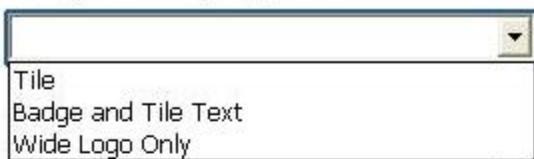
#### HOTSPOT

You need to meet the business requirements about downloading and uploading.

How should you configure the app? (To answer, select the appropriate options from each drop-down list in the answer area.)

Configure the Application UI settings in Package.appxmanifest

Lock screen notifications:

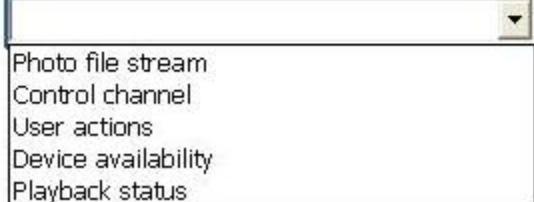


Logo files:



Configure the Declarations settings in Package.appxmanifest

Add a Background Task declaration and configure support for the following task types:



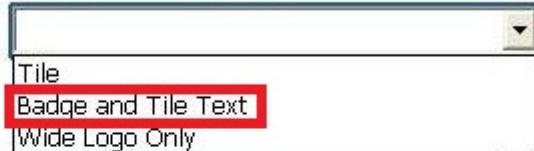
---

**Answer:**

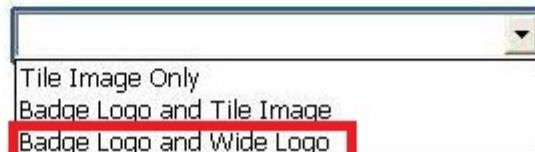
---

Configure the Application UI settings in Package.appxmanifest

Lock screen notifications:

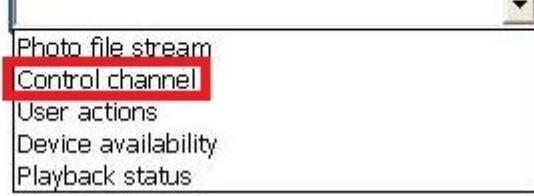


Logo files:



Configure the Declarations settings in Package.appxmanifest

Add a Background Task declaration and configure support for the following task types:



Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/hh868216.aspx>

<http://msdn.microsoft.com/en-us/library/windows/apps/Hh779720.aspx>

---

### Question: 2

You need to implement the business requirement to display video clips.

Which code segment should you use in the MainPage.xaml file?

- A. 

```
<DownloadedVideoList x:Name="videoList">
    <DownloadedVideoList.Resources>
        <Storyboard x:Name="NewVideoStoryboard">
            <ColorAnimation Storyboard.TargetName="NewVideoBrush"
                Storyboard.TargetProperty="Color" From="Red" To="Green"
                Duration="0:0:8" RepeatBehavior="Forever"/>
        </Storyboard>
    </DownloadedVideoList.Resources>
    <DownloadedVideoList.Background>
        <SolidColorBrush x:Name="NewVideoBrush" Color="Red"/>
    </DownloadedVideoList.Background>
</DownloadedVideoList>
```
- B. 

```
<DownloadedVideoList x:Name="videoList">
    <DownloadedVideoList.Resources>
        <Storyboard x:Name="NewVideoStoryboard">
            <ColorAnimation Storyboard.TargetName="NewVideoBrush"
                Storyboard.TargetProperty="Color" From="Red" To="Green"
                AutoReverse="true"/>
        </Storyboard>
    </DownloadedVideoList.Resources>
    <DownloadedVideoList.Background>
        <SolidColorBrush x:Name="NewVideoBrush" Color="Red"/>
    </DownloadedVideoList.Background>
</DownloadedVideoList>
```
- C. 

```
<DownloadedVideoList x:Name="videoList">
    <DownloadedVideoList.Transitions>
        <TransitionCollection>
            <EntranceThemeTransition/>
        </TransitionCollection>
    </DownloadedVideoList.Transitions>
</DownloadedVideoList>
```
- D. 

```
<DownloadedVideoList x:Name="videoList">
    <DownloadedVideoList.Transitions>
        <TransitionCollection>
            <AddDeleteThemeTransition/>
        </TransitionCollection>
    </DownloadedVideoList.Transitions>
</DownloadedVideoList>
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

---

**Answer: A**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.ui.xaml.media.animation.storyboard.aspx>

**Question: 3**

You need to implement downloading of media files and other content.  
Which code segment should you add to App.xaml.cs?

- A. 

```
private async Task GetPendingDownloadsList()
{
    IReadOnlyList<DownloadOperation> downloads = await
        BackgroundDownloader.GetCurrentDownloadsAsync();
    if (downloads.Count > 0)
    {
        List<Task> myTasks = new List<Task>();
        for (int i=0; i < downloads.Count; i++)
        {
            await HandleMyPendingDownloads(downloads[i], true);
        }
        await Task.WhenAll(myTasks);
    }
}
```
- B. 

```
private async Task GetPendingDownloadsList()
{
    IReadOnlyList<DownloadOperation> downloads = await
        BackgroundDownloader.GetCurrentDownloadsAsync();
    if (downloads.Count > 0)
    {
        List<Task> myTasks = new List<Task>();
        foreach (DownloadOperation download in downloads)
        {
            myTasks.Add(HandleDownloadAsync(download, false));
        }
        await Task.WhenAll(myTasks);
    }
}
```
- C. 

```
private GetPendingDownloadsList()
{
    IReadOnlyList<DownloadOperation> downloads = await
        BackgroundDownloader.GetCurrentDownloadsAsync();
    if (downloads.Count > 0)
    {
        List<Task> myTasks = new List<Task>();
        for (int i=0; i < downloads.Count; i++)
        {
            await HandleMyPendingDownloads(downloads[i], true);
        }
        await Task.WhenAll(myTasks);
    }
}
```
- D. 

```
private Task GetPendingDownloadsList()
{
    IReadOnlyList<DownloadOperation> downloads =
        BackgroundDownloader.CreateDownloadAsync();
    if (downloads.Count > 0)
    {
        List<Task> myTasks = new List<Task>();
        foreach (DownloadOperation download in downloads)
        {
            myTasks.Add(HandleDownloadAsync(download, false));
        }
        Task.WhenAll(myTasks);
    }
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

---

**Answer: B**

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.networking.backgroundtransfer.backgrounddownloader.getcurrentdownloadsasync.aspx>

---

#### **Question: 4**

You need to ensure that the app uploads media and files to the media manager service.

What should you do? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Insert the following line of code at line AP28.

```
IReadOnlyList<UploadOperation> upload =  
await BackgroundUploader.GetCurrentUploadsAsync();
```

- B. Insert the following line of code at line AP28.

```
UploadOperation upload = await uploader.CreateUpload(uri, uploadGrp);
```

- C. Insert the following line of code at line AP28.

```
UploadOperation upload = await uploader.CreateUploadAsync(uri, uploadGrp);
```

- D. Insert the following line of code at line AP19.

```
IReadOnlyList<StorageFile> files = await picker.PickMultipleFilesAsync  
(());
```

- E. Insert the following line of code at line AP19.

```
IReadOnlyList<StorageFile> files = await picker.PickSingleFileAsync  
(());
```

- A. Option A  
B. Option B  
C. Option C  
D. Option D  
E. Option E

---

**Answer: B, D**

Explanation:

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

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.storage.pickers.fileopenpicker.pickmultiplefilesasync.aspx>

---

#### **Question: 5**

DRAG DROP

You need to implement the photo viewer page to meet the business requirements.

How should you complete the code segment? (To answer, drag the appropriate [source or sources] to the correct location or locations in the answer area.)

<RepositionThemeTransition/>  
 <AddDeleteThemeTransition/>  
 <ReorderThemeTransition/>  
 <EntranceThemeTransition/>  
 <ViewBox/>  
 <GridView/>  
 <FlipView/>  
 <WrapGrid/>

## Answer Area

```
<Button Content="Add New Photo" Click="btnAdd_Click"/>
<Button Content="Remove Selected Photo" Click="btnDelete_Click"
<ItemsControl Grid.Row="1" x:Name="rectangleItems">
    <ItemsControl.ItemContainerTransitions>
        <TransitionCollection>
            </TransitionCollection>
        </ItemsControl.ItemContainerTransitions>
        <ItemsControl.ItemsPanel>
            <ItemsPanelTemplate>
                </ItemsPanelTemplate>
            </ItemsControl.ItemsPanel>
        </ItemsControl>
```

**Answer:**

<RepositionThemeTransition/>  
 <AddDeleteThemeTransition/>  
 <ReorderThemeTransition/>  
 <EntranceThemeTransition/>  
 <ViewBox/>  
 <FlipView/>

## Answer Area

```
<Button Content="Add New Photo" Click="btnAdd_Click"/>
<Button Content="Remove Selected Photo" Click="btnDelete_Click"
<ItemsControl Grid.Row="1" x:Name="rectangleItems">
    <ItemsControl.ItemContainerTransitions>
        <TransitionCollection>
            <GridView/>
            </TransitionCollection>
        </ItemsControl.ItemContainerTransitions>
        <ItemsControl.ItemsPanel>
            <ItemsPanelTemplate>
                <WrapGrid/>
            </ItemsPanelTemplate>
        </ItemsControl.ItemsPanel>
    </ItemsControl>
```

## Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.ui.xaml.media.animation.transitioncollection.aspx>  
<http://msdn.microsoft.com/en-us/library/windows/apps/windows.ui.xaml.controls.itemspaneltemplate.aspx>

**Question: 6**

You need to implement a custom control to display thumbnail images of video clips.  
 Which code segment should you use?

```

A. public sealed class DownloadedVideoList: FlipView
{
    public DownloadedVideoList()
    {
        this.DefaultStyleKey = typeof(ListView);
    }
}

B. public sealed class DownloadedVideoList: FlipView
{
    public DownloadedVideoList()
    {
        this.DefaultStyleKey = typeof(DownloadedVideoList);
    }
}

C. public sealed class DownloadedVideoList: ListView
{
    public DownloadedVideoList()
    {
        this.DefaultStyleKey = typeof(DownloadedVideoList);
    }
}

D. public sealed class DownloadedVideoList: ListView
{
    public DownloadedVideoList()
    {
        this.DefaultStyleKey = typeof(ListView);
    }
}

```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

---

**Answer: C**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.ui.xaml.controls.control.defaultstylekey.aspx>

---

**Question: 7**

---

HOTSPOT

You need to configure the app manifest to support the file download requirements.

Which task type property should you specify? (To answer, select the appropriate property in the answer area.)

Package.appxmanifest\* X

The properties of the deployment package for your app are contained in the app manifest file. You can use the Manifest Designer to set or modify one or more of the properties.

Application UI	Capabilities	Declarations	Packaging		
Background Tasks		<p>Enables the app to specify the class name for the background task. The app can trigger a background task in response to external triggers such as system events, timer triggers, push notifications, and control channel messages. Multiple instances of this declaration are allowed.</p> <p><a href="#">More information</a></p> <p><b>Properties:</b></p> <p>Supported task types </p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Audio</li> <li><input type="checkbox"/> Control channel</li> <li><input type="checkbox"/> System event</li> <li><input type="checkbox"/> Timer</li> <li><input type="checkbox"/> Push notification</li> </ul>			
<b>Supported Declarations:</b> <table border="1"> <tr> <td>Background Tasks</td> <td> </td> </tr> </table>				Background Tasks	
Background Tasks					

**Answer:**

Package.appxmanifest\* X

The properties of the deployment package for your app are contained in the app manifest file. You can use the Manifest Designer to set or modify one or more of the properties.

Application UI	Capabilities	Declarations	Packaging		
Background Tasks		<p>Enables the app to specify the class name for the background task. The app can trigger a background task in response to external triggers such as system events, timer triggers, push notifications, and control channel messages. Multiple instances of this declaration are allowed.</p> <p><a href="#">More information</a></p> <p><b>Properties:</b></p> <p>Supported task types </p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Audio</li> <li><input checked="" type="checkbox"/> Control channel</li> <li><input type="checkbox"/> System event</li> <li><input type="checkbox"/> Timer</li> <li><input type="checkbox"/> Push notification</li> </ul>			
<b>Supported Declarations:</b> <table border="1"> <tr> <td>Background Tasks</td> <td> </td> </tr> </table>				Background Tasks	
Background Tasks					

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/Hh977056.aspx>

**Question: 8**

You need to implement the requirements for the playback of media.

What should you do? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Add the following line of code at line MC02.

```
private void ShowPlayTo()  
{  
    Windows.Media.PlayTo.PlayToManager.ShowPlayToUI();  
}
```

- B. Add the following line of code at line MC06.

```
ptMgr.DefaultSourceSelection = false;
```

- C. Add the following line of code at line MC10.

```
ptMgr.PlayRequested += SourceRequestHandler;
```

- D. Add the following line of code at line MC05.

```
ptMgr.SourceRequested += SourceRequestHandler;
```

---

**Answer: B, D**

---

Explanation:

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

---

**Question: 9**

---

You need to implement the requirements for the behavior of the main page. Which code segment should you insert at line MP07?

A. <VisualStateGroup x:Name="ApplicationViewStates">  
 <VisualState x:Name="Snapped">  
 <Storyboard>  
 <ObjectAnimationUsingKeyFrames Storyboard.TargetName="LayoutRoot"  
 Storyboard.TargetProperty="(Grid.RowDefinitions)[1].Height">  
 <DiscreteObjectKeyFrame KeyTime="0" Value="Auto"/>  
</ObjectAnimationUsingKeyFrames>  
</Storyboard>  
</VisualState>  
</VisualStateGroup>

B. <VisualStateGroup x:Name="ApplicationViewStates">  
<VisualState x:Name="Filled">  
<Storyboard>  
<ObjectAnimationUsingKeyFrames Storyboard.TargetProperty="LayoutRoot">  
<DiscreteObjectKeyFrame KeyTime="0" Value="\*"/>  
</ObjectAnimationUsingKeyFrames>  
</Storyboard>  
</VisualState>  
</VisualStateGroup>

C. <VisualStateGroup x:Name="ApplicationViewStates">  
<VisualState x:Name="FullScreenLandscape">  
<Storyboard>  
<ObjectAnimationUsingKeyFrames Storyboard.TargetProperty="LayoutRoot">  
<DiscreteObjectKeyFrame KeyTime="0" Value="Auto"/>  
</ObjectAnimationUsingKeyFrames>  
</Storyboard>  
</VisualState>  
</VisualStateGroup>

D. <VisualStateGroup x:Name="ApplicationViewStates">  
<VisualState x:Name="FullScreenPortrait">  
<Storyboard>  
<ObjectAnimationUsingKeyFrames Storyboard.TargetName="LayoutRoot"  
Storyboard.TargetProperty="(Grid.RowDefinitions).Height">  
<DiscreteObjectKeyFrame KeyTime="0" Value="\*"/>  
</ObjectAnimationUsingKeyFrames>  
</Storyboard>  
</VisualState>  
</VisualStateGroup>

- A. Option A
- B. Option B
- C. Option C
- D. Option D

---

**Answer: A**

---

### Question: 10

---

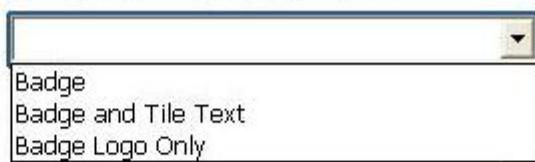
#### HOTSPOT

You need to meet the business requirements about downloading and uploading.

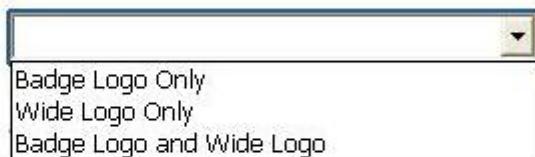
How should you configure the app? (To answer, select the appropriate options from each drop-down list in the answer area.)

Configure the Application UI settings in Package.appxmanifest

Lock screen notifications:

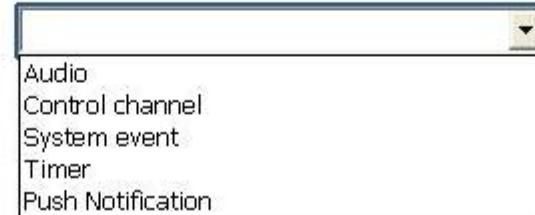


Logo files:



Configure the Declarations settings in Package.appxmanifest

Add a Background Task declaration and configure support for the following task types:



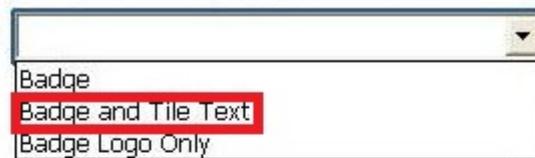
---

**Answer:**

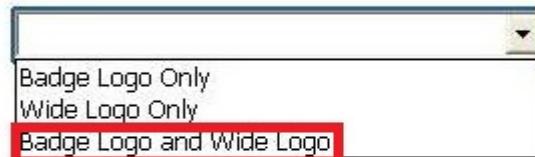
---

Configure the Application UI settings in Package.appxmanifest

Lock screen notifications:

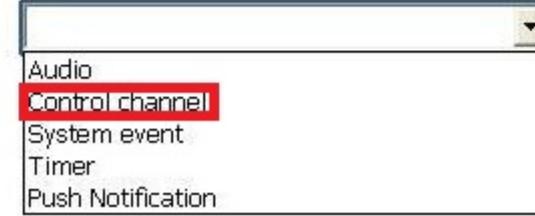


Logo files:



Configure the Declarations settings in Package.appxmanifest

Add a Background Task declaration and configure support for the following task types:



Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/Hh977056.aspx>  
<http://msdn.microsoft.com/en-us/library/windows/apps/hh779720.aspx>

**Question: 11**

You need to ensure that the VideoProcessor component can be used by the Windows Store app. What should you do? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Add the following attribute to line IP19.  
[Windows.Foundation.Metadata.DefaultOverload()]
- B. Replace line IP01 with the following line of code.  
Static class VideoProcessor
- C. Replace line IP09 with the following line of code.  
PublicVideoProcessor(string videoName, int ID)
- D. Add the following attribute to line IP14.  
[Windows.Foundation.Metadata.DefaultOverload()]
- E. Replace line IP01 with the following line of code.  
Public sealed class VideoProcessor

---

**Answer: A, C, E**

---

**Question: 12**

You need to implement the business requirements for providing information about file uploads and downloads. Which code segment should you use in the VideoProcessor.es class?

- A. 

```
public static IAsyncOperationWithProgress<TResult, TProgress> Run<TResult, TProgress>(
    Func<CancellationToken, IProgress<TProgress>, Task<TResult>> taskProvider)
{
    ...
}
```
- B. 

```
public static IAsyncActionWithProgress<TProgress> Run<TProgress>(
    Func<CancellationToken, IProgress<TProgress>, Task> taskProvider)
{
    ...
}
```
- C. 

```
public interface IAsyncOperation<TResult> : IAsyncInfo
{
    AsyncOperationCompletedHandler<TResult> Completed { get; set; }
    TResult GetResults();
}
```
- D. 

```
public interface IAsyncActionWithProgress<TProgress> : IAsyncInfo
{
    AsyncActionWithProgressCompletedHandler<TProgress> Completed { get; set; }
    AsyncActionProgressHandler<TProgress> Progress { get; set; }
    void GetResults();
}
```
- E. 

```
public static IAsyncOperation<TResult> Run<TResult>(
    Func<CancellationToken, Task<TResult>> taskProvider)
{
    ...
}
```

A. Option A

- B. Option B
- C. Option C
- D. Option D

---

**Answer: A**

---

Explanation:

[http://msdn.microsoft.com/en-us/library/hh779739\(v=vs.110\).aspx](http://msdn.microsoft.com/en-us/library/hh779739(v=vs.110).aspx)

---

### **Question: 13**

---

You need to implement the requirements for streaming media.

What should you do? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Enable access to the Videos Library.
- B. Ensure that the app stays in the foreground while media is being streamed.
- C. Enable access to the Pictures Library.
- D. Register for the SourceRequested event.
- E. Enable access to the Music Library.
- F. Register for the PlayRequested event.

---

**Answer: A, D**

---

Explanation:

From scenario:

Team members must be able to stream video clips to other devices in the vicinity of the team member's device. The app will not support the streaming of photographs.

D: You can use Play To to stream the audio or video in your application, as well as images, by implementing the Play To contract. To implement the Play To contract in your application, register for the sourceRequested event.

Note:

To register for the sourceRequested event, get a reference to the current PlayToManager by calling the getForCurrentView method. You can then call addEventHandler on the PlayToManager to associate your event handler with the sourceRequested event. In your event handler, pass the media element from your application to the setSource method of the PlayToSourceRequestedEventArgs object passed to the event handler as shown in the following example.

```
// Play To Contract
private Windows.Media.PlayTo.PlayToManager ptm =
Windows.Media.PlayTo.PlayToManager.GetForCurrentView();
protected override void OnNavigatedTo(NavigationEventArgs e)
{
    ptm.SourceRequested += sourceRequestHandler;
}
private void sourceRequestHandler(
Etc.
http://msdn.microsoft.com/en-us/library/windows/apps/windows.media.playto.aspx
```

---

### **Question: 14**

---

You need to implement the behavior requirements for the photo viewer.

Which controls should you create?

- A. Create two SemanticZoom controls and one ListView control.
- B. Create one SemanticZoom control and one ListView control.
- C. Create one ScrollViewer control, one SemanticZoom control, and one GridView control.
- D. Create two GridView controls and one SemanticZoom control.

---

**Answer: D**

---

### Question: 15

---

You need to implement the photo viewer control to meet the requirements.  
What should you do? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Add the themes\generic.xaml file to the project and reference it from the control.
- B. Create a composite control.
- C. Create a user control.
- D. Create a custom control.
- E. In the constructor of the class, set the value of the DefaultStyleKey to the type of the control.

---

**Answer: CDE**

---

### Question: 16

---

#### DRAG DROP

You need to implement the photo viewer page to meet the business requirements.

You have the following code:

```
<Button Content="Add New Photo" Click="btnAdd_Click"/>
<Button Content="Remove Selected Photo" Click="btnDelete_Click"
<ItemsControl Grid.Row="1" x:Name="rectangleItems">
  <ItemsControl.ItemContainerTransitions>
    <TransitionCollection>
      Target 1
    </TransitionCollection>
  </ItemsControl.ItemContainerTransitions>
  <ItemsControl.ItemsPanel>
    <ItemsPanelTemplate>
      Target 2
    </ItemsPanelTemplate>
  </ItemsControl.ItemsPanel>
<ItemsControl>
```

Which code snippets should you include in Target 1 and Target 2 to complete the code? (To answer, drag the appropriate code snippets to the correct targets in the answer area. Each code snippet 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 Snippets	Answer Area
<RepositionThemeTransition/>	Target 1: <input type="text"/>
<AddDeleteThemeTransition/>	Target 2: <input type="text"/>
<ReorderThemeTransition/>	
<EntranceThemeTransition/>	
<ViewBox/>	
<GridView/>	
<FlipView/>	
<WrapGrid/>	

---

**Answer:**

---

Answer Area
Target 1: <input type="text"/> <AddDeleteThemeTransition/>
Target 2: <input type="text"/> <WrapGrid/>

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.ui.xaml.media.animation.adddeletethemetransition.aspx>

## Case Study: 2

### Scenario Geese

#### Background

You are developing a Windows Store app. The app will allow ornithologists to photograph migrating geese, taking note of the location, heading, and weather conditions at the time each photo is taken.

#### Business Requirements

The app must adhere to the following requirements:

- Create and store photographs of migrating geese.
- Record the location and weather conditions where the photograph was taken.
- Record the heading and time that the photograph was taken.
- Allow the user to display the information on any device that supports the PlayTo feature.

#### Technical Requirements

##### General:

The app must meet the following technical requirements:

- The app must store images and image metadata in the Pictures Library.
- The metadata logic must be encapsulated within a reusable component named LogicComponent1.
- The metadata logic must be available to Windows Store apps written in Visual Basic, C#, JavaScript, and C++.

#### Hardware:

- The app requires a device with camera, compass, and GPS features.
- The app requires a device with Internet capabilities.

### **CurrentEnvironment.cs**

```

CE01 namespace CurrentEnvironment
CE02 {
CE03     public sealed class Environment
CE04     {
CE05         private Compass _compass = null;
CE06         private LightSensor _light = null;
CE07         public IAsyncOperation<EnvironmentalStatus> GetCurrentEnvironmentAsync()
CE08         {
CE09             LoadSensors();
CE10             return (IAsyncOperation<EnvironmentalStatus>) AsyncInfo.Run(
CE11                 (System.Threading.CancellationToken) =>
InternalGetCurrentEnvironmentAsync());
CE12         }
CE13
CE14         private async Task<EnvironmentalStatus>
InternalGetCurrentEnvironmentAsync()
CE15         {
CE16             EnvironmentalStatuses = new EnvironmentalStatus();
CE17             es.Location = await GetLocationAsync();
CE18             ...
CE19             es.Temperature = await GetWeatherAsync();
CE20             es.Time = DateTime.UtcNow.ToString();
CE21
CE22             return es;
CE23         }
CE24
CE25         private async Task<string> GetLocationAsync()
CE26         {
CE27             var locator = new Geolocator();
CE28             Geoposition location = await locator.GetGeopositionAsync();
CE29             string curPosition = location.Coordinate.Latitude.ToString() + ", "
CE30                 + location.Coordinate.Longitude.ToString();
CE31             if (_compass != null)
CE32                 curPosition += ", " + _compass.GetCurrentReading
() .HeadingTrueNorth.Value;
CE33             return curPosition;
CE34         }
CE35
CE36         private async Task<string> GetWeatherAsync()
CE37         {
CE38             IList<WeatherData> weatherData = GooseLogic.GetWeatherData();
CE39         }
CE40
CE41         private void LoadSensors()
CE42         {
CE43
CE44             {
CE45                 _compass = Compass.GetDefault();
CE46             }
CE47         }
CE48     }
CE49
CE50     public struct EnvironmentalStatus
CE51     {
CE52         public string Location;
CE53         public string Time;
CE54         public string Temperature;
CE55     }
CE56 }
```

**MainPage.xaml.cs**

```

MP01 privateasyncvoidCapturePhoto_Click(objectsender, RoutedEventArgs)
MP02 {
MP03     try
MP04     {
MP05         CameraCaptureUIcameraUI = newCameraCaptureUI();
MP06         SizeaspectRatio = newSize(16, 9);
MP07         cameraUI.PhotoSettings.CroppedAspectRatio = aspectRatio;
MP08
MP09         StorageFilefile = awaitcameraUI.CaptureFileAsync
(CameraCaptureUIMode.Photo);
MP10         if(file != null)
MP11         {
MP12             varnewFile =
awaitWindows.Storage.KnownFolders.PicturesLibrary.CreateFileAsync(file.Name);
MP13             awaitfile.CopyAndReplaceAsync(newFile);
MP14             BitmapImagebitmapImage = newBitmapImage();
MP15             using(IRandomAccessStreamfileStream = awaitnewFile.OpenAsync
(FileAccessMode.Read))
MP16             {
MP17                 bitmapImage.SetSource(fileStream);
MP18             }
MP19             capturedPhoto.Source = bitmapImage;
MP20
MP21             varenv = newCurrentEnvironment.Environment();
MP22             varenvData = awaitenv.GetCurrentEnvironmentAsync();
MP23
MP24             Info.Text = envData.Location;
MP25         }
MP26         else
MP27         {
MP28             Info.Text = "An error has occurred";
MP29         }
MP30     }
MP31     catch(Exceptionex)
MP32     {
MP33     ...
MP34     }
MP35 }

```

**Package.appxmanifest**

```

PA01 <?xml version="1.0" encoding="utf-8"?>
PA02 <Package xmlns="http://schemas.microsoft.com/appx/2010/manifest">
PA03   <Identity Name="7d32c109-5e1d-432a-a53f-df00440658f0" Publisher="CN=Admin"
PA04     Version="1.0.0.0"/>
PA05   <Properties>
PA06     <DisplayName>GooseTracker</DisplayName>
PA07     <PublisherDisplayName>Admin</PublisherDisplayName>
PA08   </Properties>
PA09   <Prerequisites>
PA10     <OSMinVersion>6.2.1</OSMinVersion>
PA11     <OSMaxVersionTested>6.2.1</OSMaxVersionTested>
PA12   </Prerequisites>
PA13   <Resources>
PA14     <ResourceLanguage="x-generate"/>
PA15   </Resources>
PA16   <Applications>
PA17     <Application Id="App" Executable="$targetnametoken$.exe"
EntryPoint="GooseTracker.App">
PA18       <VisualElements DisplayName="GooseTracker" Logo="Assets\Logo.png"
SmallLogo="Assets\SmallLogo.png"
          Description="GooseTracker" ForegroundText="light"
BackgroundColor="#464646">
PA19       <DefaultTile ShowName="allLogos"/>
PA20       <SplashScreen Image="Assets\SplashScreen.png"/>
PA21     </VisualElements>
PA22   </Application>
PA23 </Applications>
PA24 <Capabilities>
PA25
PA26   <Capability Name="internetClient"/>
PA27   <Device Capability Name="webcam"/>
PA28   <Device Capability Name="location"/>
PA29 </Capabilities>
PA30 </Package>

```

**GooseTracker.csproj**

```

GO01 <Project ToolsVersion="4.0" DefaultTargets="Build"
      xmlns="http://schemas.microsoft.com/developer/msbuild/2003">
GO02
GO03   <ItemGroup>
GO04
GO05   </ItemGroup>
GO06 </Project>

```

**GoosePlayTo.cs**

```

PT00  public class GoosePlayTo
PT01  {
PT02      private Windows.Media.PlayTo.PlayToManager playToManager;
PT03      private Windows.UI.Core.CoreDispatcher dispatcher;
PT04      private MediaElement element;
PT05
PT06      public GoosePlayTo(MediaElement element)
PT07      {
PT08          dispatcher = Window.Current.CoreWindow.Dispatcher;
PT09          playToManager = Windows.Media.PlayTo.PlayToManager.GetForCurrentView
();
PT10          playToManager.SourceRequested += SourceRequested;
PT11          this.element = element;
PT12      }
PT13
PT14      private void SourceRequested(Windows.Media.PlayTo.PlayToManager sender,
PT15          Windows.Media.PlayTo.PlayToSourceRequestedEventArgs args)
PT16      {
PT17          var def = args.SourceRequest.GetDeferral();
PT18          var evthandler = dispatcher.RunAsync
(Windows.UI.Core.CoreDispatcherPriority.Normal,
PT19              () =>
PT20              {
PT21                  args.SourceRequest.SetSource(element.PlayToSource);
PT22                  def.Complete();
PT23              }
PT24          );
PT25      }
PT26
PT27      private async void LoadFile(Windows.Storage.StorageFile videoFile,
string contentType)
PT28      {
PT29          var stream = await videoFile.OpenAsync
(Windows.Storage.FileAccessMode.Read);
PT30
PT31      }
PT32
PT33      private void Play()
PT34      {
PT35          element.Play();
PT36      }
PT37
PT38      private void Pause()
PT39      {
PT40          element.Pause();
PT41      }
PT42  }

```

## Camera.cs

```
CA01 public class Camera : Windows.Media.Devices. IMediaDeviceController
CA02 {
CA03     private Windows.Media.Capture.MediaCapture media;
CA04     private Windows.Media.Devices.VideoDeviceController video;
CA05     public double WhiteBalance
CA06     {
CA07         get
CA08         {
CA09             double wbValue = -1.0;
CA10
CA11             return wbValue;
CA12         }
CA13     }
CA14
CA15     public bool SupportsBacklightCompensation
CA16     {
CA17         get
CA18         {
CA19
CA20         }
CA21     }
CA22
CA23     public Camera()
CA24     {
CA25         media = new Windows.Media.Capture.MediaCapture();
CA26         ...
CA27         video = media.VideoDeviceController;
CA28
CA29
CA30     }
CA31 }
```

---

### Question: 1

---

You need to register the reusable WinMD component.  
What should you do?

- A. In GooseTracker.csproj, add the following code at line GO04.

```
<ProjectReference Include="..\LogicComponent1\LogicComponent1.csproj">
    <Project>{b64bd7c9-fbdc-4b80-8350-8fead0878721}</Project>
    <Name>GooseLogic</Name>
</ProjectReference>
```

- B. In the MainPage.xaml.cs file, register the handler for the extension/mime-type.  
C. Run the **Gacutil.exe /I shared.dll** command.  
D. In Package.appxmanifest, add the following code immediately after line GO02.

```
<Extension Include="..\LogicComponent1\LogicComponent1.csproj">
    <Project>{b64bd7c9-fbdc-4b80-8350-8fead0878721}</Project>
    <Name> GooseLogic</Name>
</Extension>
```

- A. Option A  
B. Option B  
C. Option C  
D. Option D

---

**Answer: A**

---

Explanation:

<http://weblogs.asp.net/lkempe/projectreference-with-condition-in-your-msbuild-project-files>

### Question: 2

---

You need to modify the existing GetCurrentEnvironmentAsync() method in the Environment WinMD component to accept parameters.

Which type should you use at line CE07?

- A. Dynamic  
B. List<string>  
C. Task<EnvironmentalStatus>  
D. IList<string>

---

**Answer: D**

---

Explanation:

[http://msdn.microsoft.com/en-us/library/5y536ey6\(v=vs.110\).aspx](http://msdn.microsoft.com/en-us/library/5y536ey6(v=vs.110).aspx)

### Question: 3

---

The users need the ambient light readings at the time a goose sighting is made.

You need to set up the light-sensing device.

Which code segment should you add to the LoadSensors() method of the Environment class?

- A. 

```
if (LightSensor.GetDefault() != null)
{
    _lightSensor = LightSensor.GetDefault();
}
```
- B. 

```
if (LightSensor.GetIlluminanceInLux() != null)
{
    _lightSensor = LightSensor.GetIlluminanceInLux();
}
```
- C. 

```
if (AmbientLightSensor.GetDefault() != null)
{
    _light = AmbientLightSensor.GetDefault();
}
```
- D. 

```
if (LightSensor.GetDefault() != null)
{
    _light = LightSensor.GetDefault();
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

---

**Answer: D**

---

Explanation:

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

#### **Question: 4**

---

You need to set the PlayTo source in the LoadFile() method. Which line of code should you insert at line PT30?

- A. element.SetSource(videoFile, contentType);
- B. playToManager.SetSource(stream, contentType);
- C. dispatcher.SetSource(stream, contentType);
- D. element.SetSource(stream, contentType);

---

**Answer: D**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/jj655411.aspx>

#### **Question: 5**

---

You need to ascertain whether the device that the app is running on has a compass.  
Which line of code should you insert at line CE43?

- A. while(Windows.Devices.Sensors == Compass)
- B. if (Compass.GetDefault() != null)

- C. if (Compass.GetDefault() == Compass.FirstOrDefault)
- D. if(Compass.GetCurrentReading() != null)

---

**Answer: B**

Explanation:

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

### **Question: 6**

---

DRAG DROP

You need to allow users to capture video instead of photos.

How should you complete the code segment that will replace lines MP03 through MP11? (To answer, drag the appropriate lines of code to the correct location or locations in the answer area. 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.)

```
CameraCaptureUI cameraUI = new CameraCaptureUI();  
VideoCaptureUI cameraUI = new VideoCaptureUI();  
(CameraCaptureUIMode.Video);  
(CameraCaptureUIMode.Mp4);  
(VideoCaptureUIMode.Mp4);  
(VideoCaptureUIMode.Video);
```

Answer Area

```
try  
{  
    cameraUI.VideoSettings.Format =  
        CameraCaptureUIVideoFormat.Mp4;  
    StorageFile file = null;  
    file = await cameraUI.CaptureFileAsync  
    if (file != null)  
    {
```

---

**Answer:**

```

VideoCaptureUI cameraUI = new VideoCaptureUI();
(CameraCaptureUIMode.Video);
(CameraCaptureUIMode.Mp4);
(VideoCaptureUIMode.Video);

```

#### Answer Area

```

try
{
    CameraCaptureUI cameraUI = new CameraCaptureUI();
    cameraUI.VideoSettings.Format =
        CameraCaptureUIMode.Mp4;
    StorageFile file = null;
    file = await cameraUI.CaptureFileAsync
        (VideoCaptureUIMode.Mp4);
    if (file != null)
    {

```

Explanation:

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

#### Question: 7

You need to get the WhiteBalance property for the app.

Which line of code should you insert at line CA10?

- A. wbValue = media.WhiteBalance.Capabilities.Max;
- B. var wb = video.WhiteBalance.TryGetValue(out wbValue);
- C. wbValue = video.WhiteBalance.Capabilities.Max;
- D. var wb = media.WhiteBalance.TryGetValue(out wbValue);

- A. Option A
- B. Option B
- C. Option C
- D. Option D

---

**Answer: C**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/br211997.aspx>

---

### **Question: 8**

---

You need to support remote devices by using the `GoosePlayTo` class. Which code segment should you use in `MainPage.xaml.cs`?

- A. 

```
var videoElement = new MediaElement();
videoElement.SourceRequested += GoosePlayTo().SourceRequested;
```
  - B. 

```
var videoElement = new MediaElement();
videoElement.SetSource(new GoosePlayTo(videoElement));
```
  - C. 

```
var videoElement = new MediaElement();
var playTo = new GoosePlayTo(videoElement);
```
  - D. 

```
var videoElement = new MediaElement();
videoElement.Source = new GoosePlayTo(videoElement);
```
- A. Option A
  - B. Option B
  - C. Option C
  - D. Option D

---

### **Answer: C**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows.ui.xaml.controls.mediaelement.aspx>

---

### **Question: 9**

---

You need to ascertain whether a camera can support zooming.

Which code segment should you insert at line CA28?

- A. 

```
if (!media.VideoDeviceController.Zoom)
    throw new Exception("Device must support zoom");
```
- B. 

```
if (!video.Zoom.Capabilities.Supported)
    throw new Exception("Device must support zoom");
```
- C. 

```
if (video.Zoom.Capabilities.Current == 0)
    throw new Exception("Device must support zoom");
```
- D. 

```
if (!media.Zoom.Capabilities.Supported)
    throw new Exception("Device must support zoom");
```

- A. Option A
- B. Option B
- C. Option C

D. Option D

---

**Answer: B**

---

### **Question: 10**

---

The app metadata logic must be available to other Windows Store apps.

You need to register the reusable WinMD component.

What should you do?

- A. In GooseTracker.csproj, add the following code at line GO04.

```
<ProjectReferenceInclude=".\\LogicComponent1\\LogicComponent1.csproj">
  <Project>{b64bd7c9-fbdc-4b80-8350-8fead0878721}</Project>
  <Name>GooseLogic</Name>
</ProjectReference>
```

- B. Register the dll file by running the **Gacutil.exe /I shared.dll** command command line tool.

- C. In Package.appxmanifest located in the GooseTracker project, add the following code after line GO02.

```
<Extension Include=".\\LogicComponent1\\LogicComponent1.csproj">
  <Project>{b64bd7c9-fbdc-4b80-8350-8fead0878721}</Project>
  <Name> GooseLogic</Name>
</Extension>
```

- D. In the MainPage.xaml.cs of the GooseTracker WinMD component, register the handler for the extension/mime-type.

A. Option A

B. Option B

C. Option C

D. Option D

---

**Answer: A**

---

Explanation:

<http://weblogs.asp.net/lkempe/projectreference-with-condition-in-your-msbuild-project-files>

### **Question: 11**

---

Users report performance issues when getting the location information associated with a photo. You suspect the app is encountering performance issues in the GetLocationAsync() method of the Environment class.

You need to enhance the performance of the GetLocationAsync() method of the app.

What should you do?

- A. Remove the Compass initialization from the LoadSensors() method and initialize it within the GetLocationAsync() method.
- B. set the ReportInterval property of the Compass object to 16.
- C. set the ReportInterval property of the Compass object to 0.
- D. Move the locator variable to a class level variable and initialize it in the Environment constructor.

---

**Answer: D**

---

**Question: 12**

---

You need to modify the GetWeatherData() method in the WinMD component at line CE38. Which interface should you use for the return type of the method?

- A. IVectorView
- B. IVector
- C. IList
- D. IMap

---

**Answer: A**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/br226058.aspx>

**Question: 13**

---

You place a breakpoint at line MP31 in the app.

When you debug the app, the debugger continuously catches a System.UnauthorizedAccess exception.

You need to resolve the exception.

What should you do?

- A. Wrap lines CE43 through CE46 in a try-catch statement.
- B. At line MP10, change the code segment to the following line of code.  
read if(cameraUI != null)
- C. Move line CE09 to CE16.
- D. At line PA25, insert the following line of code.  
<Capability Name="picturesLibrary"/>

---

**Answer: D**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/hh464936.aspx>

**Question: 14**

---

You need to create a SupportsBacklightCompensation property to accommodate morning and evening photography. Which line of code should you insert at line CA19?

- A. return (video.BacklightCompensation.Capabilities.Min == 0);
- B. return video.BacklightCompensation.Capabilities.Supported;
- C. return (media.BacklightCompensation.Capabilities.Min == 0);
- D. return media.BacklightCompensation.Capabilities.Supported;

---

**Answer: B**

---

Explanation:

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

---

### Question: 15

---

You need to reference the reusable WinMD project.

What should you do?

- A. Run the **Gacutil.exe /I shared.dll** command.

- B. In GooseTracker.csproj add the following code immediately after line GO02.

```
<Extension Include=".\\LogicComponent1\\LogicComponent1.csproj">
  <Project>{b64bd7c9-fbdc-4b80-8350-8fead0878721}</Project>
  <Name> GooseLogic</Name>
</Extension>
```

- C. In GooseTracker.csproj, add the following code at line GO04.

```
<ProjectReference Include=".\\LogicComponent1\\LogicComponent1.csproj">
  <Project>{b64bd7c9-fbdc-4b80-8350-8fead0878721}</Project>
  <Name>GooseLogic</Name>
</ProjectReference>
```

- D. In the MainPage.xaml.cs file, register the handler for the extension/mime-type.

- A. Option A
- B. Option B
- C. Option C
- D. Option D

---

**Answer: C**

---

Explanation:

<http://weblogs.asp.net/lkempe/projectreference-with-condition-in-your-msbuild-project-files>

---

### Question: 16

---

You need to modify the code at line CE38 to meet the requirements.

Which interface should you use for the return type of the method?\

- A. IMap
- B. IVector
- C. IVectorView
- D. IList

---

**Answer: B**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/br206631.aspx>

## Question: 17

DRAG DROP

You need to allow users to capture video instead of photos.

You have the following code:

```
try
{
    Target 1
    cameraUI.VideoSettings.Format =
        CameraCaptureUIVideoFormat.Mp4;
    StorageFile file = null;
    file = await cameraUI.CaptureFileAsync
    Target 2
    if (file !=null)
}
```

Which code snippets should you include in Target 1 and Target 2 to complete the code? (To answer, drag the appropriate code snippets to the correct targets in the answer area. Each code snippet 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 Snippets

`CameraCaptureUI cameraUI = new CameraCaptureUI();`

`VideoCaptureUI cameraUI = new VideoCaptureUI();`

`(CameraCaptureUIMode.Video);`

`(CameraCaptureUIMode.Mp4);`

`(VideoCaptureUIMode.Mp4);`

`(VideoCaptureUIMode.Video);`

### Answer Area

Target 1:

Target 2:

### Answer:

#### Answer Area

Target 1: `CameraCaptureUI cameraUI = new CameraCaptureUI();`

Target 2: `(CameraCaptureUIMode.Video);`

Explanation:

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

## Case Study: 3

### E-reader app

#### Background

You are developing a Windows Store style e-reader app.

#### Business Requirements

- Users must be able to upload e-books and documents and download them to e-reader devices.
- Users must be able to set a password to restrict access to their e-books and documents.

- Users must be able to create and store encrypted metadata about their e-books and documents.
- The app must replace system-generated error messages with custom-defined messages. These custom messages must come from a list of approved text.
- User actions such as printing pages, saving users' current locations in documents, and taking notes should be enabled from buttons on an AppBar control.
- The app must provide trial functionality that will expire after 14 days. If the app expires while it is running, the app must display an expiration message to the user and prompt the user to purchase the app.

## **Technical Requirements**

### **General:**

- Configuration files must be read-only. All user settings must be stored in the Contoso Settings Service.
- The SocialPoller background task must run the code in the DoWork() method to collect content from the Contoso feed.
- The UI must always remain responsive to user actions.

### **Security**

- Secured e-book and document passwords must be encrypted so that only the user who created the passwords can retrieve the metadata associated to the e-books and documents.
- The system must log all exceptions through the auditing object and notify technicians of the issue.

### **Storage:**

- The app must cache the next two chapters to the local device for users to read while disconnected from the network. This cache must be persisted if a reboot is performed.
- User state such as the current location in an e-book or document must be stored in the Microsoft SQL Azure database.
- User settings such as font sizes and colors must be stored through the Contoso Settings Service.

### **Network:**

- Communication between the app and e-book vendors must occur over an encrypted communication channel.
- Communication must use certificates to enable the SSL connection.

### **Trial Functionality:**

- The isPrintEnabled variable must determine if the user can print.
- The isMarketEnabled variable must determine if the user can use the marketplace.
- The isTrialEnabled variable must determine if the application is still in trial mode.

### **Printing:**

- The default printing options are portrait orientation and grayscale color mode.
- The app must enable the user to select the media size and printing orientation.

## **SocialPoller.es**

```

SP01 using System;
SP02 using System.Collections.Generic;
SP03 using System.Linq;
SP04 using System.Net.Http;
SP05 using System.Text;
SP06 using System.Threading;
SP07 using System.Threading.Tasks;
SP08 using Windows.ApplicationModel.Background;
SP09 namespace Ereader.Background
SP10 {
SP11     public class SocialPoller : IBackgroundTask
SP12     {
SP13
SP14         public async Task<string> DoWork()
SP15         {
SP16             HttpClient client = new HttpClient();
SP17             client.BaseAddress = new Uri("http://feed.contoso.com/");
SP18             HttpResponseMessage response = await client.GetAsync(client.BaseAddress,
SP19                 HttpCompletionOption.ResponseContentRead);
SP20             string content = await response.Content.ReadAsStringAsync();
SP21             return content;
SP22         }
SP23     }

```

**Auditor.cs**

```

AU01 using System;
AU02 using System.Collections.Generic;
AU03 using System.Linq;
AU04 using System.Text;
AU05 using System.Threading.Tasks;
AU06 namespace Ereader.Code
AU07 {
AU08     public class Auditor
AU09     {
AU10         public enum ErrorType
AU11         {
AU12             General,
AU13             NullReference,
AU14             InvalidCast,
AU15             Network
AU16         }
AU17         public static string GetMessage(ErrorType type)
AU18         {
AU19             string output = String.Empty;
AU20             switch (type)
AU21             {
AU22                 case ErrorType.General:
AU22                 case ErrorType.General:
AU23                     output = "An unknown error has occurred.";
AU24                     break;
AU25                 case ErrorType.NullReference:
AU26                     output = "An attempt was made to reference an unknown object.";
AU27                     break;
AU28             }
AU29             return output;
AU30         }
AU31         public static async void WriteAuditAsync(string errorMessage)
AU32         {
AU33             ...
AU34         }
AU35     }
AU36 }

```

**ContentPage.es**

```

CP01 namespace Ereader.Model.BookObjects
CP02 {
CP03     public class ContentPage
CP04     {
CP05         public int ID { get; set; }
CP06         public string Content { get; set; }
CP07     }
CP08 }
```

**Book.cs**

```

BO01 using System;
BO02 using System.Collections.Generic;
BO03 namespace Ereader.Model.BookObjects
BO04 {
BO05     public class Book
BO06     {
BO07         public int ID { get; set; }
BO08         public string Title { get; set; }
BO09         public string ShortDescription { get; set; }
BO10         public string LongDescription { get; set; }
BO11         public string Author { get; set; }
BO12         public List<ContentPage> Pages { get; set; }
BO13         public DateTime ReleaseDate { get; set; }
BO14         public string Cover { get; set; }
BO15         public Book() { }
BO16     }
BO17 }
```

**Book.cs**

```

BO01 using System;
BO02 using System.Collections.Generic;
BO03 namespace Ereader.Model.BookObjects
BO04 {
BO05     public class Book
BO06     {
BO07         public int ID { get; set; }
BO08         public string Title { get; set; }
BO09         public string ShortDescription { get; set; }
BO10         public string LongDescription { get; set; }
BO11         public string Author { get; set; }
BO12         public List<ContentPage> Pages { get; set; }
BO13         public DateTime ReleaseDate { get; set; }
BO14         public string Cover { get; set; }
BO15         public Book() { }
BO16     }
BO17 }
```

**SocialPost.es**

```

SP01 namespace Ereader.Model.Social
SP02 {
SP03     public class SocialPost
SP04     {
SP05         public string Message { get; set; }
SP06         public string Username { get; set; }
SP07         public string UserId { get; set; }
SP08         public string Source { get; set; }
SP09         public SocialPost() { }
SP10     }
SP11 }

```

**Page1.xaml.cs**

```

PG01 using System;
PG02 using Windows.ApplicationModel.Background;
PG03 using Windows.Graphics.Printing;
PG04 using Windows.UI.Xaml.Controls;
PG05 using Windows.UI.Xaml.Navigation;
PG06 using Windows.UI.Xaml.Printing;
PG07 namespace Ereader
PG08 {
PG09     public sealed partial class Page1 : Page
PG10     {
PG11         private PrintManager printManager = null;
PG12         private IPrintDocumentSource printDocumentSource = null;
PG13         private PrintDocument printDocument = null;
PG14
PG15         public Page1()
PG16         {
PG17             this.InitializeComponent();
PG18             var builder = new BackgroundTaskBuilder { Name = "SocialPollerTask" };
PG19
PG20             BindData();
PG21         }
PG22
PG23
PG24         private void BindData()
PG25         {
PG26             lvBooklist.DataContext = App.Books;
PG27             lvBooklist.ItemsSource = App.Books;
PG28         }
PG29
PG30         private void printManager_PrintTaskRequested(PrintManager sender,
PrintTaskRequestedEventArgs e)
PG31         {
PG32             Windows.Graphics.Printing.PrintTask printTask = e.Request.CreatePrintTask
("Print Page Title",
GetPrintSource => GetPrintSource.SetSource(printDocumentSource));
PG33
PG34
PG35         }
PG36     }
PG37 }

```

**App.xaml.cs**

```

AX01 namespace Ereader
AX02 {
AX03     sealed partial class App : Application
AX04     {
AX05         private static List<Book> _books = new List<Book>();
AX06         public static List<Book> Books { get { return _books; } }
AX07         private Windows.ApplicationModel.Store.LicenseInformation licenseInformation =
AX08             Windows.ApplicationModel.Store.CurrentAppSimulator.LicenseInformation;
AX09         private bool isPrintingEnabled = true;
AX10         private bool isMarketEnabled = true;
AX11         private bool isTrialComplete = false;
AX12         public App()
AX13         {
AX14             this.InitializeComponent();
AX15             this.Suspending += OnSuspending;
AX16             for (int i = 0; i < 10; i++)
AX17             {
AX18                 _books.Add(new Book())
AX19                 ...
AX20             });
AX21         }
AX22     }
AX23 }
AX24 }
AX25 }

```

---

**Question: 1**

---

You need to protect the metadata for the secure documents.

Which protection descriptor should you use for the DataProtectionProvider object?

- A. SID
- B. WEBCREDENTIALS=userpassword
- C. LOCAL=user
- D. USER=current

---

**Answer: C**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.security.cryptography.dataprotection.dataprotectionprovider.aspx>

---

**Question: 2**

---

Exceptions occur when the WriteAuditAsync() method of the Auditor object is run.

The UI must remain responsive to user actions.

You need to handle the exceptions.

Which code segment should you use?

- A. 

```
try
{
    bool success = await Ereader.Code.Auditor.WriteAuditAsync(message);
}
catch (Exception)
{
    txtMsg.Text = Ereader.Code.Auditor.GetMessage(Code.Auditor.ErrorType.General);
}
```
- B. 

```
try
{
    bool success = await Ereader.Code.Auditor.WriteAuditAsync(message);
}
catch (Exception ex)
{
    Logger.Log(ex.Message);
    throw ex;
}
```
- C. 

```
try
{
    bool success = Ereader.Code.Auditor.WriteAuditAsync(message);
}
catch (Exception)
{
    txtMsg.Text = Ereader.Code.Auditor.GetMessage(Code.Auditor.ErrorType.General);
}
```
- D. 

```
try
{
    bool success = Ereader.Code.Auditor.WriteAuditAsync(message);
}
catch (Exception ex)
{
    Logger.Log(ex.Message);
    throw ex;
}
```

- A. Option A  
 B. Option B  
 C. Option C  
 D. Option D

---

Answer: A

---

### Question: 3

---

#### DRAG DROP

You need to add a Print button to the app.

Which three actions should you perform in sequence? (To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.)

## Answer Area

Mark the **btnPrint\_Click** event handler as **async**.

Add a button to the PageView Stack Panel and handle its **Click** event in a method named **btnPrint\_Click()**.

Call the **PrintTask.ShowPrintUIAsync()** method in the event handler.

Mark the **btnPrint\_Click** event handler as **dynamic**.

Add a button to the AppBar and handle its **Click** event in a method named **btnPrint\_Click()**.

Call the **PrintManager.ShowPrintUIAsync()** method in the event handler.

Box 1:

Add a button to the AppBar and handle its **Click** event in a method named **btnPrint\_Click()**.

Box 2:

Mark the **btnPrint\_Click** event handler as **async**.

Box 3:

Call the **PrintManager.ShowPrintUIAsync()** method in the event handler.

Explanation:

Note:

\* Example:

```
function PrintButtonHandler() {
    // Optionally, functions to be executed immediately before and after printing can be configured as following:
    window.document.body.onbeforeprint = beforePrint;
    window.document.body.onafterprint = afterPrint;
    // If the print contract is registered, the print experience is invoked.
    Windows.Graphics.Printing.PrintManager.showPrintUIAsync();
}
```

\* From scenario:  
 / User actions such as printing pages, saving users' current locations in documents, and taking notes should be enabled from buttons on an AppBar control.  
<http://msdn.microsoft.com/en-us/library/windows/apps/windows.graphics.printing.printmanager.showprintuiasync.aspx>

---

**Answer:**

---

### **Question: 4**

You need to register the SocialPoller background task in the constructor of the Page1 class. Which statement sets the appropriate task entry point at line PG19?

- A. builder.TaskEntryPoint = "Ereader.Background.SocialPoller";
- B. builder.BackgroundTableStart = "SocialPoller.Ereader.Background";
- C. builder.TaskStart = "Pagel.SocialPoller";
- D. builder.TaskEntryPoint = "Ereader.Pagel";

---

**Answer: A**

Explanation:

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

---

### **Question: 5**

You need to deactivate features of the app when it runs as a trial.

Which lines of code should you use for the production app? (Each correct answer presents part of the solution. Choose all that apply.)

- A. licenseInformation.LicenseChanged += new LicenseChangedEventHandler(modifyLicense)
- B. license.LicenseChanged += new LicenseChangedEventHandler(implementLicense)
- C. licenseInformation = CurrentApp.GetCurrentLicense()
- D. licenseInformation = CurrentApp.LicenseInformation
- E. license = CurrentApp.GetCurrentLicense()
- F. licenseInformation.LicenseChanged += new LicenseChangedEventHandler(implementLicense)

---

**Answer: B, D**

Explanation:

B: // Register for the license state change event.

licenseInformation.addEventListener("licensechanged", reloadLicense);

D: Initialize the CurrentApp or CurrentAppSimulator to access the app's license info.

Example:

```
// Get the license info
```

```
licenseInformation = currentApp.licenseInformation;
```

\* From scenario:

/ The app must provide trial functionality that will expire after 14 days. If the app expires while it is running, the app must display an expiration message to the user and prompt the user to purchase the app.

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.applicationmodel.store.currentapp.licenseinformation.aspx>

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

---

### **Question: 6**

You need to set the default print options according to the requirements.

Which lines of code should you use at line PG33? (Each correct answer presents part of the solution. Choose all that

apply.)

- A. printTask.Options.Orientation = a PrintOrientation.Portrait;
- B. printTask.Options.Orientation = Print.Default = Portrait;
- C. printTask.Options.MediaSize = Print.Default = MediaSize.Legal;
- D. printTask.Options.ColorMode = Print.ColorDefault = Grayscale;
- E. printTask.Options.ColorMode = PrintColorMode. Grayscale;
- F. printTask.Options.MediaSize = PrintMediaSize.Letter;

---

**Answer: A, E**

---

Explanation:

A: PrintOrientation enumeration

Specifies the orientation options for the printed output

Portrait | portrait (value 3), The Portrait orientation option.

E: We can also choose what we feel the default setting should be. Maybe we really wanted the Color Mode to be set to grayscale rather than color.

printTask.options.colorMode = \_printing.PrintColorMode.graysc

From scenario:

Printing:

The default printing options are portrait orientation and grayscale color mode.

The app must enable the user to select the media size and printing orientation.

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

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

---

## Question: 7

---

DRAG DROP

You need to call the DoWork() method asynchronously in a background task.

Which four lines of code should you use to create the Run() method on line SP13? (To answer, move the appropriate lines of code from the list of code segments to the answer area and arrange them in the correct order.)

<pre>string content = await DoWork();</pre> <pre>public dynamic void Run (IBackgroundTask taskInstance);</pre> <pre>public async void Run (IBackgroundTaskInstance taskInsta nce);</pre> <pre>_deferral.StartAsync();</pre> <pre>BackgroundTaskDeferral _deferral = taskInstance.GetDeferral();</pre> <pre>_deferral.Complete();</pre>	<p style="text-align: center;">*****</p> <p style="text-align: center;"><b>Answer Area</b></p>
--	--

---

**Answer:**

---

Box 1:

```
public async void Run
(IBackgroundTaskInstance taskInsta
nce);
```

Box 2:

```
BackgroundTaskDeferral deferral =
taskInstance.GetDeferral();
```

Box 3:

```
string content = await DoWork();
```

Box 4:

```
_deferral.Complete();
```

Explanation:

Note:

\* IBackgroundTaskInstance.GetDeferral method

Informs the system that the background task might continue to perform work after the IBackgroundTask.Run method returns.

\* Example:

```
public async void Run(IBackgroundTaskInstance taskInstance)
{
    Debug.WriteLine("Start background download in background task!!!!");
    // Associate a cancellation handler with the background task.
    //taskInstance.Canceled += new BackgroundTaskCanceledEventHandler(OnCanceled);
    // Get the deferral object from the task instance, and take a reference to the taskInstance;
    _deferral = taskInstance.GetDeferral();
    //m_BKDownload.ResumeAll();
    // Check if file already downloaded
    string inputuri = "http://www.johnhaydon.com/wp-content/uploads/2011/07/google_plus_logo.jpg";
    string FileName = inputuri.Split(new[] { '/' }).LastOrDefault();
    bool b_fileFounded = false;
    IReadOnlyList<StorageFile> outputFiles = await KnownFolders.PicturesLibrary.GetFilesAsync();
    foreach (var file in outputFiles)
    {
        if (file.Name == FileName)
        {
            b_fileFounded = true;
        }
    }
    if (b_fileFounded == false)
    {
        Debug.WriteLine("downloading {0} in the background task", FileName);
        StorageFile destinationFile = await KnownFolders.PicturesLibrary.CreateFileAsync(
            FileName, CreationCollisionOption.GenerateUniqueName);
        var downloadOperation = m_BKDownload.CreateDownload(new Uri(inputuri), destinationFile);
        await downloadOperation.StartAsync().AsTask();
    }
    _deferral.Complete();
}
```

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

---

**Question: 8**

---

You need to update the DoWork() method of the background task to meet the requirements. What should you do? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Get the IsCancellationRequested property from the CancellationToken object and return a TaskCompletionSource object.
- B. Access the Progress object and report the task's progress to the caller.
- C. Update the DoWork() method to receive a Progress object.
- D. Add the CancellationToken object to the client.GetAsync() method.
- E. Confirm that the IsCancellationRequested property of the CancellationToken object is true and exit the task.
- F. Update the DoWork() method to receive a CancellationToken object in the arguments of the method.

---

**Answer: D, E, F**

---

Explanation:

Cancellation is controlled by the CancellationToken structure. You expose cancellation tokens in the signature of cancelable async methods, enabling them to be shared between the task and caller. In the most common case, cancellation follows this flow:

- (D) The caller creates a CancellationTokenSource object.
  - (F) The caller calls a cancelable async API, and passes the CancellationToken from the CancellationTokenSource (CancellationTokenSource.Token).
- The caller requests cancellation using the CancellationTokenSource object (CancellationTokenSource.Cancel()).
- (E) The task acknowledges the cancellation and cancels itself, typically using the CancellationToken.ThrowIfCancellationRequested method.

\* From scenario:

- / The SocialPoller background task must run the code in the DoWork() method to collect content from the Contoso feed.
- / The UI must always remain responsive to user actions.

Note:

\* Task-based Asynchronous Pattern

\* CancellationToken Structure

/ Propagates notification that operations should be canceled.

/ CancellationToken. IsCancellationRequested

Gets whether cancellation has been requested for this token.

<http://blogs.msdn.com/b/dotnet/archive/2012/06/06/async-in-4-5-enabling-progress-and-cancellation-in-async-apis.aspx>

---

### **Question: 9**

---

You need to enable the capabilities that allow communication according to the technical requirements.

Which capabilities should you enable? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Shared User Certificates
- B. SSL Certificates
- C. Internet (Client)
- D. Default Windows Credentials

---

**Answer: B, C**

---

Explanation:

B: From scenario:

Communication between the app and e-book vendors must occur over an encrypted communication channel. Communication must use certificates to enable the SSL connection.

C:

Use this page to specify system features or devices that your app can use.

**Capabilities:**

- Documents Library
- Enterprise Authentication
- Internet (Client)
- Internet (Client & Server)
- Location
- Microphone
- Music Library
- Pictures Library
- Private Networks (Client & Server)
- Proximity
- Removable Storage
- Shared User Certificates
- Videos Library
- Webcam

**Description:**

Provides outbound access to the Internet and networks in public places like airports and coffee shops. For example, Intranet networks where the user has designated the network as public. Most apps that require Internet access should use this capability.

[More information](#)

<http://msdn.microsoft.com/en-us/library/windows/apps/Hh770532.aspx>

<http://msdn.microsoft.com/en-us/library/windows/apps/Hh986970.aspx>

## Question: 10

DRAG DROP

You need to ascertain whether the app trial period has expired.

You have the following code that you plan to insert at line AX22 of App.xaml.cs:

```
var daysRemaining = (Target 1
    -DateTime.Now).Days;
if(Target 2<= daysRemaining)
    isTrialComplete = true;
```

Which code snippets should you include in Target 1 and Target 2 to complete the code? (To answer, drag the appropriate code snippets to the correct targets in the answer area. Each code snippet 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.)

Answer Area	
<input type="button" value="licenseInformation.ExpirationDate"/> <input type="button" value="licenseInformation.TrialEndDate"/> <input type="button" value="license.ExpirationDate"/> <input type="button" value="license.TrialEndDate"/> <input type="button" value="0"/> <input type="button" value="15"/>	<p>Target 1: <input type="text"/></p> <p>Target 2: <input type="text"/></p>

---

**Answer:**

---

Target 1: licenseInformation.ExpirationDateTarget 2: 0

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.applicationmodel.store.licenseinformation.expirationdate.aspx>

**Question: 11**

---

You need to handle the following exception and meet the error handling requirements.

```
try
{
    TextBlock txt = (TextBlock)this.FindName("BookSummary");
    txt.Text = "This is a great book!";
}
```

Which code segment should you use?

- A. 

```
catch (NullReferenceException ex)
{
    txtErrorMessage.Text = Ereader.Code.Auditor.GetMessage
(Code.Auditor.ErrorType.NullReference);
    AuditResult result = await Ereader.Code.Auditor.WriteAuditAsync(ex.ToString());
}
```
- B. 

```
catch (NullReferenceException ex)
{
    txtErrorMessage.Text = Ereader.Code.Auditor.GetMessage
(Code.Auditor.ErrorType.General);
    AuditResult result = await Ereader.Code.Auditor.WriteAuditAsync(ex.ToString());
}
```
- C. 

```
catch (NullReferenceException ex)
{
    txtErrorMessage.Text = Ereader.Code.Auditor.GetMessage
(Code.Auditor.ErrorType.NullReference);
    AuditResult result = Ereader.Code.Auditor.WriteAuditAsync(ex.ToString());
}
```
- D. 

```
catch (NullReferenceException ex)
{
    txtErrorMessage.Text = Ereader.Code.Auditor.GetMessage
(Code.Auditor.ErrorType.General);
    AuditResult result = Ereader.Code.Auditor.WriteAuditAsync(ex.ToString());
}
```

- A.Option A
- B.Option B
- C.Option C
- D.Option D

---

**Answer: A**

---

**Question: 12**

---

## DRAG DROP

You need to meet the app caching requirements.

Which caching technique should you use in each scenario? (To answer, drag the appropriate technique to the correct scenario. Each technique 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.)

Answer Area	
remote web service	Last page read:
<b>LocalSettings</b> object	Future chapters in the book:
SQL Azure	Default page color:
<b>TemporaryFolder</b> object	
local configuration file	

**Answer:**

- Last page read: **SQL Azure**
- Future chapters in the book: **LocalSettings** object
- Default page color: **remote web service**

**Question: 13**

You need to configure the print options that a user can change.

Which lines of code should you use at line PG34? (Each correct answer presents part of the solution. Choose all that apply.)

- A. `printTask.Options.DisplayedOptions.Add(StandardPrintTaskOptions.HolePunch);`
- B. `printTask.Options.DisplayedOptions.Add(StandardOptions.Orientation);`
- C. `printTask.Options.DisplayedOptions.Add(StandardPrintTaskOptions.MediaSize);`
- D. `printTask.Options.DisplayedOptions.Add(StandardOptions.HolePunch);`
- E. `printTask.Options.DisplayedOptions.Add(StandardOptions.MediaSize);`
- F. `printTask.Options.DisplayedOptions.Add(StandardPrintTaskOptions.Orientation);`

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E
- F. Option F

**Answer: AC**

Explanation:

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

## **Case Study: 4**

### **Fabrikam, Inc**

#### **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 Windows 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="InvoicePrint" />
```

#### **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>
```

### Question: 1

#### 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 }
```

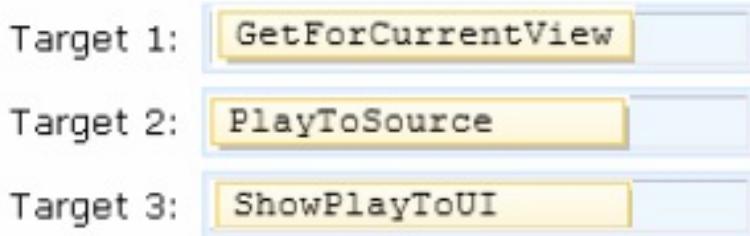
Which elements should you include in Target 1, Target 2 and Target 3 to complete the code? (To answer, drag the appropriate elements to the correct targets in the answer area. Each element may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view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

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

---

**Answer:**

---



Explanation:

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

---

### Question: 2

---

You need to recommend a solution to comply with the language requirements of the app.

What should you include in the recommendation? (Each correct answer presents part of the solution. Choose three.)

- A. Use the ResourceLoader class to retrieve localized strings from the code.
- B. In a subfolder of the app, create three .config files.
- C. Use the ResourceManager class to retrieve localized strings from the code.
- D. Use the x:Uid property for all of the controls that require localization.
- E. Use the x:id property for all of the controls that require localization.
- F. In a subfolder of the app, create three .resw files.

---

**Answer: A, D, F**

---

Explanation:

From scenario: The app interface must be available in English, Spanish, and French.

A (not C): You can load string resources from objects such as resource files, libraries, controls, and Windows Store app packages and manifests.

\* Example: var res = Windows.ApplicationModel.ResourceLoader('Errors');  
res.GetString('AlreadyRegistered');

D (not E): x:Uid directive

Provides a unique identifier for markup elements. For Windows Runtime XAML, this unique identifier is used by XAML localization processes and tools, such as using resources from a .resw resource file.

F (not B): Windows Store apps that use XAML

For Windows Store apps that use XAML, you localize these fields in resources.resw files by using the Resource Editor.

To create the United States English version of the manifest fields, you would add an en-us\resources.resw file.

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/hh965326.aspx>

---

### Question: 3

---

You create the following method in a Utility class: (Line numbers are included for reference only.)

```
01 using Windows.Storage.AccessCache;
02 static void StoreMostViewed(StorageFile file)
03 {
04
05 }
```

You need to complete the code to meet the requirement for displaying the last 10 viewed pictures.

What code should you add to line 04? (More than one answer choice may achieve the goal. Select the BEST answer.)

- A. StorageApplicationPermissions.FutureAccessList.Add(file, file.Name);
- B. StorageApplicationPermissions.MostlyRecentlyUsedI\_ist.Add(file, file.Name);
- C. StorageItemMostRecentlyUsedList.Entries.Add(file, file.Name);
- D. StorageItemAccessList.Entries.Add(file, file.Name);

**Answer: A**

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.storage.accesscache.storageapplicationpermissions.futureaccesslist.aspx>

#### **Question: 4**

HOTSPOT

You need to handle the Click event of the Print button.

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

```
private async void Target 1
    (object sender, RoutedEventArgs e)
{
    await PrintManager.Target 2;
}
```

Which code snippets should you insert in Target 1 and Target 2 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:

#### **Answer Area**

Target 1:

btnPrintClick  
InvokePrint  
InvokePrintButtonClick

Target 2:

CreatePrintTask()  
GetForCurrentView()  
ShowPrintUIAsync()

**Answer:**

Answer Area

Target 1:

lbtnPrintClick  
InvokePrint  
InvokePrintButtonClick

Target 2:

CreatePrintTask()  
GetForCurrentView()  
ShowPrintUIAsync()

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/windows.graphics.printing.printmanager.showprintuiasync.aspx>

**Question: 5**

You need to configure Package.appxmanifest to support the download of pictures. The solution must meet the general requirements.

Which code segment should you add to line 04? (More than one answer choice may achieve the goal. Select the BEST answer.)

- A. <Task Type="timer" />
- B. <Task Type="SystemEvent" />
- C. <Task Type="deviceUse" />
- D. <Task Type="pushNotification" />

**Answer: D**

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/br211469.aspx>

**Question: 6**

DRAG DROP

You need to recommend which code must be implemented to meet the requirements for resuming the video tour downloads.

Develop the solution by selecting and ordering the required code snippets. You may not need all of the code snippets.

## Answer Area

```
downloads = await BackgroundDownloader.  
GetCurrentDownloadsAsync();
```

```
}
```

```
await Task.WhenAll(tasks);
```

```
}
```

```
downloads = await BackgroundDownloader.  
RequestUnconstrainedDownloadsAsync();
```

```
}
```

```
await Task.WhenAny(tasks);
```

```
}
```

```
IReadOnlyList<DownloadOperation>  
downloads = null;
```

```
if (downloads.Count > 0)  
{  
    List<Task> tasks = new List<Task>();  
    foreach (DownloadOperation download in downloads)  
    {
```

```
        tasks.Add(HandleDownloadAsync  
(download, false));
```

**Answer:**

Box 1:

```
IReadOnlyList<DownloadOperation>  
downloads = null;
```

Box 2:

```
downloads = await BackgroundDownloader.  
GetCurrentDownloadsAsync();
```

Box 3:

```

if (downloads.Count > 0)
{
    List<Task> tasks = new List<T
ask>();
    foreach (DownloadOperation do
wnload in downloads)
    {
}

```

Box 4:

```

tasks.Add(HandleDownloadAsync
(download, false));

```

Box 5:

```

}
await Task.WhenAny(tasks);
}

```

Explanation:

Note:

- \* GetCurrentDownloadsAsync

Returns a collection of pending downloads that are not associated with a group.

- \* await Task.WhenAny

By using Task.WhenAny, you can start multiple tasks at the same time and process them one by one as they're completed rather than process them in the order in which they're started.

- \* From scenario:

/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.

/ When downloading the video tours, the app must remain responsive, and each download must be processed on a separate thread.

Incorrect:

- \* Not: await Task.WhenAll (need separate threads)

You apply the Task.WhenAll method to a collection of tasks. The application of WhenAll returns a single task that isn't complete until every task in the collection is completed. The tasks appear to run in parallel, but no additional threads are created. The tasks can complete in any order.

- \* Not: RequestUnconstrainedDownloadsAsync

Used to request an unconstrained download operation

When this method is called the user is provided with a UI prompt that they can use to indicate their consent for an unconstrained operation.

An unconstrained transfer operation will run without the resource restrictions normally associated with background network operations while a device is running on battery.

<http://msdn.microsoft.com/en-us/library/windows/apps/br207128.aspx>

[http://msdn.microsoft.com/en-us/library/hh194914\(v=vs.110\).aspx](http://msdn.microsoft.com/en-us/library/hh194914(v=vs.110).aspx)

## Question: 7

You add a button named btnDownloadTours to the search results page.

You create a method named DownloadTour to download video tours synchronously.

DownloadTour receives a single parameter of type integer, representing the ID of a video tour.

As customers add listings to their favorites list, the ID of the video tour is added to a collection named selectedTours.

You need to implement the code required to download the video tour based on the video tour requirements.

What code should you add to the Click event of btnDownloadTours? (More than one answer choice may achieve the

goal. Select the BEST answer.)

- A. `Parallel.For(0, selectedTours.Count, i => DownloadTour(selectedTours [i]));`
- B. `for (int i=0; i < selectedTours.Count; i++)
{
 DownloadTour(selectedTours[i]);
}`
- C. `var tasks = new List<Task>()
foreach (var tour in selectedTours)
{
 var task = new Task(() => DownloadTour(tour));
 tasks.Add(task);
 task.Start();
}
Task.WaitAll(tasks);`
- D. `foreach (var tour in selectedTours)
{
 DownloadTour(tour);
}`

- A. Option A  
B. Option B  
C. Option C  
D. Option D

---

### Answer: C

---

Explanation:

[http://msdn.microsoft.com/en-us/library/system.threading.tasks.task\(v=vs.110\).aspx](http://msdn.microsoft.com/en-us/library/system.threading.tasks.task(v=vs.110).aspx)  
[http://msdn.microsoft.com/en-us/library/dd270695\(v=vs.110\).aspx](http://msdn.microsoft.com/en-us/library/dd270695(v=vs.110).aspx)

---

### Question: 8

---

You create a mobile service to send push notifications to the app.

You configure the service and the app to work with Windows Push Notification Services (WNS).

You add the following code to the App.xaml.cs file:

```
using Windows.Networking.PushNotifications;
...
public static PushNotificationChannel pushChannel
{get; private set; }
private async void GetChannel()
{
    pushChannel = await PushNotificationChannelManager.
        CreatePushNotificationChannelForApplicationAsync();
}
```

You need to ensure that the app can access the push notification channel.

What should you do first?

- A. Add a call to GetChannel in the OnLaunched event handler of the app.
- B. Set the Uri property of pushChannel in the OnActivated event handler of the app.
- C. Set the Uri property of pushChannel in the OnLaunched event handler of the app.
- D. Add a call to GetChannel in the OnActivated event handler of the app.

---

**Answer: A**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.ui.xaml.application.onlaunched.aspx>

### Question: 9

---

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
		reset test
		-reportoutputpath C:\reports\report.xml
		Desktop desktopdevice windowstoreapp

---

**Answer:**

---

Answer Area

		-appxpackagepath C:\app\re.appx
		reset test
		-reportoutputpath C:\reports\report.xml
		Desktop desktopdevice windowstoreapp

Explanation:

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

**Case Study: 5**

**Mix Questions:**

**Question: 1**

**DRAG DROP**

You are developing a Windows Store app that allows users to capture videos and upload them to a social networking website.

You need to ensure that the app saves the captured video in MP4 format to the user's videos library.

How should you complete the code segment? (To answer, drag the appropriate option to the correct location or locations in the answer area. Each option 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.)

```
Windows.Storage.KnownFolders.VideosLibrary.CreateFileAsync("video.mp4",  
  
Windows.Storage.KnownFolders.VideosLibrary.CreateFolderAsync  
("video", VideoFormat.Mp4,  
  
awaitmediaCapture.StartRecordToCustomSinkAsync  
(recordProfile, videoFile);  
  
await mediaCapture.StartRecordToStorageFileAsync(recordProfile, videoFile);
```

**Answer Area**

```
private async void CaptureVideo()  
{  
    var videoFile =  
        await  
            Windows.Storage.CreateCollisionOption.GenerateUniqueName);  
  
    var quality = Windows.Media.MediaProperties.VideoEncodingQuality.Auto;  
    var recordProfile = MediaEncodingProfile.CreateMp4(quality);  
  
}
```

**Answer:**

```
Windows.Storage.KnownFolders.VideosLibrary.CreateFolderAsync
("video", VideoFormat.Mp4,
awaitmediaCapture.StartRecordToCustomSinkAsync
(recordProfile, videoFile);
```

## Answer Area

```
private async void CaptureVideo()
{
    var videoFile =
        await await mediaCapture.StartRecordToStorageFileAsync(recordProfile, videoFile);

    Windows.Storage.CreateCollisionOption.GenerateUniqueName);

    var quality = Windows.Media.MediaProperties.VideoEncodingQuality.Auto;
    var recordProfile = MediaEncodingProfile.CreateMp4(quality);

    Windows.Storage.KnownFolders.VideosLibrary.CreateFileAsync("video.mp4",
}
```

## Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/hh700863.aspx>  
<http://msdn.microsoft.com/en-us/library/windows/apps/windows.storage.knownfolders.videoslibrary.aspx>  
<http://msdn.microsoft.com/en-us/library/windows/apps/windows.storage.storagefolder.createfileasync.aspx>

**Question: 2**

## HOTSPOT

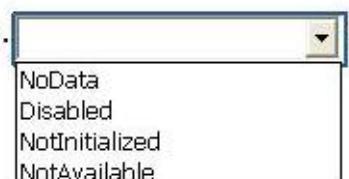
You are developing a Windows Store app that uses location services.

You need to indicate that a user has blocked location services.

How should you complete the code segment? (To answer, select the appropriate line of code from the drop-down list in the answer area.)

```
Windows.Devices.Geolocation.PositionStatus status;

...
if (status == Windows.Devices.Geolocation.PositionStatus.
{
```




---

**Answer:**

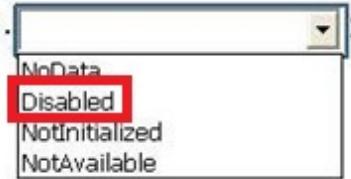
---

```

Windows.Devices.Geolocation.PositionStatus status;

...
if (status == Windows.Devices.Geolocation.PositionStatus.
{
    ...
}

```



Explanation:

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

### Question: 3

You are developing a Windows Store app that uses a webcam.  
You need to be notified if new webcams are connected to the system.  
Which class should you use?

- A. ManagementObjectFinder
- B. FileSystemWatcher
- C. DeviceWatcher
- D. ServiceDevice

---

**Answer: C**

---

Explanation:

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

### Question: 4

HOTSPOT

You are developing a Windows Store app. You have the following resource table.

	Name	Value	Comment
▶	AppName	Contoso Works	
*			

You need to bind the text resource to a XAML text block.

How should you complete the code segment? (To answer, select the appropriate option from each drop-down list in the answer area.)

```

<TextBlock x:Name="AppName" Text="" />

```

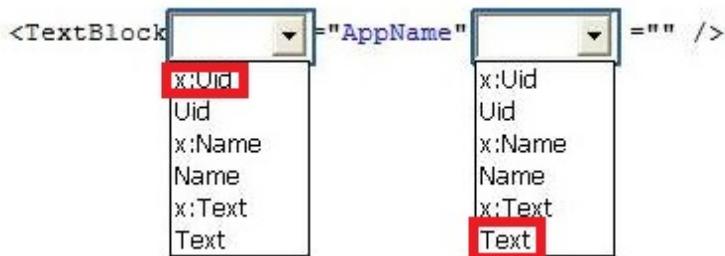
x:Uid  
Uid  
x:Name  
Name  
x:Text  
Text

x:Uid  
Uid  
x:Name  
Name  
x:Text  
Text

---

**Answer:**

---



Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/Hh965326.aspx>

## Question: 5

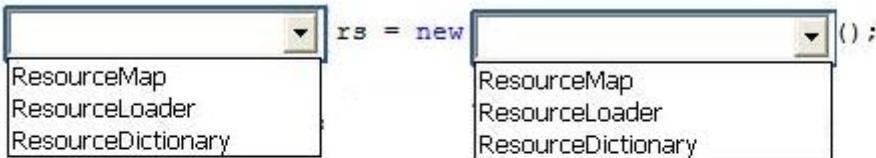
HOTSPOT

You are developing a Windows Store app. You have the following resource table.

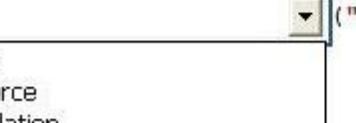
	Name	Value	Comment
▶	AppName	Contoso Works	
*			

You need to use text resources in the app. How should you complete the code segment? (To answer, select the appropriate line of code from each drop-down list in the answer area.)

```
protected string GetAppName ()  
{
```

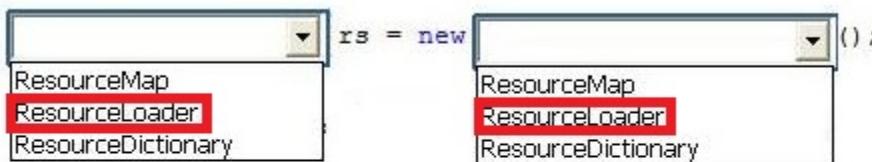


```
    rs = new ResourceDictionary ();  
  
    string appname = rs.GetString ("AppName");  
  
    return appname;  
}
```

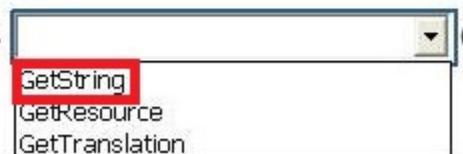


Answer:

```
protected string GetAppName()
{
```



```
    string appname = rs.  
    return appname;  
}
```



Explanation:

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

### Question: 6

DRAG DROP

You are developing a Windows Store app. The `GetData()` method returns an integer.

You need to run the method as an asynchronous task.

How should you complete the code segment? (To answer, drag the appropriate expression to the correct position in the answer area. Each expression 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.)

Answer Area

```
private void StartTask()
{
    var t =  .Factory. ((() => GetData()));
}
```

Task<int>

(int) Task

Task

StartNew

Finalize

Equals

Answer:

## Answer Area

```
private void StartTask()
{
    var t = Task<int> .Factory. (int)Task (() => GetData());
}
```

**Task****StartNew****Finalize****Equals**

Explanation:

<http://msdn.microsoft.com/en-us/library/hh524395.aspx>

**Question: 7**

## DRAG DROP

You are developing a Windows Store app.

The app must allow salespeople to choose customer contacts by using a ContactPicker class. It also must continue to be responsive while the ContactPicker class is displayed.

You need to ensure that the ContactPicker class is displayed to meet the requirements.

How should you complete the code segment? (To answer, drag the appropriate term to the correct location or locations in the answer area. Each term 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.)

## Answer Area

```
private [ ] void ContactButton_Click(object s, RoutedEventArgs e)
{
    var cp = new ContactPicker();
    ContactInformation contact = [ ] cp.PickSingleContactAsync();
}
```

**Answer:**

## Answer Area

```
private [ ] void ContactButton_Click(object s, RoutedEventArgs e)
{
    var cp = new ContactPicker();
    ContactInformation contact = [ ] await cp.PickSingleContactAsync();
}
```

Explanation:

<http://msdn.microsoft.com/en-us/library/hh156528.aspx>

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.applicationmodel.contacts.contactpicker.picksinglecontactasync.aspx>

### Question: 8

#### DRAG DROP

You are developing a Windows Store app.

The app has numerous features that should be enabled or disabled based on the license information of the app.

You need to test the trial functionality by using the CurrentAppSimulator class.

Which three actions should you perform in sequence? (To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.)

#### Answer Area

Set the **LicenseInformation/App/IsTrial** element to **true**.

Open the WindowsStoreProxy.manifest file.

Start the app in Debug or Release mode to monitor areas marked for the trial status.

Set the **LicenseInformation/App/TrialMode** element to **true** instead of **false**.

Start the app in Simulator mode with the purchased option selected.

Open the WindowsStoreProxy.xml file.

#### Answer:

#### Answer Area

Start the app in Debug or Release mode to monitor areas marked for the trial status.

Set the **LicenseInformation/App/IsTrial** element to **true**.

Open the WindowsStoreProxy.xml file.

Set the **LicenseInformation/App/TrialMode** element to **true** instead of **false**.

Start the app in Simulator mode with the purchased option selected.

#### Explanation:

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

### Question: 9

#### DRAG DROP

You are developing a Windows Store app.

You are testing a remote mobile device named Contoso1.

You are testing only C# code in the solution.

You need to configure the Visual Studio debug options.

How should you configure the debug options? (To answer, drag the appropriate options to the correct location or locations in the answer area. Each option 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.)

Answer Area

Simulator	
Remote Machine	
Native Only	
Contoso1	
Managed Only	

---

**Answer:**

---

Answer Area

Simulator	Remote Machine
Native Only	Contoso1
	Managed Only

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/hh771032.aspx>

---

### Question: 10

---

You are developing a Windows Store app that invokes asynchronous methods to keep the app responsive to user actions.

The app must handle exceptions gracefully, so they are never displayed to the user.

Which code segment should you use?

```

A. private async void SearchButton_Click(object sender, RoutedEventArgs e)
{
    try
    {
        var result = await this.SearchAsync();
        searchLabel.Text = "Found " + result.Count + " results" + Environment.NewLine;
        ...
    }
    catch (Exception ex)
    {
        ...
    }
}

B. private async void SearchButton_Click(object sender, RoutedEventArgs e)
{
    var result = await this.SearchAsync();
    try
    {
        searchLabel.Text = "Found " + result.Count + " results" + Environment.NewLine;
        ...
    }
    catch (Exception ex)
    {
        ...
    }
}

C. private async void SearchButton_Click(object sender, RoutedEventArgs e)
{
    var result = await this.SearchAsync();
    try
    {
        searchLabel.Text = "Found " + result.Count + " results" + Environment.NewLine;
        ...
    }
    catch (AsynchronousException ex)
    {
        ...
    }
}

D. private dynamic SearchButton_Click(object sender, RoutedEventArgs e)
{
    try
    {
        var result = this.SearchAsync();
        searchLabel.Text = "Found " + result.Count + " results" + Environment.NewLine;
        ...
    }
    catch (Exception ex)
    {
        ...
    }
}

```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

---

**Answer: A**

---

**Explanation:**

<http://msdn.microsoft.com/en-us/library/hh156528.aspx>  
<http://msdn.microsoft.com/en-us/library/dk1507sz.aspx>

---

### **Question: 11**

---

**DRAG DROP**

You are developing a Windows Store app.

You need to create and run unit tests for the app.

Which three actions should you perform in sequence? (To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order,)

Answer Area
Modify the production classes to implement the test code.
Modify the Package.appxmanifest file with the appropriate settings.
Create a new unit test solution.
Add code to the test classes and run the tests.
Create a unit test project in the existing solution.
Create a Unittest.appxmanifest file to store the test settings.

---

**Answer:**

---

Answer Area
Create a unit test project in the existing solution.
Add code to the test classes and run the tests.
Create a Unittest.appxmanifest file to store the test settings.

**Explanation:**

<http://msdn.microsoft.com/en-us/library/windows/apps/ms182532.aspx>

---

### **Question: 12**

---

**DRAG DROP**

You are developing a Windows Store app. The app allows users to purchase additional features from within the app.

You need to run the EnableExtendedFeatures() method if the user has purchased extended features.

How should you complete the code segment? (To answer, drag the appropriate lines of code to the correct location or locations. Each line of code 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.)

```
CurrentAppSimulator.LicenseInformation;  
license.ProductLicenses["extend"]  
RequestProductPurchaseAsync  
new LicenseInformation();  
license.ProductLicenses  
GetProductPurchaseAsync
```

Answer Area

```
LicenseInformation license =  
  
if (license.  
    .IsActive)  
{  
    try  
    {  
        var receipts = await CurrentAppSimulator.  
            ("extend", false);  
        EnableExtendedFeatures();  
    }  
    catch (Exception ex)  
    {  
        DisplayError(ex);  
    }  
}
```

Answer:

```

new LicenseInformation();
license.ProductLicenses
GetProductPurchaseAsync

```

## Answer Area

```

LicenseInformation license =
    RequestProductPurchaseAsync

if (license. license.ProductLicenses["extend"] .IsActive)
{
    try
    {
        var receipts = await CurrentAppSimulator.

            CurrentAppSimulator.LicenseInformation; ("extend", false);

        EnableExtendedFeatures();
    }
    catch (Exception ex)
    {
        DisplayError(ex);
    }
}

```

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.applicationmodel.store.currentappsimulator.licenseinformation.aspx>  
<http://msdn.microsoft.com/en-us/library/windows/apps/windows.applicationmodel.store.currentappsimulator.aspx>

### Question: 13

You are preparing a Windows Store game update for deployment. Game performance must be analyzed by using a profiling tool.

You need to ensure that you collect the most accurate performance data for the analysis.

Which Visual Studio project configuration options should you use? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Choose the Simulator deployment target for the game.
- B. Use the Release build of the game.
- C. Use the Debug build of the game.
- D. Choose the Local Machine deployment target for the game.

---

**Answer: B, D**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xx130654.aspx#Performance>

### **Question: 14**

You are preparing to deploy a Windows Store app to the marketplace.  
You need to ensure that unhandled errors and exceptions are never displayed to users.  
What should you do?

- A. In the app object, wrap the call to the Window.Current.Activate() method in a try-catch statement to handle any exceptions that occur.
- B. Open the Exceptions window in Visual Studio and clear the check box for unhandled exceptions for the Common Language Runtime.
- C. Write a handler for the UnhandledException event and set the Handled property on the UnhandledExceptionEventArgs object to true.
- D. Write a handler for the UnhandledException event and set the CancelBubble property on the UnhandledExceptionEventArgs object to true.

**Answer: C**

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.ui.xaml.unhandledexceptioneventargs.handled.aspx>

### **Question: 15**

#### **DRAG DROP**

You are collecting metrics from a Windows Store game that has been deployed to the Windows Store for a year.  
You need to collect data to analyze the quality and success of the game.  
Which metric should you use for each statistic? (To answer, drag the appropriate metrics to the correct location or locations in the answer area. Each metric 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.)

Answer Area	
Telemetry	How often the app has launched
Fuslog Viewer	Listing views
Analytics	How long the app has run
Ranking	Crashes and exceptions
	Downloads
	Customer ratings
	Reviews

**Answer:**

Telemetry	How often the app is launched
-----------	-------------------------------

Analytics	Listing views
Telemetry	How long the app has run
Telemetry	Crashes and exceptions
Analytics	Downloads
Analytics	Customer ratings
Analytics	Reviews

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/hh967787.aspx>

## Question: 16

---

### HOTSPOT

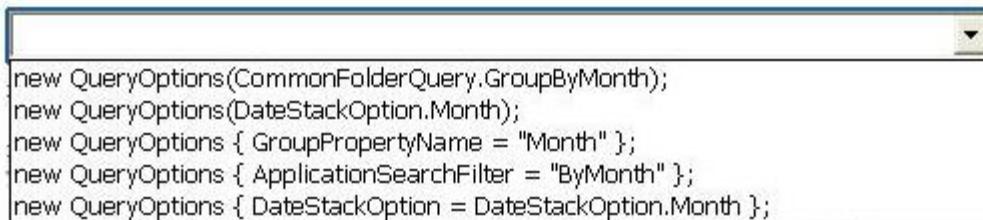
You are developing a Windows Store app that allows users to copy music from their local computers to removable storage.

The app displays songs grouped by the month the song was downloaded and allows individual songs to be copied to the removable storage device. The user interface for selecting and copying songs uses data binding.

You need to load and return songs in a format appropriate for data binding.

How should you complete the code segment? (To answer, select the appropriate line of code from each drop-down list in the answer area.)

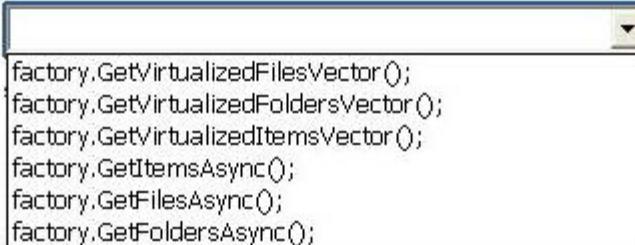
```
var queryOptions =
```



new QueryOptions(CommonFolderQuery.GroupByMonth);  
new QueryOptions(DateStackOption.Month);  
new QueryOptions { GroupPropertyName = "Month" };  
new QueryOptions { ApplicationSearchFilter = "ByMonth" };  
new QueryOptions { DateStackOption = DateStackOption.Month };

```
var fileQuery = KnownFolders.MusicLibrary  
.CreateFileQueryWithOptions(queryOptions);  
var factory = new FileInformationFactory(fileQuery,  
ThumbnailMode.MusicView);
```

```
var dataSource =
```



factory.GetVirtualizedFilesVector();  
factory.GetVirtualizedFoldersVector();  
factory.GetVirtualizedItemsVector();  
factory.GetItemsAsync();  
factory.GetFilesAsync();  
factory.GetFoldersAsync();

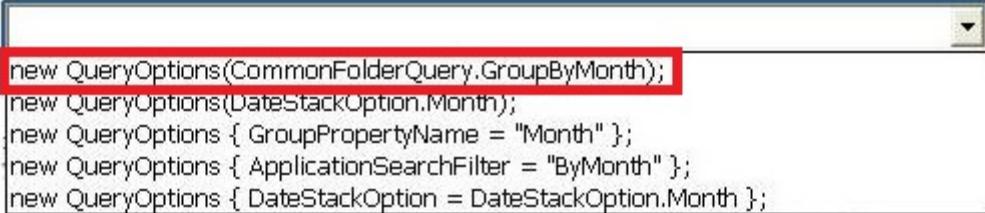
```
return dataSource;
```

---

Answer:

---

```
var queryOptions =
```



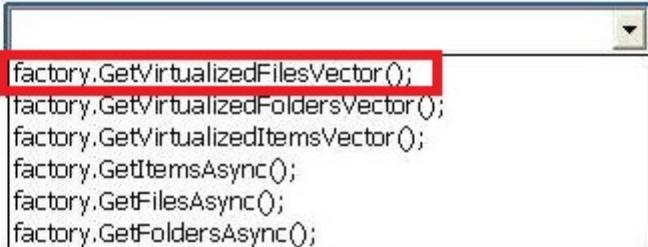
```

new QueryOptions(CommonFolderQuery.GroupByMonth);
new QueryOptions(DateStackOption.Month);
new QueryOptions { GroupPropertyName = "Month" };
new QueryOptions { ApplicationSearchFilter = "ByMonth" };
new QueryOptions { DateStackOption = DateStackOption.Month };

```

```
var fileQuery = KnownFolders.MusicLibrary
    .CreateFileQueryWithOptions(queryOptions);
var factory = new FileInformationFactory(fileQuery,
    ThumbnailMode.MusicView);
```

```
var dataSource =
```



```

factory.GetVirtualizedFilesVector();
factory.GetVirtualizedFoldersVector();
factory.GetVirtualizedItemsVector();
factory.GetItemsAsync();
factory.GetFilesAsync();
factory.GetFoldersAsync();

```

```
return dataSource;
```

Explanation:

QueryOptions.QueryOptions(CommonFolderQuery) constructor (Windows)

FileInformationFactory.GetVirtualizedFilesVector | getVirtualizedFilesVector method (Windows)

### Question: 17

You are developing a Windows Store app that allows users to compose musical beats and rhythms.

The app must meet the following requirements:

The app must save the work in progress in case the app suspends or terminates before users save their work.

If the app closes before the work is complete, work in progress should be automatically reloaded so that users can continue seamlessly from where they left off.

Users should be able to resume work on another device with the app installed, provided that the user supplies the same credentials on both machines.

You need to ensure that the app meets the requirements.

How should the app save the work in progress?

- A. by storing it in a memory-mapped file
- B. by serializing it to a temporary app store
- C. by serializing it to the roaming app store
- D. by serializing it to the local app store

---

**Answer: C**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/hh465094.aspx>

---

### Question: 18

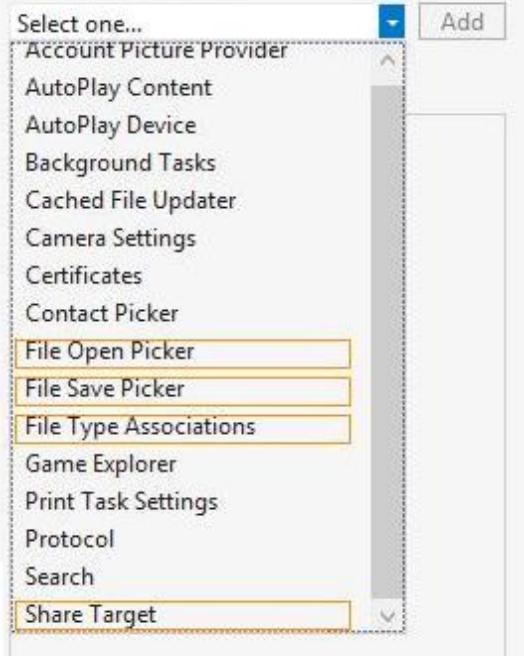
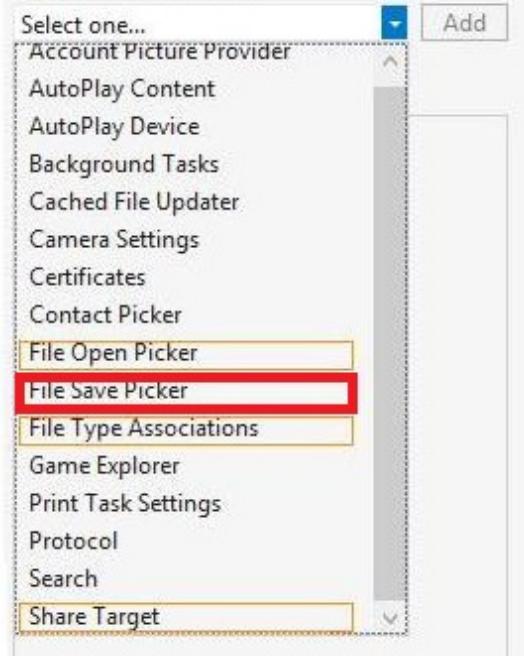
---

**HOTSPOT**

You are developing a Windows Store app that saves a file to a cloud service for other apps to use.

You need to configure the app manifest.

Which declaration should you use? (To answer, select the appropriate declaration from the drop-down list in the answer area.)

**Available Declarations:****Answer:****Available Declarations:****Explanation:**

<http://msdn.microsoft.com/en-us/library/windows/apps/br211473.aspx>

---

### **Question: 19**

You are designing a Windows Store app that creates large amounts of temporary binary data each time it is run. You need to ensure that data is persisted while the app is running but deleted when the app is closed. Which app data storage mechanism should you use? (Each correct answer presents a complete solution. Choose all that apply.)

- A. a temporary app data store
- B. the app files of the local app data store
- C. the app settings of the local app data store
- D. a roaming app data store

---

**Answer: A, B, C**

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/hh464917.aspx>

---

### **Question: 20**

You are developing a Windows Store app. The app has the following requirements:

Files must be stored on a device's file system so other Windows Store apps can access them.

Additional configuration must be performed to make the location of the files available to other Windows Store apps.

You need to meet the requirements.

Where should you store the files? (Each correct answer presents a complete solution. Choose all that apply.)

- A. Removable devices
- B. App data locations
- C. User's download folder
- D. Documents library
- E. App install directory

---

**Answer: A, E**

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/hh967755.aspx>

---

### **Question: 21**

**DRAG DROP**

You are developing a Windows Store game that downloads virtual store information from two servers. Store information from Server1 is sent as a hex string. Store information from Server2 is sent as Base64 encoding.

Data from Server1 is configuration data and must be captured before data from Server2 is captured.

You need to compare the strings from each server to verify that the cryptographic buffers match.

Which three actions should you perform in sequence? (To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.)

Answer Area	
Load and convert data from Server2 by using the following code segment.	
<pre>String strStoreData = GetFromServer2(); IBuffer buffer2 =     CryptographicBuffer.DecodeFromHexString (strStoreData);</pre>	
Compare data between buffer1 and buffer2 by using the following code segment.	
<pre>Boolean bVal_1 = Buffer.Compare(buffer1, buffer2);</pre>	
Load and convert data from Server2 by using the following code segment.	
<pre>String strStoreData = GetFromServer2(); CryptoBuffer buffer2 =     CryptographicBuffer.DecodeFromHex (strStoreData);</pre>	
Load and convert data from Server1 by using the following code segment.	
<pre>String strConfiguration = GetFromServer1(); IBuffer buffer1 =     CryptographicBuffer.DecodeFromBase64String (strConfiguration);</pre>	
Compare data between buffer1 and buffer2 by using the following code segment.	
<pre>Boolean bVal_1 = CryptographicBuffer.Compare (buffer1, buffer2);</pre>	
Load and convert data from Server1 by using the following code segment.	
<pre>String strConfiguration = GetFromServer1(); CryptoBuffer buffer1 =     CryptographicBuffer.DecodeFromBase64String (strConfiguration);</pre>	

**Answer:**

Box1

Box3

Box2

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.security.cryptography.cryptographicbuffer.aspx>**Question: 22****DRAG DROP**

You are developing a Windows Store app that caches user application data in the local data store.

The app must create a setting named `UserName` within a container named `UserSettings`. The app must store the user name in the local store.

You need to meet the requirements.

How should you complete the code segment? (To answer, drag the appropriate options to the correct location or locations. Each option 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.)

Answer Area

Always

LocalSettings

localStore

LocalFolder

Existing

Values

Name

userContainer

```
var localStore = ApplicationData.Current. [ ]; ;
var userContainer = localStore.CreateContainer("UserSettings",
    Windows.Storage.ApplicationDataCreateDisposition. [ ] );
if ( [ ] .Containers.ContainsKey("UserSettings"))
{
    localStore
        .Containers["UserSettings"]
        . [ ] ["UserName"] = "TestUser";
}
```

**Answer:**

Localsettings

Values

Localstore

Always

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.storage.applicationdata.localsettings.aspx><http://msdn.microsoft.com/en-us/library/windows/apps/windows.storage.applicationdatacontainer.aspx><http://msdn.microsoft.com/en-us/library/windows/apps/windows.storage.applicationdatacreatedisposition.aspx>**Question: 23**

HOTSPOT

You are developing a Windows Store app.

You need to encrypt data.

How should you complete the code segment? (To answer, select the appropriate line of code from each drop-down list in the answer area.)

```
protected async void EncryptData(string data)
{
    String descriptor = "LOCAL=user";
    BinaryStringEncoding encoding = BinaryStringEncoding.Utf8;
    DataProtectionProvider provider =
        new DataProtectionProvider( [ ] );
    [ ]
    encoding
    buffer
    descriptor
    data

    IBuffer buffer =CryptographicBuffer.

    ConvertStringToBinary([ ], [ ]);
    [ ]
    encoding
    buffer
    descriptor
    data

    IBuffer encrypted = await provider.ProtectAsync([ ]);
    [ ]
    encoding
    buffer
    descriptor
    data
```

---

**Answer:**

---

```

protected async void EncryptData(string data)
{
    String descriptor = "LOCAL=user";
    BinaryStringEncoding encoding = BinaryStringEncoding.Utf8;
    DataProtectionProvider provider =
        new DataProtectionProvider( [ ] );
    [ ]
        encoding
        buffer
        descriptor
        data
    IBUFFER buffer = CryptographicBuffer.

    ConvertStringToBinary( [ ] , [ ] );
    [ ]
        encoding
        buffer
        descriptor
        data
    [ ]
        encoding
        buffer
        descriptor
        data
    IBuffer encrypted = await provider.ProtectAsync( [ ] );
}

```

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.security.cryptography.dataprotection.dataprotectionprovider.aspx>

### Question: 24

DRAG DROP

You are developing a Windows Store app that downloads large files from the Internet by using background tasks. The app includes the following:

TaskInstance is an instance of the IBackgroundTask interface that provides access to a background task instance. DownloadFilesAsync() is the asynchronous method that performs the download.

You need to ensure that the app performs the download operation asynchronously in a background task.

Which three actions should you perform in sequence? (To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.)

Answer Area
Create the deferral by requesting it from the <b>taskInstance</b> instance.
Call the <b>DownloadFilesAsync()</b> method by using the <b>await</b> operator.
Invoke the <b>Complete()</b> method on the deferral.
Invoke the <b>Run()</b> method on the deferral.
Call the <b>DownloadFilesAsync()</b> method by using the <b>async</b> operator.
Invoke the <b>Begin()</b> method on the deferral.

**Answer:**

Answer Area
Create the deferral by requesting it from the <b>taskInstance</b> instance.
Call the <b>DownloadFilesAsync()</b> method by using the <b>await</b> operator.
Invoke the <b>Complete()</b> method on the deferral.
Invoke the <b>Run()</b> method on the deferral.
Call the <b>DownloadFilesAsync()</b> method by using the <b>async</b> operator.
Invoke the <b>Begin()</b> method on the deferral.

**Explanation:**

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

### Question: 25

**DRAG DROP**

You are developing a Windows Store app that must use a background task to retrieve local weather conditions from the Internet.

You need to ensure that the app can update the user interface while it is in a running or suspended state.

How should you complete the code segment? (To answer, drag the appropriate term to the correct location or locations in the answer area. Each term 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.)

sealed  
abstract  
new  
Run  
ExecuteTask  
IBackgroundTrigger  
IBackgroundTask

## Answer Area

```
namespace WeatherTaskLibrary
{
    public sealed class WeatherClass : IBackgroundTask
    {
        public void Run(IBackgroundTaskInstance weatherTask)
        {
            ...
        }
    }
}
```

**Answer:**

```
namespace WeatherTaskLibrary
{
    public sealed class WeatherClass : IBackgroundTask
    {
        public void Run(IBackgroundTaskInstance weatherTask)
        {
            ...
        }
    }
}
```

**Question: 26****DRAG DROP**

You are developing a Windows Store app.

The app must send video from a phone to a TV by using the Play To contract.

You need to complete the SourceRequest event of the PlayToManager object.

How should you complete the code segment? (To answer, drag the appropriate lines of code to the correct location or 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.)

```

object
deferral.Complete();
sr.GetDeferral();
newDeferral(sr.SourceRequest);
Windows.Media.PlayTo.PlayToManager
e.Complete(deferral);

```

## Answer Area

```

private async void SourceRequested(
    Windows.Media.PlayTo.PlayToManager sender,
    Windows.Media.PlayTo.PlayToSourceRequestedEventArgs e)
{
    await dispatcher.RunAsync(
        Windows.UI.Core.CoreDispatcherPriority.Normal, () =>
    {
        Windows.Media.PlayTo.PlayToSourceRequest sr =
            e.SourceRequest;
        Windows.Media.PlayTo.PlayToSource controller = null;
        Windows.Media.PlayTo.PlayToSourceDeferral deferral =
            e.GetDeferral();

        controller = ((MediaElement)mediaElement).PlayToSource;
        sr.SetSource(controller);

    });
}

```

**Answer:**

```

object
newDeferral(sr.SourceRequest);
e.Complete(deferral);

```

## Answer Area

```

private async void SourceRequested(
    Windows.Media.PlayTo.PlayToManager sender,
    Windows.Media.PlayTo.PlayToSourceRequestedEventArgs e)
{
    await dispatcher.RunAsync(
        Windows.UI.Core.CoreDispatcherPriority.Normal, () =>
    {
        Windows.Media.PlayTo.PlayToSourceRequest sr =
            e.SourceRequest;
        Windows.Media.PlayTo.PlayToSource controller = null;
        Windows.Media.PlayTo.PlayToSourceDeferral deferral =
            sr.GetDeferral();

        controller = ((MediaElement)mediaElement).PlayToSource;
        sr.SetSource(controller);

        deferral.Complete();

    });
}

```

## Explanation:

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

**Question: 27**

You are developing a Windows Store app that displays notifications on the lock screen.

The app must execute a background task when the notification arrives. In addition, the app must receive push notifications from Windows Push Notification Service (WNS).

You need to use a push notification mechanism that meets the requirements.

Which push notification mechanism should you use?

- A. Toast notification
- B. Raw notification
- C. Tile update
- D. Badge update

---

**Answer: B**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/jj676791.aspx>

### Question: 28

---

#### HOTSPOT

You are developing a Windows Store app that displays and prints information. You have the following code.

```
private Windows.Graphics.Printing.PrintManager prntMgr;
private Windows.UI.Xaml.Printing.PrintDocument prntDoc;
private IPrintDocumentSource prntDocSrc = null;
```

You need to enable printing. How should you complete the initialization of the print functionality? (To answer, select the appropriate element from the drop-down list in the answer area.)

```
private void InitializePrinting()
{
    myMgr = PrintManager
        .Current.GetPrintView();
        .GetForCurrentView();
        .PrintTaskRequested();

    myMgr.PrintTaskRequested +=
        myMgr_PrintTaskRequested;

    myDoc =
        myMgr.GetPrintDocument();
        PrintDocument.CreateDocument();
        new PrintDocument();

    myDocSrc =
        myDoc.DocumentSource;
        new PrintDocumentSource();
        PrintDocumentSource.Current;

    myDoc.Paginate +=
        new PaginateEventHandler(myDoc_Paginate);
    myDoc.GetPreviewPage +=
        new GetPreviewPageEventHandler(mytDoc_GetPreviewPage);
    myDoc.AddPages +=
        new AddPagesEventHandler(myDoc_AddPages);
}
```

---

**Answer:**

---

```

private void InitializePrinting()
{
    myMgr = PrintManager
        .Current.GetPrintView();
    myMgr.GetForCurrentView();
    myMgr.PrintTaskRequested();

    myMgr.PrintTaskRequested +=
        myMgr_PrintTaskRequested;

    myDoc =
        myMngr.GetPrintDocument();
    PrintDocument.CreateDocument();
    new PrintDocument();

    myDocSrc =
        myDoc.DocumentSource;
    new PrintDocumentSource();
    PrintDocumentSource.Current;

    myDoc.Paginate +=
        new PaginateEventHandler(myDoc_Paginate);
    myDoc.GetPreviewPage +=
        new GetPreviewPageEventHandler(mytDoc_GetPreviewPage);
    myDoc.AddPages +=
        new AddPagesEventHandler(myDoc_AddPages);
}

```

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/hh465204.aspx>

### Question: 29

DRAG DROP

You are developing a Windows Store app that prints documents.

You need to ensure that the app enables the user to specify the paper size.

Which four actions should you perform in sequence? (To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.)

Answer Area	
Clear all displayed options in the <b>PrintTask</b> object and then append the option to display the paper size.	
Create and register a print contract.	
Create a <b>PrintTask</b> object by using the <b>PrintTaskRequested</b> handler arguments.	
Create an event handler to handle the <b>PrintTaskRequested</b> event of the print contract.	
Append the option to display the paper size in the <b>PrintTask</b> object and then clear all displayed options.	

**Answer:**

Answer Area	
Create and register a print contract.	
Create a <b>PrintTask</b> object by using the <b>PrintTaskRequested</b> handler arguments.	
Clear all displayed options in the <b>PrintTask</b> object and then append the option to display the paper size.	
Create an event handler to handle the <b>PrintTaskRequested</b> event of the print contract.	
Append the option to display the paper size in the <b>PrintTask</b> object and then clear all displayed options.	

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/hh849590.aspx>

### Question: 30

You are developing a Windows Store app that prints documents. An object named printManager manages the print flow. An object named printDocument sends output to the printer.

You need to ensure that the app allows the user to preview the print layout of the entire document.

Which event should you handle to construct the print preview of the entire document?

- A. printDocument.GetPreviewPage
- B. printManager.PrintTaskRequested
- C. printDocument.Paginate
- D. printDocument.AddPages

**Answer: C**

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.ui.xaml.printing.printdocument.paginate.aspx>

### **Question: 31**

#### **DRAG DROP**

You are developing your first Windows Store app and submitting it to the Windows Store.

The app uses a cloud server to send notifications by using Windows Push Notification Service (WNS).

You need to authenticate the cloud server with WNS.

Which five actions should you perform in sequence? (To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.)

Answer Area
Send the WNS response on the notification channel.
Create and save a push notification channel.
Obtain the identity values for the app.
Register for a Windows Store developer account.
Register the app with the Windows Store.
Obtain the credentials for the app.
Create the secure HTTP authentication request.

**Answer:**

Answer Area
Register the app with the Windows Store.
Create the secure HTTP authentication request.
Obtain the identity values for the app.
Obtain the credentials for the app.
Register for a Windows Store developer account.

**Explanation:**

<http://msdn.microsoft.com/en-us/library/windows/apps/hh465407.aspx>

### **Question: 32**

#### **DRAG DROP**

You are developing a Windows Store app that uses the Windows Push Notification Service (WNS) to provide real-time updates to users. The app uses an HTTP request to authenticate a cloud service to interact with WNS.

The Package Security Identifier (SID) prefix is app://.

Parameter values must be URL encoded.

You need to ensure that the authentication request provides the required parameters.

Which parameters should you use? (To answer, drag the appropriate parameters to the correct location or locations. Each parameter 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.)

<div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;">"notify.windows.com"</div> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;">"App%3A%2F%2F123-abc"</div> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;">"client_credentials"</div> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;">"DIAW1-JCU80YV"</div> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;">"app://cab-123"</div>	<p><b>Answer Area</b></p> <pre>WebClient webCl = new WebClient(); webCl.Headers.Add(     "grant_type=" + <span style="border: 1px solid #ccc; padding: 2px;"> </span> +     "&amp;client_id=" + <span style="border: 1px solid #ccc; padding: 2px;"> </span> +     "&amp;client_secret=" + <span style="border: 1px solid #ccc; padding: 2px;"> </span> +     "&amp;scope=" + <span style="border: 1px solid #ccc; padding: 2px;"> </span>); </pre>
--	---

**Answer:**

<div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;">"app://cab-123"</div>	<p><b>Answer Area</b></p> <pre>WebClient webCl = new WebClient(); webCl.Headers.Add(     "grant_type=" + "App%3A%2F%2F123-abc" +     "&amp;client_id=" + "client_credentials" +     "&amp;client_secret=" + "DIAW1-JCU80YV" +     "&amp;scope=" + "notify.windows.com"); </pre>
--	---

**Explanation:**

<http://msdn.microsoft.com/en-us/library/windows/apps/hh465407.aspx>

**Question: 33****DRAG DROP**

You are developing a Windows Store app that prints documents.

You need to ensure that the app enables the user to specify the print orientation.

Which four actions should you perform in sequence? (To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.)

<div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;">Create a <b>PrintTask</b> object by using the <b>PrintTaskRequested</b> handler arguments.</div> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;">Clear all displayed options in the <b>PrintTask</b> object and then append the option to display the print orientation.</div> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;">Create and register a print contract.</div> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;">Create an event handler to handle the <b>PrintTaskRequested</b> event of the print contract.</div> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;">Append the option to display the print orientation in the <b>PrintTask</b> object and then clear all displayed options.</div>	<p><b>Answer Area</b></p>
--	---------------------------

---

**Answer:****Answer Area**

Create and register a print contract.

Create a **PrintTask** object by using the **PrintTaskRequested** handler arguments.

Clear all displayed options in the **PrintTask** object and then append the option to display the print orientation.

Create an event handler to handle the **PrintTaskRequested** event of the print contract.

Append the option to display the print orientation in the **PrintTask** object and then clear all displayed options.

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/hh849590.aspx>

---

**Question: 34****HOTSPOT**

You are developing a Windows Store app that displays and prints information. You have the following code.

```
private Windows.Graphics.Printing.PrintManager prntMgr;  
private Windows.UI.Xaml.Printing.PrintDocument prntDoc;  
private IPrintDocumentSource prntDocSrc = null;
```

You need to enable printing.

How should you complete the initialization of the print functionality? (To answer, select the appropriate element from the drop-down list in the answer area.)

```
private void InitializePrinting()
{
    prntMgr = PrintManager
        .Current.GetPrintView();
    .GetForCurrentView();
    .PrintTaskRequested();

    prntMgr.PrintTaskRequested +=
        prntMgr_PrintTaskRequested;

    prntDoc =
        prntMngr.GetPrintDocument();
    PrintDocument.CreateDocument();
    new PrintDocument();

    prntDocSrc =
        prntDoc.DocumentSource;
    new PrintDocumentSource();
    PrintDocumentSource.Current;

    prntDoc.Paginate +=
        new PaginateEventHandler(prntDoc_Paginate);
    prntDoc.GetPreviewPage +=
        new GetPreviewPageEventHandler(prntDoc_GetPreviewPage);
    prntDoc.AddPages +=
        new AddPagesEventHandler(prntDoc_AddPages);
}
```

---

**Answer:**

---

```

private void InitializePrinting()
{
    prntMgr = PrintManager
        .Current.GetPrintView();
    prntMgr.GetForCurrentView();
    prntMgr.PrintTaskRequested();

    prntMgr.PrintTaskRequested +=
        prntMgr_PrintTaskRequested;

    prntDoc =
        prntMngr.GetPrintDocument();
    PrintDocument.CreateDocument();
    new PrintDocument();

    prntDocSrc =
        prntDoc.DocumentSource;
    new PrintDocumentSource();
    PrintDocumentSource.Current;

    prntDoc.Paginate +=
        new PaginateEventHandler(prntDoc_Paginate);
    prntDoc.GetPreviewPage +=
        new GetPreviewPageEventHandler(prntDoc_GetPreviewPage);
    prntDoc.AddPages +=
        new AddPagesEventHandler(prntDoc_AddPages);
}

```

Explanation:

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

### Question: 35

You are developing a Windows Store app that uses the Windows Push Notification Service (WNS) to send toast notifications.

You need to ensure that the requests that the app sends to the WNS follow the authorization standard that WNS supports.

Which authorization standard should you use?

- A. ADFS
- B. ws-Trust
- C. openID
- D. OAuth 2.0

---

Answer: D

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/hh913756.aspx>

### Question: 36

You are developing a Windows Store app that requires access to a user's location.

A user denies the app access to the location service.

You need to handle the error that results when the app calls the GetGeopositionAsync() method.

What should you do?

- A. Modify the app manifest to enable Location services and query the user.
- B. Display an interface for the user to enable location and rerun the method.
- C. Catch the exception using a try-catch statement.
- D. Modify the app.config file to enable Location services and query the user.
- E. Catch the exception using a try-catch async statement.

---

**Answer: C**

---

Explanation:

[http://msdn.microsoft.com/en-us/library/system.exception\(v=vs.110\).aspx](http://msdn.microsoft.com/en-us/library/system.exception(v=vs.110).aspx)

---

### **Question: 37**

---

DRAG DROP

You are developing a Windows Store game.

The game allows users to purchase additional levels in the game.

You need to run the ContinueToLevel2() method if the user has a license to Level 2.

How should you complete the code segment? (To answer, drag the appropriate lines of code to the correct location or 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.)

CurrentAppSimulator.LicenseInformation;  
license.ProductLicenses["level2"]  
RequestProductPurchaseAsync  
new LicenseInformation();  
license.ProductLicenses  
GetProductPurchaseAsync

Answer Area

```
LicenseInformation license =  
    [REDACTED]  
  
if (license. [REDACTED].IsActive)  
{  
    try  
    {  
        var receipts = await CurrentAppSimulator.  
            [REDACTED] ("level2", false);  
        ContinueToLevel2();  
    }  
    catch (Exception ex)  
    {  
        DisplayError(ex);  
    }  
}
```

Answer:

```

new LicenseInformation();
license.ProductLicenses
GetProductPurchaseAsync

```

#### Answer Area

```

LicenseInformation license =
    CurrentAppSimulator.LicenseInformation;

if (license. license.ProductLicenses["level2"] .IsActive)

{
    try
    {
        var receipts = await CurrentAppSimulator.
            RequestProductPurchaseAsync ("level2",false);
        ContinueToLevel2();
    }
    catch (Exception ex)
    {
        DisplayError(ex);
    }
}

```

#### Explanation:

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

### Question: 38

#### DRAG DROP

You are collecting metrics from a Windows Store app that has been deployed to the Windows Store.

You need to collect data to analyze the quality and success of the app.

Which tool should you use for each statistic? (To answer, drag the appropriate metrics to the correct location or locations in the answer area. Each metric 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.)

**Answer Area**

Telemetry	How often the app has launched
Fuslog Viewer	Listing views
Analytics	How long the app has run
	Crashes and exceptions
	Downloads
	Customer ratings
	Reviews

**Answer:**

**Answer Area**

Telemetry	Analytics	How often the app has launched
Fuslog Viewer	Telemetry	Listing views
Analytics	Analytics	How long the app has run
	Analytics	Crashes and exceptions
	Telemetry	Downloads
	Fuslog Viewer	Customer ratings
	Telemetry	Reviews

Telemetry	How often the app is launched
Analytics	Listing views
Telemetry	How long the app has run
Telemetry	Crashes and exceptions
Analytics	Downloads
Analytics	Customer ratings
Analytics	Reviews

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/hh967787.aspx>**Question: 39**

DRAG DROP

You are developing a Windows Store app.

The app has numerous features that should be enabled or disabled based on the license information of the app. You need to test the trial functionality by using the CurrentAppSimulator class. Which three actions should you perform in sequence? (To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.)

Answer Area
Open the WindowsStoreProxy.xml file.
Set the <b>LicenseInformation/App/IsTrial</b> element to <b>true</b> .
Start the app in Debug or Release mode to monitor areas marked for the trial status.
Set the <b>LicenseInformation/App/Purchase</b> element to be <b>App/Trial</b> instead of <b>App/Full</b> .
Open the WindowsStoreProxy.manifest file.
Start the app in Deploy mode to monitor areas marked for the trial status.

**Answer:**

Answer Area
Start the app in Debug or Release mode to monitor areas marked for the trial status.
Set the <b>LicenseInformation/App/IsTrial</b> element to <b>true</b> .
Open the WindowsStoreProxy.xml file.
Set the <b>LicenseInformation/App/Purchase</b> element to be <b>App/Trial</b> instead of <b>App/Full</b> .
Open the WindowsStoreProxy.manifest file.
Start the app in Deploy mode to monitor areas marked for the trial status.

**Explanation:**

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

**Question: 40****HOTSPOT**

You are developing a Windows Store app that allows users to copy music from their local computers to removable storage.

The app displays songs grouped by the month the song was downloaded and allows individual songs to be copied to the removable storage device. The user interface for selecting and copying songs uses data binding.

You need to load and return songs in a format appropriate for data binding.

How should you complete the code segment? (To answer, select the appropriate line of code from each drop-down list in the answer area.)

```
var queryOptions =
    new QueryOptions(CommonFolderQuery.GroupByMonth);
    new QueryOptions(CommonFolderQuery.Month);
    new QueryOptions(CommonFolderQuery.GroupByType.Month);
    new QueryOptions { ApplicationSearchFilter = "ByMonth" };
    new QueryOptions(CommonFolderQuery.GroupByType);
```

```
var fileQuery = KnownFolders.MusicLibrary
    .CreateFileQueryWithOptions(queryOptions);
var factory = new FileInformationFactory(fileQuery,
    ThumbnailMode.MusicView);
```

```
var dataSource = factory.
    GetVirtualizedFilesVector();
    GetFoldersVector();
    GetVirtualizedItemsVector();
    GetItemsVector();
    GetVirtualizedFilesVectorAsync();
    GetFilesVectorAsync();
```

---

**Answer:**

---

```
var queryOptions =
    new QueryOptions(CommonFolderQuery.GroupByMonth);
    new QueryOptions(CommonFolderQuery.Month);
    new QueryOptions(CommonFolderQuery.GroupByType.Month);
    new QueryOptions { ApplicationSearchFilter = "ByMonth" };
    new QueryOptions(CommonFolderQuery.GroupByType);
```

```
var fileQuery = KnownFolders.MusicLibrary
    .CreateFileQueryWithOptions(queryOptions);
var factory = new FileInformationFactory(fileQuery,
    ThumbnailMode.MusicView);
```

```
var dataSource = factory.
    GetVirtualizedFilesVector();
    GetFoldersVector();
    GetVirtualizedItemsVector();
    GetItemsVector();
    GetVirtualizedFilesVectorAsync();
    GetFilesVectorAsync();
```

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/br208005.aspx>

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.storage.bulkaccess.fileinformationfactory.getvirtualizedfilesvector.aspx>

---

**Question: 41**

---

DRAG DROP

You are developing a Windows Store app that receives data from two providers. Data from Provider1 is sent as a hex

string. Data from Provider2 is sent as Base64 encoding.

Data from Provider1 must be captured before data from Provider2 is captured.

You need to compare the strings from each provider to verify that the cryptographic buffers match.

Which three actions should you perform in sequence? (To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.)

Answer Area

Compare data between buffer1 and buffer2 by using the following code segment.

```
Boolean bVal_1 = Buffer.Compare(buffer1,  
buffer2);
```

Compare data between buffer1 and buffer2 by using the following code segment.

```
Boolean bVal_1 = CryptographicBuffer.Compare  
(buffer1, buffer2);
```

Load and convert data from Provider2 by using the following code segment.

```
String strProvider2 = GetFromProvider2();  
IBuffer buffer2 =  
CryptographicBuffer.DecodeFromHexString  
(strProvider2);
```

Load and convert data from Provider1 by using the following code segment.

```
String strProvider1 = GetFromProvider1();  
IBuffer buffer1 =  
CryptographicBuffer.DecodeFromBase64String  
(strProvider1);
```

Load and convert data from Provider1 by using the following code segment.

```
String strProvider1 = GetFromProvider1();  
CryptoBuffer buffer1 =  
CryptographicBuffer.DecodeFromBase64String  
(strProvider1);
```

Load and convert data from Provider2 by using the following code segment.

```
String strProvider2 = GetFromProvider2();  
CryptoBuffer buffer2 =  
CryptographicBuffer.DecodeFromHex  
(strProvider2);
```

---

**Answer:**

---

Compare data between buffer1 and buffer2 by using the following code segment.

```
Boolean bVal_1 = Buffer.Compare(buffer1,
buffer2);
```

## Answer Area

Load and convert data from Provider1 by using the following code segment.

```
String strProvider1 = GetFromProvider1();
IBuffer buffer1 =
CryptographicBuffer.DecodeFromBase64String
(strProvider1);
```

Load and convert data from Provider2 by using the following code segment.

```
String strProvider2 = GetFromProvider2();
IBuffer buffer2 =
CryptographicBuffer.DecodeFromHexString
(strProvider2);
```

Compare data between buffer1 and buffer2 by using the following code segment.

```
Boolean bVal_1 = CryptographicBuffer.Compare
(buffer1, buffer2);
```

Load and convert data from Provider1 by using the following code segment.

```
String strProvider1 = GetFromProvider1();
CryptoBuffer buffer1 =
CryptographicBuffer.DecodeFromBase64String
(strProvider1);
```

Load and convert data from Provider2 by using the following code segment.

```
String strProvider2 = GetFromProvider2();
CryptoBuffer buffer2 =
CryptographicBuffer.DecodeFromHex
(strProvider2);
```

## Explanation:

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

**Question: 42**

You are developing a Windows store game that allows players to save friend information for other players they meet in the game.

The app must meet the following requirements:

The app must save all friend information when the app suspends or terminates.

When the app is restarted, friend information should be automatically reloaded.

Players should be able to view friend information on other devices with the app installed, provided that the user supplies the same credentials on both machines.

You need to ensure that the app meets the requirements.

How should the app save the friend information?

- A. by saving friend information to a temporary app store
- B. by saving friend information to the roaming app store
- C. by saving friend information to the local app store
- D. by saving friend information in a memory-mapped file

---

**Answer: B**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/hh465094.aspx>

---

### **Question: 43**

---

DRAG DROP

You are developing a Windows Store game that saves virtual store purchase information to the local device. The app must create a setting named PlayerName within a container named Purchases. The app must store the value of the PlayerName property in the local store. You need to meet the requirements. How should you complete the code segment? (To answer, drag the appropriate terms to the correct location or locations. Each term 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.)

Answer Area	
<p>Always</p> <p>LocalSettings</p> <p>localStore</p> <p>LocalFolder</p> <p>Existing</p> <p>Values</p> <p>Name</p> <p>userContainer</p>	<pre>var localStore = ApplicationData.Current.<span style="background-color: #e0f2ff;">Container</span>; ; var userContainer = localStore.CreateContainer("Purchases",     Windows.Storage.ApplicationDataCreateDisposition.<span style="background-color: #e0f2ff;">Temporary</span>);  if (<span style="background-color: #e0f2ff;">localStore</span>.Containers.ContainsKey("Purchases")) {     localStore     .Containers["Purchases"]     .<span style="background-color: #e0f2ff;">Value</span>["PlayerName"] = "TestUser"; }</pre>

---

**Answer:**

---

Localsettings

Values

Localstore

Always

Values and Always should be switched around.

Explanation:

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

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

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

---

### **Question: 44**

---

You are developing a Windows Store app for geocaching competitions that displays location-aware tips.

You need to capture device location events periodically to determine if a tip should be displayed.

What should you do? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Enable the Proximity capability in the Package.appxmanifest file.
- B. Create an instance of the Windows.Devices.Sensors.OrientationSensor class. Use the ReportInterval property to set the interval for getting the position data. Then attach an event handler to the PositionChanged event to capture position and decide if tips should be shown.
- C. Create an instance of the Windows.Devices.Sensors.Gps class. Use the ReportInterval property to set the interval for getting the position data. Then attach an event handler to the PositionChanged event to capture position and decide if tips should be shown.
- D. Enable the Location capability in the Package.appxmanifest file.
- E. Create an instance of the Windows.Devices.Geolocation.Geolocator class. Use the ReportInterval property to set the interval for getting the position data. Then attach an event handler to the PositionChanged event to capture position and decide if tips should be shown.

---

**Answer: D, E**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/hh465142.aspx>

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

---

### Question: 45

---

HOTSPOT

You are developing a Windows Store app that allows bloggers to capture videos and upload them to a blog.

You need to ensure that the app saves the captured video in MP4 format to the blogger's videos library.

How should you complete the code segment? (To answer, select the appropriate line of code from each drop-down list in the answer area.)

```
private async void CaptureVideo()
{
    var videoFile =
        await
            Windows.Storage.KnownFolders.VideosLibrary.CreateFileAsync("video.mp4",
            Windows.Storage.KnownFolders.VideosLibrary.CreateFolderAsync("video", VideoFormat.Mp4,
            await mediaCapture.StartRecordToCustomSinkAsync(recordProfile, videoFile);
            await mediaCapture.StartRecordToStorageFileAsync(recordProfile, videoFile);

    Windows.Storage.CreateCollisionOption.GenerateUniqueName);

    var quality = Windows.Media.MediaProperties.VideoEncodingQuality.Auto;
    var recordProfile = MediaEncodingProfile.CreateMp4(quality);

    var mediaCapture = new Windows.Media.Capture.MediaCapture();

}
Windows.Storage.KnownFolders.VideosLibrary.CreateFileAsync("video.mp4",
    Windows.Storage.KnownFolders.VideosLibrary.CreateFolderAsync("video", VideoFormat.Mp4,
    await mediaCapture.StartRecordToCustomSinkAsync(recordProfile, videoFile);
    await mediaCapture.StartRecordToStorageFileAsync(recordProfile, videoFile);
```

---

**Answer:**

---

```
private async void CaptureVideo()
{
    var videoFile =
        await
            Windows.Storage.KnownFolders.VideosLibrary.CreateFileAsync("video.mp4",
            Windows.Storage.KnownFolders.VideosLibrary.CreateFolderAsync("video", VideoFormat.Mp4,
            await mediaCapture.StartRecordToCustomSinkAsync(recordProfile, videoFile);
            await mediaCapture.StartRecordToStorageFileAsync(recordProfile, videoFile);

    Windows.Storage.CreateCollisionOption.GenerateUniqueName);

    var quality = Windows.Media.MediaProperties.VideoEncodingQuality.Auto;
    var recordProfile = MediaEncodingProfile.CreateMp4(quality);

    var mediaCapture = new Windows.Media.Capture.MediaCapture();

    await
        Windows.Storage.KnownFolders.VideosLibrary.CreateFileAsync("video.mp4",
        Windows.Storage.KnownFolders.VideosLibrary.CreateFolderAsync("video", VideoFormat.Mp4,
        await mediaCapture.StartRecordToCustomSinkAsync(recordProfile, videoFile);
        await mediaCapture.StartRecordToStorageFileAsync(recordProfile, videoFile));
}
```

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/hh452798.aspx>

<http://msdn.microsoft.com/en-us/library/windows/apps/br227250.aspx>

### Question: 46

You are developing a Windows Store app that uses a webcam. You need to be notified if new webcams are connected to the system.

Which class should you use?

- A. DeviceInformationWatcher
- B. EnclosureLocation
- C. DeviceWatcher
- D. DeviceInformationCollection

**Answer: C**

Explanation:

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

### Question: 47

DRAG DROP

You are developing a Windows Store app that downloads large files from the Internet by using background tasks.

The app includes the following:

taskInstance is an instance of the IBackgroundTask interface that provides access to a background task instance.

DownloadFilesAsyncQ is the asynchronous method that performs the download.

You need to ensure that the app performs the download operation asynchronously in a background task.

Which three actions should you perform in sequence? (To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.)

Answer Area
Invoke the <b>Run()</b> method on the deferral.
Invoke the <b>Begin()</b> method on the deferral.
Create the deferral by requesting it from the <b>taskInstance</b> instance.
Invoke the <b>Complete()</b> method on the deferral.
Call the <b>DownloadFilesAsync()</b> method by using the <b>async</b> operator.
Call the <b>DownloadFilesAsync()</b> method by using the <b>await</b> operator.

**Answer:**

Answer Area
Invoke the <b>Run()</b> method on the deferral.
Invoke the <b>Begin()</b> method on the deferral.
Call the <b>DownloadFilesAsync()</b> method by using the <b>async</b> operator.
Create the deferral by requesting it from the <b>taskInstance</b> instance.
Call the <b>DownloadFilesAsync()</b> method by using the <b>await</b> operator.
Invoke the <b>Complete()</b> method on the deferral.

**Explanation:**

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

**Question: 48****HOTSPOT**

You are developing a Windows Store app. The app has the following requirements:

It must allow users to choose contacts by using a ContactPicker class.

It must continue to be responsive while the ContactPicker class is displayed.

You need to ensure that the ContactPicker class is displayed to meet the requirements.

How should you complete the code segment? (To answer, select the appropriate line of code from each drop-down list in the answer area.)

```

private void ContactButton_Click(object s, RoutedEventArgs e)
{
    var cp = new ContactPicker();
    ContactInformation contact = cp.PickSingleContactAsync();
}

```

**Answer:**

```

private void ContactButton_Click(object s, RoutedEventArgs e)
{
    var cp = new ContactPicker();
    ContactInformation contact = cp.PickSingleContactAsync();
}

```

**Explanation:**

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.applicationmodel.contacts.contactpicker.aspx>  
<http://msdn.microsoft.com/en-us/library/hh156528.aspx>

**Question: 49****DRAG DROP**

You are developing a Windows Store app.

You need to create an animation that moves a rectangle horizontally across the screen by using a storyboard.

What should you do? (To answer, drag the appropriate option to the correct location or locations in the answer area. Each option 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.)

## Answer Area

```

animation
start
"X"
transform
end

private void TranslateRect(Rectangle rect,
    TranslateTransform transform, int end, Duration time)
{
    rect.RenderTransform = transform;
    DoubleAnimation animation = new DoubleAnimation();
    animation.Duration = time;
    Storyboard sb = new Storyboard();
    sb.Duration = time;

    sb.Children.Add( [ ] );
    Storyboard.SetTarget([ ], [ ]);
    Storyboard.SetTargetProperty([ ], [ ]);

    animation.To = end;
    sb.Begin();
}

```

**Answer:**

## Answer Area

```

animation
start
"X"
transform
end

private void TranslateRect(Rectangle rect,
    TranslateTransform transform, int end, Duration time)
{
    rect.RenderTransform = transform;
    DoubleAnimation animation = new DoubleAnimation();
    animation.Duration = time;
    Storyboard sb = new Storyboard();
    sb.Duration = time;

    sb.Children.Add( animation );
    Storyboard.SetTarget( animation , transform );
    Storyboard.SetTargetProperty( animation , "X" );

    animation.To = end;
    sb.Begin();
}

```

## Explanation:

[http://msdn.microsoft.com/en-us/library/system.windows.media.translatetransform\(v=vs.110\).aspx](http://msdn.microsoft.com/en-us/library/system.windows.media.translatetransform(v=vs.110).aspx)  
<http://msdn.microsoft.com/en-us/library/windows/apps/windows.ui.xaml.media.animation.storyboard.aspx>

**Question: 50**

You are designing a Windows Store app to manage image and video files.

The app must meet the following requirements:

Video files must be stored locally on each device.

The app must use local storage for data caching.

User settings must be shared across multiple devices.

Image files must be available across multiple devices.

Metadata for images must be stored in a central database.

Image files, video files, and their associated metadata must load as quickly as possible.

You need to identify which data must be cached based on the app requirements.

Which two types of data should you identify? (Each correct answer presents part of the solution. Choose two.)

- A. User settings
- B. Video files
- C. Image files
- D. Metadata

---

**Answer: C, D**

---

Explanation:

Image files, video files, and their associated metadata must load as quickly as possible.

[http://msdn.microsoft.com/en-us/library/windows/desktop/aa365201\(v=vs.85\).aspx](http://msdn.microsoft.com/en-us/library/windows/desktop/aa365201(v=vs.85).aspx)

---

### **Question: 51**

---

You are developing a Windows Store app for devices connected to AC power.

The app must meet the following requirements:

The app must download movie reviews from a web service once per hour.

The app must have new movie reviews ready for the user when the user interacts with the app.

The app cannot interact with the lock screen.

You need to ensure that the web service is called periodically whether the app is running or suspended.

What should you do?

- A. Use the `ThreadPoolTimer.CreatePeriodicTimer()` static method to periodically call the web service to get new movie reviews for display.
- B. Implement the `IBackgroundTask` interface to make the service call and then register a `PushNotificationTrigger` object to run the background task when the new reviews are available.
- C. Implement the `IBackgroundTask` interface to make the service call and then register a `TimeTrigger` object to run the background task every hour.
- D. Implement the `IBackgroundTask` interface to make the service call and then register a `MaintenanceTrigger` object to run the background task every hour.

---

**Answer: D**

---

Explanation:

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

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

---

### **Question: 52**

---

You are developing a Windows Store app. The app will receive push notifications from the Windows Push Notification Services (WNS).

You store the secret for authentication in a variable named `encodedSecret`. You store the security ID for authentication in a variable named `encodedSid`. Both variables contain string data encoded for use in a Uniform Resource Identifier (URI).

You create a `WebClient` object named `client`.

You need to use the `client` object to retrieve an OAuth token as a string and to store the string in a variable named

response.

Which code segment should you use?

- A. 

```
var body =
    String.Format("grant_type=client_credentials&client_id=
    {0}&client_secret={1}&scope=notify.windows.com",
    encodedSid, encodedSecret);
client.Headers.Add("Content-Type", "application/x-www-form-urlencoded");
string response = client.
    UploadString("https://login.live.com/accesstoken.srf", body);
```
  
- B. 

```
var body =
    String.Format("grant_type=client_credentials&client_id=
    {0}&client_secret={1}&scope=notify.windows.com",
    encodedSid, encodedSecret);
client.Headers.Add("Content-Type", "text/xml");
string response = client.
    UploadString("https://login.live.com/accesstoken.srf", body);
```
  
- C. 

```
var body =
    String.Format("grant_type=client_credentials&client_id=
    {0}&client_secret={1}&scope=notify.windows.com",
    encodedSecret, encodedSid);
client.Headers.Add("Content-Type", "application/x-www-form-urlencoded");
string response = client.
    UploadString("https://login.live.com/accesstoken.srf", body);
```
  
- D. 

```
var body =
    String.Format("grant_type=client_credentials&client_id=
    {0}&client_secret={1}&scope=notify.windows.com",
    encodedSecret, encodedSid);
client.Headers.Add("Content-Type", "text/xml");
string response = client.
    UploadString("https://login.live.com/accesstoken.srf", body);
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

---

**Answer: A**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/hh868252.aspx>

### Question: 53

---

You are developing a Windows Store app that will provide users with the ability to create photos by using the hardware on a device.

Once the users create the photos, they can save the photos to the Pictures library.

If the users sign in by using a Microsoft account, they can grant other users remote access to the photos.

You need to identify which capabilities must be enabled for the app.

Which three capabilities should you identify? (Each correct answer presents part of the solution. Choose three.)

- A. Webcam
- B. Pictures Library
- C. Proximity
- D. Internet (Client & Server)
- E. Private Networks (Client & Server)
- F. Enterprise Authentication

---

**Answer: A, B, D**

**Explanation:**

A: The webcam capability provides access to the webcam's video feed, which allows the app to capture snapshots and movies from a connected webcam.

B: The picturesLibrary capability provides programmatic access to the user's Pictures, allowing the app to enumerate and access all files in the library without user interaction. This capability is typically used in photo playback apps that need to access the entire Pictures library.

D: Internet and public networks

The internetClient capability provides outbound access to the Internet and public networks through the firewall. Almost all web apps use this capability. The internetClientServer capability provides inbound and outbound access to the Internet and public networks through the firewall.

<http://msdn.microsoft.com/en-us/library/windows/apps/hh464936.aspx>

---

### **Question: 54**

---

You are developing a Windows Store app.

You need to ensure that the app can run only if the device is located in a specified location. If the device is moved from the location while the app is running, the app must be disabled.

What should you use? (More than one answer choice may achieve the goal. Select the BEST answer.)

- A. the NetworkInformation.GetInternetConnectionProfileQ method in the OnLaunched event handler
- B. the GeoLocator.PositionChanged event handler
- C. the GeofenceMonitor.GeofenceStateChanged event handler
- D. the GeoLocator.GetGeopositionAsync() method in the OnLaunched event handler

---

**Answer: C**

**Explanation:**

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.devices.geolocation.geofencing.geofencemonitor.geofencestatechanged.aspx>

---

### **Question: 55**

---

You plan to create a custom panel that displays a pie chart. Each value of the pie chart will have a control.

You need to register a custom dependency property to the panel.

Which code segment should you use?

- A. `public static readonly DependencyProperty MaketShareProperty = DependencyProperty.RegisterAttached("MaketShare", typeof(double), typeof(MarketSharePanel), new PropertyMetadata(1, OnMarketShareChanged));`
- B. `public static readonly DependencyProperty MaketShareProperty = DependencyProperty.Register("MaketShare", typeof(double), typeof(MarketSharePanel), new PropertyMetadata(1, OnMarketShareChanged));`
- C. `public static readonly DependencyProperty MaketShareProperty = DependencyProperty.RegisterAttached("MaketShare", typeof(double), typeof(MarketSharePanel), new PropertyMetadata(1.0, OnMarketShareChanged));`
- D. `public static readonly DependencyProperty MaketShareProperty = DependencyProperty.Register("MaketShare", typeof(double), typeof(MarketSharePanel), new PropertyMetadata(1.0, OnMarketShareChanged));`
- A. Option A  
B. Option B  
C. Option C  
D. Option D

---

**Answer: C**

Explanation:

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

---

### Question: 56

---

HOTSPOT

You are developing a Windows Store app.

A file named Test.csv contains the following content:

```
op1, op2, Result
5,4,9
5,6,11
6,2,8
```

You have a project that contains the following code:

```
[DeploymentItem("Test\\Test.csv")]
[DataSource("Microsoft.VisualStudio.TestTools.DataSource.CSV", "Test.csv", "Test#csv",
    DataAccessMethod.Random)]
[TestMethod]
public void Test1()
{
    Assert.AreEqual(
        Add (
            int.Parse(TestContext.DataRow["Op1"].ToString()),
            int.Parse(TestContext.DataRow["Op2"].ToString())),
            int.Parse(TestContext.DataRow["Result"].ToString())));
}
public int Add(int a, int b)
{
    if (a > b)
        return a + b;
    return 0;
}
```

The Test1 function is the only test in the project.

For each of the following statements, select Yes if the statement is true. Otherwise select No. Each correct selection is worth one point.

#### Answer Area

	Yes	No
When you run the test, the results will show two tests that passed.	<input type="radio"/>	<input type="radio"/>
When you run the test, the results will show one test that failed.	<input type="radio"/>	<input type="radio"/>
The code in the test function will always execute three times.	<input type="radio"/>	<input type="radio"/>

Answer:

**Answer Area**

	<b>Yes</b>	<b>No</b>
When you run the test, the results will show two tests that passed.	<input type="radio"/>	<input checked="" type="radio"/>
When you run the test, the results will show one test that failed.	<input checked="" type="radio"/>	<input type="radio"/>
The code in the test function will always execute three times.	<input type="radio"/>	<input checked="" type="radio"/>

**Question: 57**

You develop several Windows Store apps.

You need to use a control to display multiple elements.

The control has the following requirements:

Each item must be displayed as a button.

When a user clicks a button, the button must show that it was clicked.

Developers must be able to bind the control to a collection.

Developers must be able to handle an event when items are selected.

Developers must be able to specify whether the control provides users with the ability to select either one or multiple items.

What should you use? (More than one answer choice may achieve the goal. Select the BEST answer.)

A.A custom control that inherits from ListBox

B.A control template for the ComboBox control

C.A custom control that inherits from ComboBox

D.A control template for the ListView control

---

**Answer: D**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/jj674099.aspx#ListView>

**Question: 58**

HOTSPOT

You plan to develop several Windows Store apps.

You plan to use a CheckBox control in all of the apps. The CheckBox control will use a custom visual display.

You create XAML markup to customize the control. The code contains all of the necessary visual components for the control, including elements named checkedGlyph and indeterminateGlyph.

You need to ensure that the check box meets the following requirements:

If a value for the check box was NOT set, the check box must display indeterminateGlyph.

When the check box is selected, the check box must display checkedGlyph.

If the check box is cleared, the check box must NOT display any glyphs.

You have the following XAML markup:

```

<Target 1 Target 2="CheckBox"
    x:Key="myCheckbox">
    <Border BorderBrush="{TemplateBinding BorderBrush}"
        BorderThickness="{TemplateBinding BorderThickness}"
        Background="{TemplateBinding Background}">
        <VisualStateManager.VisualStateGroups>
            <VisualStateGroup x:Name="CheckStates">
                <VisualState x:Name="Target 3">
                    <Storyboard>
                        <DoubleAnimation Duration="0" To="1"
                            Storyboard.TargetProperty="Opacity"
                            Storyboard.TargetName="checkGlyph"/>
                    </Storyboard>
                </VisualState>
                <VisualState x:Name="Target 4"/>
                <VisualState x:Name="Target 5">
                    <Storyboard>
                        <DoubleAnimation Duration="0" To="1"
                            Storyboard.TargetProperty="Opacity"
                            Storyboard.TargetName="indeterminateGlyph"/>
                    </Storyboard>
                </VisualState>
            </VisualStateGroup>
        ...
    </Target 6>

```

Which code snippets should you insert in Target 1, Target 2, Target 3, Target 4, Target 5 and Target 6 to complete the XAML markup? (To answer, select the correct code snippet from each drop-down list in the answer area.)

#### Answer Area

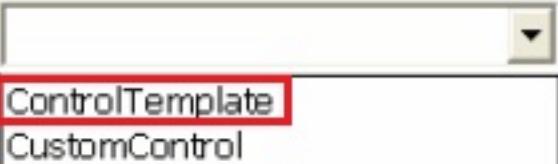
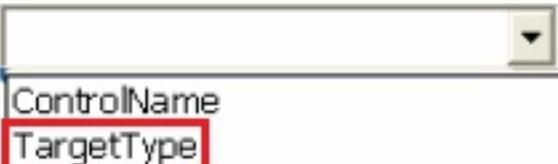
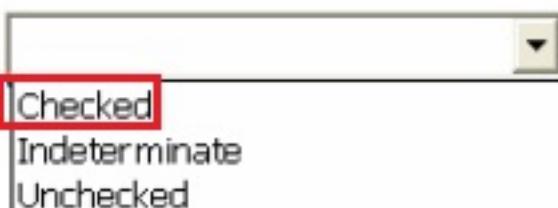
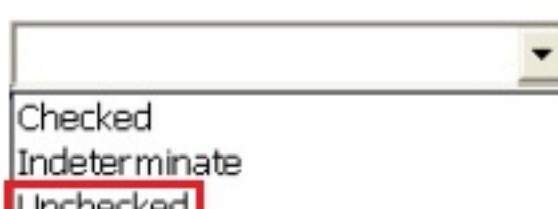
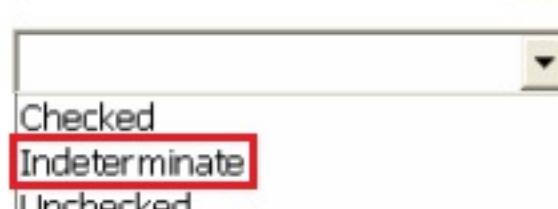
Target 1:	<input type="button" value="▼"/>
Target 2:	<input type="button" value="▼"/>
Target 3:	<input type="button" value="▼"/>
Target 4:	<input type="button" value="▼"/>
Target 5:	<input type="button" value="▼"/>
Target 6:	<input type="button" value="▼"/>

Answer Area

- Target 1:    
ControlTemplate  
CustomControl
- Target 2:    
ControlName  
TargetType
- Target 3:    
Checked  
Indeterminate  
Unchecked
- Target 4:    
Checked  
Indeterminate  
Unchecked
- Target 5:    
Checked  
Indeterminate  
Unchecked
- Target 6:    
ControlTemplate  
CustomControl

Answer:

**Answer Area**

- Target 1:  ControlTemplate  
CustomControl
- Target 2:  ControlName  
TargetType
- Target 3:  Checked  
Indeterminate  
Unchecked
- Target 4:  Checked  
Indeterminate  
Unchecked
- Target 5:  Checked  
Indeterminate  
Unchecked
- Target 6:  ControlTemplate  
CustomControl

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/hh465374.aspx>

---

**Question: 59**

---

DRAG DROP

You are developing a Windows Store app that allows users to take and edit pictures.

The user interface must remain responsive while the user works with pictures.

You need to ensure that the app allows users to crop captured pictures.

You have the following code: private async void CapturePhoto()

```

private async void CapturePhoto()
{
    var dialog = new CameraCaptureUI();
    Target 1
    var photo = Target 2
    this.SavePhoto(photo);
}

```

Which code snippets should you include in Target 1 and Target 2 to complete the code? (To answer, drag the appropriate code snippets to the correct targets in the answer area. Each code snippet 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.)

```

dialog.PhotoSettings.AllowCropping = true;
dialog.PhotoSettings.AllowTrimming = true;
dialog.CaptureFileAsync(CameraCaptureUIMode.Photo);
await dialog.CaptureFileAsync(CameraCaptureUIMode.Photo);
await dialog.CaptureFile(CameraCaptureUIMode.Photo);

```

#### Answer Area

Target 1:

Target 2:



---

#### Answer:

---

Target 1: dialog.PhotoSettings.AllowCropping = true;

Target 2: await dialog.CaptureFileAsync(CameraCaptureUIMode.Photo);

#### Explanation:

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

---

#### Question: 60

---

##### DRAG DROP

You are developing a Windows Store app that logs error information to be used for troubleshooting.

You need to create a log that will contain the events to be used by Event Tracing for Windows (ETW).

You have the following code:

```

using System.Diagnostics.Tracing;
namespace AppErrorLogging
{
    class AppEventTrackingForWindows : Target 1
    {
        public static AppEventTrackingForWindows appLog =
            new AppEventTrackingForWindows ();
        public void LogError(int eventID, string errorInfo)
        {
            Target 2(eventID, errorInfo);
        }
    }
}

```

Which code snippets should you include in Target 1 and Target 2 to complete the code? (To answer, drag the appropriate code snippets to the correct targets in the answer area. Each code snippet 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.)

**Answer Area**

EventListener

EventSource

WriteEvent

WriteEventCore

SendCommand

Target 1:

Target 2:

---

**Answer:**

---

Target 1: EventSource

Target 2: WriteEvent

Explanation:

[http://msdn.microsoft.com/en-us/library/system.diagnostics.tracing\(v=vs.110\).aspx](http://msdn.microsoft.com/en-us/library/system.diagnostics.tracing(v=vs.110).aspx)

---

### Question: 61

---

DRAG DROP

You need to develop an app to measure whether a surface is level. The app will be used on devices that have a gyrometer.

You have the following code:

```

public void InitReadLevel()
{
    var gyro = Gyrometer.GetDefault();
    Target 1;
    gyro.ReadingChanged += gyro_ReadingChanged;
}

void gyro_ReadingChanged(Gyrometer sender, Target 2 args)
{
    var currentGeoInformation = Target 3;
}

```

Which code snippets should you include in Target 1, Target 2 and Target 3 to complete the code? (To answer, drag the appropriate code snippets to the correct targets in the answer area. Each code snippet 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 Snippets	Answer Area
args.Reading	Target 1: <input type="text"/> Code snippet
EventArgs	Target 2: <input type="text"/> Code snippet
gyro.MinimumReportInterval = 20	Target 3: <input type="text"/> Code snippet
gyro.ReportInterval = 20	
GyrometerReadingChangedEventArgs	
RoutedEventArgs	

---

### Answer:

---

Target 1:

Target 2:

Target 3:

Explanation:

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

---

### Question: 62

---

DRAG DROP

You are developing a Windows Store app to record audio.

You need to ensure that when an audio recording reaches the maximum permitted length, the app sends a message to the user indicating that recording has stopped.

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

```

01 public async void InitAudio()
02 {
03     MediaCapture media = new MediaCapture();
04
05     await media.InitializeAsync(new MediaCaptureInitializationSettings()
06     {StreamingCaptureMode = StreamingCaptureMode.Audio});
07 }
08
09 {
10
11     await new MessageDialog(
12         "The recording has stopped because you exceeded
13         the maximum recording length.").ShowAsync();
14 }

```

Which code segments should you insert at lines 04, 08 and 10? (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	Answer Area
<code>async void media_LimitReached(     MediaCapture sender)</code>	Line 04: <input type="text"/> Code segment
<code>async void media_Failed(MediaCapture sender,     MediaCaptureFailedEventArgs errorEventArgs)</code>	Line 08: <input type="text"/> Code segment
<code>await sender.StopRecordAsync();</code>	Line 10: <input type="text"/> Code segment
<code>if (errorEventArgs.Code == 3)</code>	
<code>media.Failed += media_Failed;</code>	
<code>media.RecordLimitationExceeded +=     media_LimitReached;</code>	

### Answer:

Line 04: `media.RecordLimitationExceeded +=  
 media_LimitReached;`

Line 08: `async void media_LimitReached(  
 MediaCapture sender)`

Line 10: `await sender.StopRecordAsync();`

Explanation:

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

### Question: 63

#### DRAG DROP

You are developing a Windows Store app that uploads large files to the Internet by using background tasks.

`uploadTask` is an instance of the `IBackgroundTask` interface that provides access to a background task instance. `UploadFilesAsync()` is the asynchronous method that performs the upload.

You need to ensure that the app performs the upload operation asynchronously in a background task.

Which three actions should you perform in sequence? (To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.)

Answer Area
Call the <b>UploadFilesAsync()</b> method by using the <b>async</b> operator.
Create the deferral by requesting it from the <b>uploadTask</b> instance.
Invoke the <b>Complete()</b> method on the deferral.
Call the <b>UploadFilesAsync()</b> method by using the <b>await</b> operator.
Invoke the <b>Run()</b> method on the deferral.
Invoke the <b>Begin()</b> method on the deferral.

**Answer:**

Box 1:

Create the deferral by requesting it from the **uploadTask** instance.

Box 2:

Call the **UploadFilesAsync()** method by using the **await** operator.

Box 3:

Invoke the **Complete()** method on the deferral.

Explanation:

Note:

\* Example:

```
public sealed class TestClass:IBackgroundTask
{
    async void IBackgroundTask.Run(IBackgroundTaskInstance taskInstance)
    {
        BackgroundTaskDeferral deferral = taskInstance.GetDeferral();
        await SomeOperationAsync();
        await SomeOtherOperationAsync();
        deferral.Complete();
    }
}
```

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

**Question: 64**

DRAG DROP

You are developing a Windows Store app that writes data to a file.

You have the following requirements:

If a file exists with the same name, it should be overwritten by the new file.

The data must be stored in the app data folder.

The method is defined as follows. (Line numbers are included for reference only.)

```
01 protected async void WriteToFile(string data, string filename)
02 {
03
04
05
06 }
```

You need to complete the method to meet the requirements.

Which three code segments should you arrange in sequence at lines 03, 04, and 05? (To answer, move the appropriate code segment from the list of code segments to the answer area and arrange them in the correct order.)

#### Answer Area

```
await StorageFile.WriteAllTextAsync(file,
data);

StorageFolder folder =
ApplicationData.Current.RoamingFolder;

StorageFolder folder =
ApplicationData.Current.LocalFolder;

StorageFile file =
await folder.CreateFileAsync(filename,
CreationCollisionOption.ReplaceExisting);

await FileIO.WriteAllTextAsync(file, data);

StorageFile file =
await folder.CreateFileAsync(filename,
CreationCollisionOption.GenerateUniqueName)
;
```

---

#### Answer:

Box 1:

```
StorageFolder folder =
ApplicationData.Current.LocalFolder;
```

Box 2:

```
StorageFile file =
await folder.CreateFileAsync(filename,
CreationCollisionOption.ReplaceExisting);
```

Box 3:

```
await FileIO.WriteAllTextAsync(file, data);
```

Explanation:

Note:

- \* Step 1: Local is meant to store assets in a local, application-specific folder.
- \* Step 2: ReplaceExisting. Need to replace existing file
- \* Step 3: Write text to your file by calling the WriteTextAsync methods of the FileIO class.

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

---

### Question: 65

#### HOTSPOT

You are developing a Windows Store app.

The app must receive push notifications from a calling app by using Windows Push Notification Service (WNS).

You have the following code:

```
try
{
    PushNotificationChannel pushChannel = null;
    pushChannel = Target 1 PushNotificationChannelManager.
        Target 2
}
catch (Exception ex)
{
    ...
}
```

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

#### Answer Area

Target 1:

new  
await  
(PushNotificationChannel)

Target 2:

CreatePushNotificationChannelForApplicationAsync(String.Empty)  
CreatePushNotificationChannelForApplicationAsync()  
CreatePushNotificationChannelForSecondaryTileAsync()

**Answer:**

#### Answer Area

Target 1:

new  
**await**  
(PushNotificationChannel)

Target 2:

**CreatePushNotificationChannelForApplicationAsync(String.Empty)**  
**CreatePushNotificationChannelForApplicationAsync()**  
CreatePushNotificationChannelForSecondaryTileAsync()

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/hh868221.aspx>

#### Question: 66

DRAG DROP

You are developing a Windows Store app that uses a light sensor to detect and respond to light changes. An object named lightSensor is an instance of the sensor service.

The light sensor must detect changes once per second. If the sensor is unable to record as fast as once per second, then it must use the fastest interval possible.

You need to ensure that the app meets the requirements. You have the following code:

```
private LightSensor lightsensor;
public void Initialize()
{
    this.InitializeComponent();
    Target 1
    Target 2
}
```

Which code snippets should you include in Target 1 and Target 2 to complete the code? (To answer, drag the appropriate code snippets to the correct targets in the answer area. Each code snippet 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.)

```
lightSensor = Windows.Devices.Sensors.LightSensor.GetCurrentReading();
lightSensor = Windows.Devices.Sensors.LightSensor.GetDefault();
lightSensor.MinimumReportInterval = 1000;
lightSensor.MinimumReportInterval = lightSensor.ReportInterval < 1 ? 1 : lightSensor.ReportInterval;
lightSensor.ReportInterval = lightSensor.MinimumReportInterval < 1000 ? 1000 : lightSensor.MinimumReportInterval;
```

#### Answer Area

Target 1:

Target 2:

#### Answer:

Target 1:

```
lightSensor = Windows.Devices.Sensors.LightSensor.GetDefault();
```

Target 2:

```
lightSensor.ReportInterval = lightSensor.MinimumReportInterval < 1000 ? 1000 : lightSensor.MinimumReportInterval;
```

Explanation:

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

---

#### Question: 67

---

HOTSPOT

You are developing a Windows store app that requires text documents. The documents are loaded from a web service and are often larger than 5 MB. The users of the app travel between offices that are located on different continents. The app must support thousands of documents and use as little local storage as possible.

You need to store the documents to meet the requirements.

You have the following code:

```
string docId;
var bytes = GetDocumentBytes(out docId);
var folder = ApplicationData.Current.Target 1;
var file = await folder.CreateFileAsync(docId);
using (var fileStream = await file.OpenStreamForWriteAsync())
{
    var outputStream = fileStream.AsOutputStream();
    dynamic writer = Target 2;
    await writer.WriteAsync(bytes.AsBuffer());
    await writer.FlushAsync();
    await writer.FinishAsync();
    await writer.FlushAsync();
}
```

Which code snippets should you insert in Target 1 and Target 2 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:

#### Answer Area

Target 1:

LocalFolder;  
RoamingFolder;  
ApplicationFolder;

Target 2:

FileIO.WriteStringAsync(file, bytes);  
FileIO.WriteBufferAsync(file, bytes.AsBuffer());  
new DataWriter(outputStream);  
new Compressor(outputStream);

**Answer:**

## Answer Area

Target 1:

LocalFolder  
 RoamingFolder;  
 ApplicationFolder;

Target 2:

FileIO.WriteBytesAsync(file, bytes);  
 FileIO.WriteBufferAsync(file, bytes.AsBuffer());  
 new DataWriter(outputStream);  
 new Compressor(outputStream);

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.storage.compression.compressor.aspx>**Question: 68**

DRAG DROP

You are developing a Windows Store app.

You need to use text resources in the app for localization.

You have the following code:

```
protected string GetAppName()
{
    Target 1 rs = new Target 2();
    string appname = rs.Target 3("AppName");
    return appname
}
```

Which code snippets should you include in Target 1, Target 2 and Target 3 to complete the code? (To answer, drag the appropriate code snippets to the correct targets in the answer area. Each code snippet 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.)

<input type="checkbox"/> ResourceMap <input type="checkbox"/> ResourceLoader <input type="checkbox"/> ResourceDictionary <input type="checkbox"/> GetString <input type="checkbox"/> GetResource <input type="checkbox"/> GetTranslation	<p>Target 1: <input type="checkbox"/></p> <p>Target 2: <input type="checkbox"/></p> <p>Target 3: <input type="checkbox"/></p>
---	---

**Answer:**



Explanation:

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

### Question: 69

---

You are developing a Windows Store app.

You must create a custom soft input panel (SIP).

You need to animate the input panel with Show/Hide animations.

Which transition class should you use?

- A. EntranceThemeTransition
- B. EdgeUIThemeTransition
- C. PaneThemeTransition
- D. AddDeleteThemeTransition

---

**Answer: C**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/jj649428.aspx>

### Question: 70

---

DRAG DROP

You plan to deploy an app to the Windows Store. The app will have a trial mode of 30 days.

You need to develop a solution that displays a notification on the main page that shows the number of days remaining before the trial mode expires.

Develop the solution by selecting and ordering the required code snippets. You may not need all of the code snippets.

## Answer Area

```

var expiration =
licenseInformation.ExpirationDate;

var days = (expiration - DateTime.Now).Days;

rootPage.NotifyUser("App expires in: " +
days + " days.", NotifyType.StatusMessage)

licenseInformation =
CurrentAppSimulator.LicenseInformation;

licenseInformation =
CurrentApp.LicenseInformation;

var days = expiration - DateTime.Now.Days;

```

**Answer:**

Box 1:

```
licenseInformation =
CurrentApp.LicenseInformation;
```

Box 2:

```
var expiration =
licenseInformation.ExpirationDate;
```

Box 3:

```
var days = (expiration - DateTime.Now).Days;
```

Box 4:

```
rootPage.NotifyUser("App expires in: " +
days + " days.", NotifyType.StatusMessage)
```

**Explanation:**

**Note:**

\* LicenseInformation.ExpirationDate | expirationDate property

Gets the license expiration date and time relative to the system clock.

\* CurrentApp.LicenseInformation | licenseInformation property

Gets the license metadata for the current app.

\* the variable expiration is a date. So you must subtract it with the current date.

**Incorrect:**

\* CurrentAppSimulator.LicenseInformation | licenseInformation property

Gets the simulated license metadata for the current app as provided by the simulation.

[http://msdn.microsoft.com/en-](http://msdn.microsoft.com/en-us/library/windows/apps/windows.applicationmodel.store.currentapp.licenseinformation.aspx)

[us/library/windows/apps/windows.applicationmodel.store.licenseinformation.expirationdate.aspx](http://msdn.microsoft.com/en-us/library/windows/apps/windows.applicationmodel.store.licenseinformation.expirationdate.aspx)

**Question: 71**

You are evaluating the following code that is part of a method named SelectMove:

```

var moves = Logic.GetMoves();
Position selectedMove = moves.First<Position>();
double maxResult = 0;

foreach(var move in moves)
{
    double result = Logic.EvaluatePosition(move);
    if (result > maxResult)
    {
        maxResult = result;
        selectedMove = move;
    }
}

```

You need to recommend a replacement for the foreach loop to reduce the amount of time that it takes for SelectMove to execute.

Which code segment should you recommend?

- A. 

```

foreach (var move in moves)
{
    Task.Factory.StartNew(() =>
    {
        double result = Logic.EvaluatePosition(move);
        if (result > maxResult)
        {
            maxResult = result;
            selectedMove = move;
        }
    });
}
```
- B. 

```
Parallel.ForEach(moves, move =>
    Logic.EvaluatePosition(move));
```
- C. 

```

foreach (var move in moves)
{
    Task<double> evaluationResult = Logic.EvaluatePositionAsync(move);
    double result = await evaluationResult;
    if (result > maxResult)
    {
        maxResult = result;
        selectedMove = move;
    }
}
```
- D. 

```

Parallel.ForEach(moves, move =>
{
    double result = Logic.EvaluatePosition(move);
    lock(selectedMove)
    {
        if(result>maxResult)
        {
            maxResult = result;
            selectedMove = move;
        }
    }
});
```

A. Option A

B. Option B

- C. Option C
- D. Option D

---

**Answer: D**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/ff963547.aspx>

### **Question: 72**

---

You are developing a Windows Store app that integrates with a stock trading website on the Internet.

The app must meet the following requirements:

The app must allow the user to view stock details.

The app must be able to get the updated stock information every five minutes from an Internet web service.

You need to configure the app to meet the requirements.

What should you do?

- A. Create a BackgroundDownloader object and then call the CreateDownloadAsync() method to specify the frequency of the stock information update.
- B. Add a Background Tasks declaration in the package.appxmanifest file and select the timer task type to collect stock information periodically.
- C. Enable the Home or Work Networking capability in the package.appxmanifest file.
- D. Enable the Lock Screen Notifications capability in the package.appxmanifest file.

---

**Answer: B**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/hh977049.aspx>

### **Question: 73**

---

You are developing a Windows Store app that will download files from a remote server.

You need to recommend a solution to display a custom message if a network error occurs during a file download.

What should you include in the recommendation?

- A. Wrap the asynchronous call in a try/catch block
- B. Wrap the Window.Current.ActivateQ call in a try/catch block.
- C. Register an event handler for the Application.UnhandledException event and call Application.Current.Exit.
- D. Register an event handler for the Application.UnhandledException event and set e.Handled to true.

---

**Answer: A**

---

Explanation:

Quickstart: Calling asynchronous APIs in C# or Visual Basic (Windows)

### **Question: 74**

---

DRAG DROP

You are developing a Windows Store app.

The following code is provided as part of an RSS feed reader.

```
public static Task<string> ReadRSSAsync(string[] url)
{
    ...
}
```

You need to create an asynchronous method that reports progress and allows cancellation.

Which three actions should you perform in sequence? (To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.)

Answer Area
Return an <b>AsyncInfo.Run</b> object and pass in an async delegate with a cancellation token and progress object.
Return an <b>AsyncOperation.Run</b> object and pass in an async delegate with a cancellation token and progress object.
Use the <b>dynamic</b> keyword and run the <b>ReadRSSAsync()</b> method.
Wrap the method in a new method that returns an <b>IAsyncOperationWithProgress&lt;string&gt;</b> object.
Use the <b>await</b> keyword and run the <b>ReadRSSAsync()</b> method.
Wrap the method in a new method that returns an <b>IAsyncTaskWithProgress&lt;string&gt;</b> object.

### Answer:

Box 1:

Wrap the method in a new method that returns an **IAsyncOperationWithProgress<string>** object.

Box 2:

Return an **AsyncInfo.Run** object and pass in an async delegate with a cancellation token and progress object.

Box 3:

Use the **await** keyword and run the **ReadRSSAsync()** method.

Explanation:

Note:

\* **IAsyncOperationWithProgress<TResult, TProgress>** interface

Represents an asynchronous operation that includes progress updates.

\* **AsyncInfo.Run<TResult, TProgress>** Method (`Func<CancellationToken, IProgress<TProgress>, Task<TResult>>`)

Creates and starts a Windows Runtime asynchronous operation that includes progress updates, by using a function that generates a started task that returns results. The task can support cancellation and progress reporting.

\* Example:

The **AsyncInfo** class is there to assist you with performing asynchronous actions or operations that support cancellation and reporting progress.

```

public static IAsyncOperationWithProgress<int, double> Multiply(int a, int b)
{
    return AsyncInfo.Run<IList<long>, double>((token, progress) =>
        Task.Run<int>(() =>
    {
        progress.Report(0);
        var result = a * b;
        token.ThrowIfCancellationRequested();
        progress.Report(100.0);
        return result;
    }, token));
}
http://msdn.microsoft.com/en-us/library/windows/apps/br206594.aspx
http://msdn.microsoft.com/en-us/library/hh779740\(v=vs.110\).aspx

```

---

### Question: 75

You are developing a Windows Store app to record videos.

The app will provide users with the ability to change the image rotation, ratio, and video format.

You need to recommend which control to use for the app.

Which control should you recommend?

- A. CameraCaptureUI
- B. MediaCapture
- C. SystemMediaTransportControls
- D. MediaElement

---

**Answer: B**

---

Explanation:

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

---

### Question: 76

#### HOTSPOT

You create a class in a namespace named `BacJcgrounaTasics` by using the following signature:

`Public sealed class GetLatestPricesBackgroundTask : IBackgroundTask`

The background task connects to a service to retrieve the latest price of the stock information used by an app.

You add code to unregister any background tasks already registered to the `OnNavigatedTo` event handler for the only page in the app.

You need to ensure that the task runs every 15 minutes once the app starts. You have the following code segment:

```

var var1 = new Target 1();
var1.Name = "BackgroundTask1";
var1.TaskEntryPoint = "Target 2";
var1.SetTrigger(new TimeTrigger(Target 3, false));
var1.Register();

```

Which code snippets should you insert in Target 1, Target 2, and Target 3 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:

**Answer Area**

Target 1:

AlarmApplicationManager  
BackgroundExecutionManager  
BackgroundTaskBuilder

Target 2:

BackgroundTasks  
BackgroundTasks.GetLatestPricesBackgroundTask  
GetLatestPricesBackgroundTask

Target 3:

15  
900  
900000

**Answer:****Answer Area**

Target 1:

AlarmApplicationManager  
BackgroundExecutionManager  
BackgroundTaskBuilder

Target 2:

BackgroundTasks  
BackgroundTasks.GetLatestPricesBackgroundTask  
GetLatestPricesBackgroundTask

Target 3:

15  
900  
900000

**Explanation:**

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

**Question: 77**

You are developing a Windows Store app.

The app has the following requirements:

The app must print from the Devices charm.

In-app printing must be invoked by using a Print button on the user interface.

You need to ensure that the user can print documents successfully.

Which code segments should you use? (Each answer presents part of the solution. Choose all that apply.)

- A. 

```
private Windows.Graphics.Printing.PrintManager printManager;
private void PrintInitializer()
{
    printManager.PrintTaskRequested += printManager_PrintTaskRequested;
}
private void printManager_PrintTaskRequested(PrintManager sender, PrintTaskRequestedEventArgs args)
{
    Windows.Graphics.Printing.PrintManager.ShowPrintUIAsync();
}
```
- B. 

```
private void PrintButton_Click(object sender, RoutedEventArgs e)
{
    Windows.Graphics.Printing.PrintManager.ShowPrintUIAsync();
}
```
- C. 

```
private Windows.Graphics.Printing.PrintManager printManager;
private IPrintDocumentSource printDocumentSource = null;

private void PrintButton_Click(object sender, RoutedEventArgs e)
{
    printManager = PrintManager.GetForCurrentView();
    printDocumentSource = new PrintDocument().DocumentSource;
    var args = e as PrintTaskRequestedEventArgs;
    PrintTask printTask = args.Request.CreatePrintTask("My Test Print", printSource =>
        printSource.SetSource(printDocumentSource));
}
```
- D. 

```
private Windows.Graphics.Printing.PrintManager printManager;
private IPrintDocumentSource printDocumentSource = null;
private void PrintInitializer()
{
    printManager = PrintManager.GetForCurrentView();
    printManager.PrintTaskRequested += printManager_PrintTaskRequested;
    printDocumentSource = new PrintDocument().DocumentSource;
}
private void printManager_PrintTaskRequested(PrintManager sender, PrintTaskRequestedEventArgs args)
{
    PrintTask printTask = args.Request.CreatePrintTask("My Test Print", printSource =>
        printSource.SetSource(printDocumentSource));
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

---

### Answer: BD

---

Explanation:

B: ShowPrintUIAsync is an asynchronous method and it is responsible for making your Windows Store app display the appropriate print window. Here is a JavaScript code snippet to show how it is used to display a print window:

// Function to process the print button click

```
function printButtonClick() {
    Windows.Graphics.Printing.PrintManager.showPrintUIAsync();
}
```

D: Example:

- To each screen in your app from which you want to print, add the following code so that it runs when the screen is opened. In the PrintSampleJS sample app, this is done in the ready member of the members parameter to the WinJS.UI.Pages.define function that is called to create the screen.

JavaScript

```
var printManager = Windows.Graphics.Printing.PrintManager.getForCurrentView();
printManager.onprinttaskrequested = onPrintTaskRequested;
```

Add the print-task event handler for that screen. Each screen in your app might need a different function if, for example, the content of each needs to be formatted differently for printing.

This PrintSampleJS app includes a completion handler, which is shown here. It's a good idea to handle completion events because then your app can let the user know if an error occurred and provide possible solutions. Likewise, your app could use the completion event to indicate subsequent steps for the user to take after the print job is successful.

JavaScript

```
function onPrintTaskRequested(printEvent) {  
    var printTask = printEvent.request.createPrintTask("Print Sample", function (args) {  
        args.setSource(MSApp.getHtmlPrintDocumentSource(document));  
        // Register the handler for print task completion event  
        printTask.oncompleted = onPrintTaskCompleted;  
    });  
}  
  
http://msdn.microsoft.com/en-us/library/windows/apps/windows.graphics.printing.printmanager.showprintuiasync.aspx  
http://msdn.microsoft.com/en-us/library/windows/apps/Hh780609.aspx
```

---

## Question: 78

---

You are developing a Windows Store app for a security monitoring company.

You have been asked to build a module that uploads large video files to a web-based video sharing service.

You have the following requirements:

The video codex must match the proprietary format developed by the company's internal labs.

When the app runs on a metered network connection, upload operations must be suspended.

When the app is suspended, upload operations must continue.

You need to ensure that the app meets the requirements.

What should you do? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Create a BackgroundUploader object and call the CreateUploadAsync() method to transfer the video file.
- B. Enable the Internet (Client) capability in the package.appxmanifest file.
- C. Enable the Internet (Server) capability in the package.appxmanifest file.
- D. Create an HttpClient object and use the PutAsync() method to perform the transfer the video file asynchronously.
- E. Create a BackgroundTransfer object and call the UploadAsync() method to transfer the video file.
- F. Use the XHR class to initiate and run a web upload of a video file.

---

## Answer: C, F

---

Explanation:

C: To ensure your Windows Store app is network ready, you must set the capability in the project Package.appxmanifest file.

Capability: Internet (Client & Server)

Gives the app inbound and outbound network access from the Internet and networks in public places like airports and coffee shops.

This is the internetClientServer capability in the app manifest.

A:

\* BackgroundUploader class

Background Transfer is primarily designed for long-term transfer operations for resources like video, music, and large images. For short-term operations involving transfers of smaller resources (i.e. a couple KB), use the Windows.Web.Http namespace (not D).

\* BackgroundUploader.CreateUploadAsync | createUploadAsync methods

Initializes an asynchronous UploadOperation.

\* Example:

```
BackgroundUploader uploader = new BackgroundUploader();
uploader.SetRequestHeader("Filename", file.Name);
UploadOperation upload = uploader.CreateUpload(uri, file);
// Attach progress and completion handlers.
await HandleUploadAsync(upload, true);
```

### Question: 79

DRAG DROP

You are developing a Windows Store app.

You need to profile the app performance.

Which three actions should you perform in sequence? (To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.)

Answer Area
Use the vsperf.exe tool to obtain the PackageFullName ID and then run the test.
Import the security certificate for the app.
Test the performance by using the appcert.exe tool.
Deploy the app to the local machine.
Use the perfmon.exe tool to obtain the PackageFullName ID and then run the test.
Create a release build.
Create a debug build.

**Answer:**

Use the vsperf.exe tool to obtain the PackageFullName ID and then run the test.

Deploy the app to the local machine.

Create a release build.

Explanation:

<http://msdn.microsoft.com/en-us/library/hh977161.aspx>

<http://msdn.microsoft.com/en-us/library/wx0123s5.aspx>

### Question: 80

You are developing a Windows Store app named GeoLoc.

You have the following code:

```
Geolocator geo = null;
if (geo == null)
    geo = new Geolocator();
Geoposition pos = await geo.GetGeopositionAsync();
```

When you run the app on some devices, you receive the following error message: "An exception of type 'System.UnauthorizedAccessException' occurred in msclib.dll but was not handled in user code."

You need to resolve the issue that causes the exception to occur.

Which file should you modify?

- A. Package.appxmanifest
- B. Assemblyinfo.es
- C. App.xaml
- D. Geoloc.csproj

---

**Answer: A**

---

Explanation:

Reference: <http://stackoverflow.com/questions/22753843/an-exception-of-type-system-unauthorizedaccessexception-occurred-in-mscorlib-d>

### **Question: 81**

---

You are developing a Windows Store app.

The app contains a page named MainPage.

The page contains a media element named videoPlayer and a button named btnPlayTo.

You need to provide users with the ability to select a device that will display the contents of videoPlayer when they click btnPlayTo.

Which code segment should you add to the Click event handler of btnPlayTo?

- A. PlayToManager.ShowPlayToUI();
- B. PlayToReceiver ptr = new PlayToReceiver();
await ptr.NotifyPlaying()
- C. PlayToReceiver ptr = new PlayToReceiver();
await ptr.StartAsync();
- D. PlayToManager.GetForCurrentView();

---

**Answer: A**

---

Explanation:

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

### **Question: 82**

---

DRAG DROP

You are developing a Windows Store app.

The app will provide users with the ability to play music remotely on another user's device and then the other users will guess the name of the song.

You need to access the music storage and to retrieve files and folders.

You have the following code:

```

List<string> fileTypeFilter = new List<string>();
fileTypeFilter.Add(".mp3");
fileTypeFilter.Add(".wma");
fileTypeFilter.Add(".wav");
fileTypeFilter.Add(".ogg");
var qryParam = new Target 1(Target 2.OrderByName, fileTypeFilter);

var query = KnownFolders.Target 3.Target 4(qryParam);

```

Which elements should you include in Target 1, Target 2, Target 3 and Target 4 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
CommonFileQuery	Target 1: <input type="text"/>
CreateFileQueryWithOptions	Target 2: <input type="text"/>
CreateFolderQueryWithOptions	Target 3: <input type="text"/>
CreateItemQueryWithOptions	Target 4: <input type="text"/>
DocumentsLibrary	
MusicLibrary	
PicturesLibrary	
QueryOptions	

---

### Answer:

---

Target 1:   
 Target 2:   
 Target 3:   
 Target 4:

Explanation:

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

---

### Question: 83

---

You are developing a Windows Store app named VideoPlayer.

The app will provide user with the ability to select video files by using the file picker and to play the video.

You need to recommend a solution for the app that meets the following requirements:

If the app is terminated while playing a video, the next time the app starts, the video must play.

The app must minimize the amount of storage space used.

The app must NOT request any capabilities.

What should you include in the recommendation?

- A. Add the file to AccessCache.StorageApplicationPermissions.MostRecentlyUsedList.
- B. Store the StorageFile.Path property in ApplicationData.Current.LocalSettings.
- C. Store the video in ApplicationData.Current.RoamingFolder.
- D. Store the video in ApplicationData.Current.LocalFolder.

---

**Answer: A**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.storage.accesscache.storageapplicationpermissions.mostrecentlyusedlist.aspx>

---

**Question: 84**

---

HOTSPOT

You are developing a Windows Store app.

The app will use certificates issued by a standalone certification authority (CA) for authentication. The standalone CA certificate is stored in a file named Ca.cer.

You need to configure the app manifest to ensure that the app can use certificates issued by the standalone CA.

You have the following XAML markup in the app manifest:

```
<Extensions>
  <Extension Category="windows.certificates">
    <Certificates>
      <Certificate StoreName="Target 1" Target 2="ca.cer" />
    </Certificates>
  </Extension>
</Extensions>
```

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

Answer Area

Target 1:

Target 2:

Answer Area

Target 1:

CA  
Root  
TrustedPeople

Target 2:

Type  
Content  
ExclusiveTrust

---

**Answer:**

---

**Answer Area**

Target 1:

The screenshot shows a dropdown menu with three items: 'CA', 'Root', and 'TrustedPeople'. The item 'CA' is highlighted with a red box.

Target 2:

The screenshot shows a dropdown menu with three items: 'Type', 'Content', and 'ExclusiveTrust'. The item 'Content' is highlighted with a red box.

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/hh465016.aspx>

---

**Question: 85**

You are developing a Windows Store app that will be used as an IT support ticket system.

You need to ensure that user settings are available regardless of the device being used on a corporate network.

Which app data store property should you use?

- A. Windows.Storage.Application Data.Current.LiveSyncFolder
- B. Windows.Storage.ApplicationData.Current.LocalFolder
- C. Windows.Storage.ApplicationData.Current.RoamingFolder
- D. Windows.Storage.ApplicationData.DefaultRemoteFolder

---

**Answer: C**

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/Hh700362.aspx>

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

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

---

**Question: 86**

You are developing a Windows Store app.

The main page of the app contains a canvas container that has five TextBox controls and three Button controls. The visibility of the buttons changes according to the data entered in the TextBox controls.

You need to ensure that the buttons slide into place when their Visibility property is set to true.

What should you add?

- A. A RepositionThemeTransition to the canvas
- B. An EntranceThemeTransition to the canvas
- C. A DoubleAnimation to the canvas
- D. A PointAnimation to each button

---

**Answer: A**

Explanation:

Reference:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/hh452703.aspx>

---

**Question: 87**

**DRAG DROP**

You are developing a Windows Store app.

The app will download files from the Internet.

You already have a method that downloads files. The method has the following signature:

```
public IAsyncOperation<StorageFile> DownloadFileAsync(string uri)
```

You need to call the **DownloadFileAsync** method from a background task.

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

```
01
02{
03   StorageFile file = null;
04
05   return file;
06}
```

Which code segments should you insert at lines 01 and 04? (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**

```
file = await DownloadFileAsync(uri);
file = DownloadFileAsync(uri).GetResults();
public StorageFile GetFile(string uri)
public async Task<StorageFile> GetFile(string uri)
=====
```

**Answer Area**

Line 01:  Code segment

Line 04:  Code segment

**Answer:**

Line 01:  public async Task<StorageFile> GetFile(string uri)

Line 04:  file = await DownloadFileAsync(uri);

**Question: 88**

You are developing a Windows Store app that will provide users with the ability to perform price comparisons between online retailers.

You build a user interface (UI) that has a button. The button is used to perform the price comparisons.

You write an event handler that contains the following code:

```

01 private void Button_Click(object sender, RoutedEventArgs e)
02 {
03     Button fetchButton = sender as Button;
04     fetchButton.IsEnabled = false;
05     Task<double> priceFetch1 = Task.Run(() => GetPrice(_retailer1,_item));
06     Task<double> priceFetch2 = Task.Run(() => GetPrice(_retailer2,_item));
07
08 }

```

You need to ensure that once the button is clicked, the button is disabled until the comparison completes. The solution must prevent the app from blocking access to the UI.

Which code segment should you insert at line 07?

- A. 

```
priceFetch1.Start();
priceFetch2.Start();
var priceAwaiter1 = priceFetch1.GetAwaiter();
var priceAwaiter2 = priceFetch2.GetAwaiter();
fetchButton.IsEnabled = true;
```
- B. 

```
Task.WaitAll(priceFetch1, priceFetch2);
fetchButton.IsEnabled = true;
```
- C. 

```
Task.WhenAll(priceFetch1, priceFetch2).ContinueWith((continuation) =>
{
    fetchButton.Dispatcher.RunAsync(
        Windows.UI.Core.CoreDispatcherPriority.Low,
        () => { fetchButton.IsEnabled = true; });
});
```
- D. 

```
while (!priceFetch1.IsCompleted && !priceFetch2.IsCompleted)
{
    new System.Threading.ManualResetEvent(false).WaitOne(1000);
}
fetchButton.IsEnabled = true;
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

---

**Answer: C**

---

Explanation:

[http://msdn.microsoft.com/en-us/library/hh160374\(v=vs.110\).aspx](http://msdn.microsoft.com/en-us/library/hh160374(v=vs.110).aspx)

---

### Question: 89

---

You are developing a Windows Store app that beeps when a device is turned upside down. You need to identify which type of sensor to use for the app.

Which sensor should you identify?

- A. Gyrometer
- B. Accelerometer
- C. SimpleOrientationSensor
- D. Compass

---

**Answer: B**

---

### **Question: 90**

You are developing a Windows Store app that accesses a USB Human Interface Device (HID). The app has a default page and a settings page.

You need to ensure that when a user connects the USB device, the app starts automatically and opens the settings page.

Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

- A. Override the OnLaunched method in the Application class and use the ApplicationViewEventArgs interface.
- B. Add a File Type Associations declaration to the app manifest.
- C. Add a Removable Storage capability to the app manifest.
- D. Override the OnActivated method in the Application class and use the ActivatedEventArgs interface.
- E. Add an AutoPlay Device declaration to the app manifest.

---

**Answer: A, D**

Explanation:

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

---

### **Question: 91**

You are developing a Windows Store app that targets customers who travel frequently.

The app allows users to record audio and video files and save them to their local devices.

You have the following traveler-friendly requirements:

The audio and video files must be shorter than three minutes in duration.

The app must finalize recording automatically when the time limit is reached.

You cannot use continuous polling to test when the time limit is reached.

You need to ensure that the app meets the requirements.

What should you do?

- A. Assign a handler to the DefaultAudioCaptureDeviceChanged event to handle the requirements.
- B. Handle the RecordLimitationExceeded event to handle the requirements.
- C. Call the StopRecordAsync() method to end recording.
- D. Handle the AudioTransferRequested event to avoid continuous polling.

---

**Answer: B**

Explanation:

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

---

### **Question: 92**

---

You are developing a Windows Store app.

You need to recommend a solution to handle exceptions thrown by the XAML Framework.

What should you recommend?

- A. Try/catch blocks
- B. An override of the Application.OnLaunched method
- C. An Application.UnhandledException event handler
- D. An Application.Suspending event handler

---

**Answer: C**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.ui.xaml.application.unhandledexception.aspx>

---

### **Question: 93**

---

You are developing a Windows Store app.

The app will support multiple languages. The app has a page named MainPage. The resource file of the page is named MainPage.resw and is located in a folder named /Resources/en-us/.

MainPage.resw contains the data shown in the following table.

Name	Value	Comment
GreetingTextBlock.Text	Hello	
Greeting	Good Day!	

You need to parameterize a TextBlock control by using the data in the resource file.

Which XAML markup should you use?

- A. <TextBlock x:Uid="Greeting"/>
- B. <TextBlock x:Uid="/MainPage/GreetingTextBlock"/>
- C. <TextBlock x:name='VResources/MainPage/GreetingTextBlock"/>
- D. <TextBlock x:name="Greeting"/>

---

**Answer: A**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/Hh965326.aspx>

---

### **Question: 94**

---

You are developing a Windows Store app.

The app will store user names and passwords by using Windows Azure.

You need to recommend a method to store the passwords. The solution must minimize the likelihood that the passwords will be compromised.

Which algorithm should you recommend using?

- A. 3DES
- B. DES

- C. AES
- D. SHA512

---

**Answer: D**

---

Explanation:

Reference:

<http://apps.microsoft.com/windows/en-us/app/sha-512-encoder/6be865f2-4673-47c6-9354-1865c2ef82fe>

---

### **Question: 95**

---

You are developing a Windows Store app to view MP4 videos.

You need to ensure that when a user double-clicks an MP4 file, the app starts and plays back the video automatically. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

- A. Add the Videos Library capability to the Appxmanifest file.
- B. Modify the OnActivated event of the App.xaml.cs file to pass ProtocolActivatedEventArgs to the page if ActivatedEventArgs.Kind == ProtocolActivatedEventArgs.
- C. Add a File Type Associations declaration to the Appxmanifest file.
- D. Add an OnFileActivated event handler to the App.xaml.cs file.
- E. Add an AutoPlay Content declaration to the Appxmanifest file.

---

**Answer: C, D**

---

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/jj191724.aspx>

---

### **Question: 96**

---

You are developing a Windows Store app that will be used as an IT support ticket system.

You need to ensure that user settings are available to only a single device.

Which property should you use?

- A. Windows.Storage.ApplicationData.Current.LocalFolder
- B. Windows.Storage.ApplicationData.Current.LiveSyncFolder
- C. Windows.Storage.ApplicationData.Current.RoamingFolder
- D. Windows.Storage.ApplicationData.DefaultRemoteFolder

---

**Answer: A**

---

Explanation:

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

---

### **Question: 97**

---

You are developing a Windows Store app.

The app will store data in a text file.

You create the following method to store encrypted text in the text file:

```

01 public async void EncryptData(StorageFile file,
02     IBuffer data,
03     IBuffer password,
04     string algorithm)
05 {
06
07     WriteData(file, encrypted);
08 }

```

The WriteData method writes the contents of an IBuffer object to a StorageFile object.

You need to recommend a solution to encrypt the data. The solution must minimize the use of system resources and must ensure that the app can decrypt the data.

Which code segment should you recommend adding to line 06?

- A. `var provider = AsymmetricKeyAlgorithmProvider.OpenAlgorithm(algorithm);  
var key = provider.CreateKeyPair(1024);  
var encrypted = CryptographicEngine.Encrypt(key, data, null);`
- B. `var provider = SymmetricKeyAlgorithmProvider.OpenAlgorithm(algorithm);  
var key = provider.CreateSymmetricKey(password);  
var encrypted = CryptographicEngine.SignHashedData(key, data);`
- C. `var provider = AsymmetricKeyAlgorithmProvider.OpenAlgorithm(algorithm);  
var key = provider.CreateKeyPair(1024);  
var encrypted = CryptographicEngine.Sign(key, data);`
- D. `var provider = SymmetricKeyAlgorithmProvider.OpenAlgorithm(algorithm);  
var key = provider.CreateSymmetricKey(password);  
var encrypted = CryptographicEngine.Encrypt(key, data, null);`

- A. Option A  
 B. Option B  
 C. Option C  
 D. Option D

---

**Answer: D**

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.security.cryptography.core.symmetrickeyalgorithmprovider.aspx>

### Question: 98

---

You are developing a Windows Store app.

The app contains a page named MainPage. The page contains a media element named videoPlayer.

You need to provide users with the ability to play the contents of videoPlayer on different devices by using the Devices charm.

Which two code segments should you add to the OnNavigateTo event handler on MainPage? (Each correct answer presents part of the solution. Choose two.)

- A. if (mgr.State == PlayToConnectionState.Connected)  
 {  
 videoPlayer.Play();  
 }
- B. PlayToConnection mgr = videoPlayer.PlayToSource.Connection;
- C. PlayToManager mgr = PlayToManager.GetForCurrentView();
- D. mgr.SourceSelected += (PlayToManager sender, PlayToSourceSelectedEventArgs e) =>  
 {  
 if (e.SupportsVideo)  
 {  
 mgr.ShowPlayToUI();  
 }  
 }
- E. mgr.SourceRequested += (PlayToManager sender, PlayToSourceRequestedEventArgs e) =>  
 {  
 request = e.SourceRequest;  
 PlayToSourceDeferral deferral = request.GetDeferral();  
 request.SetSource(videoplayer.PlayToSource);  
 deferral.Complete();  
 }

- A. Option A  
 B. Option B  
 C. Option C  
 D. Option D  
 E. Option E

---

**Answer: B, D**

---

Explanation:

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

---

### Question: 99

---

#### HOTSPOT

You are developing a Windows Store app.

The app receives badge notifications from Windows Push Notification Services (WNS).

You configure the app to establish a communication channel with WNS. You use a variable named pushChannel to store the notification channel object used for communication. You add the following line of code to the app:

```
pushChannel.PushNotificationReceived += OnPushReceived;
```

You need to extract the data sent from the service to a class-level variable named **xmlData** of type string.

You have the following code:

```
void Target 1(PushNotificationChannel sender,
              PushNotificationReceivedEventArgs e)
{
    switch(e.Target 2)
    {
        case PushNotificationType.Badge:
            xmlData = e.Target 3;
            break;
        default:
            xmlData="";
    }
}
```

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

Target 1:	<input type="button" value="▼"/>
Target 2:	<input type="button" value="▼"/>
Target 3:	<input type="button" value="▼"/>
Target 1:	<input type="button" value="▼"/>
	OnPush OnPushNotification OnPushReceived
Target 2:	<input type="button" value="▼"/>
	BadgeNotification NotificationType RawNotification
Target 3:	<input type="button" value="▼"/>
	BadgeNotification.Content BadgeNotification.Content.DocumentElement BadgeNotification.Content.GetXml()

---

**Answer:**

---

Target 1:	<input type="button" value="▼"/>
	OnPush OnPushNotification <b>OnPushReceived</b>
Target 2:	<input type="button" value="▼"/>
	<b>BadgeNotification</b> <b>NotificationType</b> RawNotification
Target 3:	<input type="button" value="▼"/>
	BadgeNotification.Content BadgeNotification.Content.DocumentElement <b>BadgeNotification.Content.GetXml()</b>

Explanation:

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

### Question: 100

HOTSPOT

You are developing a Windows Store app.

You configure the app to support AutoPlay when a portable media player is connected to a Windows 8.1 device.

You need to verify whether the app was initiated from AutoPlay.

What code should you add to the OnActivated event handler? (To answer, select the appropriate options in the answer area.)

Answer Area

if ( [ ] == [ ] )

Answer Area

if ( [ ] == [ ] )  
[ ]  
args.Kind  
args.PreviousExecutionState  
ActivationKind.Device  
ActivationKind.Launch  
ActivationKind.Protocol  
ApplicationExecutionState.ClosedByUser

Answer:

Answer Area

if ( [ ] == [ ] )  
[ ]  
args.Kind  
args.PreviousExecutionState  
ActivationKind.Device  
ActivationKind.Launch  
ActivationKind.Protocol  
ApplicationExecutionState.ClosedByUser

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/jj161017.aspx>

### Question: 101

DRAG DROP

You are developing a Windows Store app to capture video.

You need to ensure that a record button only appears if the camera is enabled and is located on the back of the device.

You have the following code:

```

01 public async Task<DeviceInformation> GetRearCamera()
02 {
03     var filter1 =
04         "System.Devices.InterfaceClassGuid:=" +
05             "\'{E5323777-F976-4F5B-9B55-B94699C46E44}\'' + 
06             "AND System.Devices.InterfaceEnabled:=" +
07             "System.StructuredQueryType.Boolean#True";
08     var filter2 = DeviceClass.VideoCapture;
09     var filter3 = DeviceClass.ImageScanner;
10
11     foreach (DeviceInformation info in devices)
12     {
13
14         return info;
15     }
16     return null;
17 }
```

Which code segments should you insert at lines 10 and 13? (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

```

if (info.EnclosureLocation.InDock)

if (info.EnclosureLocation.InLid)

if (info.EnclosureLocation.Panel ==
Windows.Devices.Enumeration.Panel.Back)

var devices = await DeviceInformation.FindAllAsync
(filter1);

var devices = await DeviceInformation.FindAllAsync
(filter2);

var devices = await DeviceInformation.FindAllAsync
(filter3);
```

#### Answer Area

Line 10: Code segment

Line 13: Code segment

**Answer:**

Line 10: `var devices = await DeviceInformation.FindAllAsync(filter1);`

Line 13: `if (info.EnclosureLocation.Panel == Windows.Devices.Enumeration.Panel.Back)`

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/br225436.aspx>

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

## Question: 102

You are developing a Windows Store app that will provide users with the ability to save annotations to text files. You have the following code segment: (Line numbers are included for reference only.)

```
01 public async void WriteData(StorageFile file, string data)
02 {
03
04 }
```

You need to add the contents of data to the beginning of file.

Which code segment should you insert at line 03?

- A. `string text = await FileIO.ReadTextAsync(file);
await FileIO.AppendTextAsync(file, data + text);`
- B. `using (var stream = await file.OpenAsync(FileAccessMode.ReadWrite))
{
 using (var output = stream.GetOutputStreamAt(0))
 {
 DataWriter writer = new DataWriter(output);
 writer.WriteString(data);
 await writer.StoreAsync();
 await output.FlushAsync();
 }
}`
- C. `using (var stream = await file.OpenAsync(FileAccessMode.ReadWrite))
{
 using (var output = stream.GetOutputStreamAt(0))
 {
 DataWriter writer = new DataWriter(output);
 writer.WriteString(data);
 await output.FlushAsync();
 }
}`
- D. `using (var stream = await file.OpenAsync(FileAccessMode.ReadWrite))
{
 using (var output = stream.GetOutputStreamAt(0))
 {
 DataWriter writer = new DataWriter(output);
 writer.WriteString(data);
 }
}`

- A. Option A
- B. Option B
- C. Option C
- D. Option D

---

**Answer: C**

---

Explanation:

[http://msdn.microsoft.com/en-us/library/windows/apps/xaml/Hh758325\(v=win.10\).aspx](http://msdn.microsoft.com/en-us/library/windows/apps/xaml/Hh758325(v=win.10).aspx)

### Question: 103

---

#### HOTSPOT

You are developing a Windows Store app to check the weather.

You need to ensure the app polls an external web service once per hour for tile updates.

You have the following code:

```
private void StartPolling(Uri urlToPoll,
Windows.UI.Notifications.PeriodicUpdateRecurrence recurrence)
{
    var updater =
        Windows.UI.Notifications.TileUpdateManager.CreateUpdaterForApplication();
    updater.Target 1(urlToPoll, recurrence);
}
```

Which code snippet should you insert in Target 1 to complete the code? (To answer, select the correct code snippet from the dropdown list in the answer area.)

#### Answer Area

Target 1:

#### Answer Area

Target 1:

AddToSchedule  
StartPeriodicUpdate  
EnableNotificationQueue  
GetScheduledTileNotifications

---

**Answer:**

---

#### Answer Area

Target 1:

AddToSchedule  
**StartPeriodicUpdate**  
EnableNotificationQueue  
GetScheduledTileNotifications

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.ui.notifications.tileupdater.startperiodicupdate.aspx>

**Question: 104****DRAG DROP**

You are developing a Windows store app.

The app will use Windows Push Notification Services (WNS). The app will execute a background task when a notification is pushed from the Windows Azure Mobile Services.

You need to develop the code for the Windows Azure Mobile Services.

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

```
01public string PushNotification(
02 OAuthToken accessToken, string uri, byte[] contentInBytes)
03{
04     try
05     {
06         HttpWebRequest request = HttpWebRequest.Create(uri) as HttpWebRequest;
07         request.Method =
08
09         request.Headers["X-WNS-Type"] =
10
11         request.ContentType =
12
13         request.Headers["Authorization"] =
14
15         using (Stream requestStream = request.GetRequestStream())
16         {
17             requestStream.Write(contentInBytes, 0, contentInBytes.Length);
18         }
19         using (HttpWebResponse webResponse = (HttpWebResponse)request.GetResponse())
20         {
21             return webResponse.StatusCode.ToString();
22         }
23     }
24     catch (Exception ex)
25     {
26         return ex.Message;
27     }
28}
```

Which code segments should you insert at lines 08, 10, 12 and 14? (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**

```

accessToken.Token;
acessToken.ToString();
"application/octet-stream";
"GET";
"POST";
String.Format("Bearer {0}", accessToken.Token);
"text/xml";
"wns/badge";
"wns/raw";
"wns/toast";
=====

```

**Answer Area**

- |          |              |
|----------|--------------|
| Line 08: | Code segment |
| Line 10: | Code segment |
| Line 12: | Code segment |
| Line 14: | Code segment |

**Answer:**

Line 08: "POST";  
 Line 10: "wns/raw";  
 Line 12: "application/octet-stream";  
 Line 14: String.Format("Bearer {0}", accessToken.Token);

**Explanation:**

<http://msdn.microsoft.com/en-us/library/windows/apps/xaml/hh868252.aspx>

**Question: 105****DRAG DROP**

You are developing a Windows Store game.

You need to profile the game's performance.

Which three actions should you perform in sequence? (To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.)

Answer Area
Use the perfmon.exe tool to obtain the PackageFullName ID and then run the test.
Test the performance by using the Accessibility Checker.
Create a debug build.
Test the performance by using the appcert.exe tool.
Deploy the game to the local machine.
Import the security certificate for the game.
Create a release build.
Use the vsperf.exe tool to obtain the PackageFullName ID and then run the test.

**Answer:**

Use the vsperf.exe tool to obtain the PackageFullName ID and then run the test.
Deploy the app to the local machine.
Create a release build.

**Explanation:**

<http://msdn.microsoft.com/en-us/library/hh977161.aspx>

<http://msdn.microsoft.com/en-us/library/wx0123s5.aspx>

**Question: 106****DRAG DROP**

You are developing a Windows Store app that must use a background task to retrieve local weather conditions from the Internet,

You need to ensure that the app can update the user interface while it is in a running or suspended state.

You have the following code:

```
namespace WeatherTaskLibrary
{
    public Target 1 class WeatherClass : Target 2
    {
        public void Target 3 (IBackgroundTaskInstance weatherTask)
        {
            ...
        }
    }
}
```

Which code snippets should you include in Target 1, Target 2 and Target 3 to complete the code? (To answer, drag the appropriate code snippets to the correct targets in the answer area. Each code snippet 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 Snippets	Answer Area
sealed	Target 1: <input type="text"/> Code Snippet
static	Target 2: <input type="text"/> Code Snippet
internal	Target 3: <input type="text"/> Code Snippet
Run	
Execute	
IBackgroundTaskInstance	
IBackgroundTask	

:::

**Answer:**

Sealed  
IBackgroundTask  
Run

**Question: 107****DRAG DROP**

You are developing a Windows Store app.

You need to create an animation that moves a rectangle horizontally across the screen by using a storyboard.

You have the following code:

```
private void TranslateRect(Rectangle rect,
    TranslateTransform transform, int end, Duration time)
{
    rect.RenderTransform = transform;
    DoubleAnimation animation = new DoubleAnimation();
    animation.Duration = time;
    Storyboard sb = new Storyboard();
    sb.Duration = time;
    sb.Children.Add(Target 1);
    Storyboard.SetTarget(Target 2, Target 3);
    Storyboard.SetTargetProperty(Target 4, Target 5);
    animation.To = end;
    sb.Begin();
}
```

Which code snippets should you include in Target 1, Target 2, Target 3, Target 4 and Target 5 to complete the code? (To answer, drag the appropriate code snippets to the correct targets in the answer area. Each code snippet 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 Snippets**

animation  
start  
"X"  
transform  
end

**Answer Area**

Target 1: Code Snippet  
Target 2: Code Snippet  
Target 3: Code Snippet  
Target 4: Code Snippet  
Target 5: Code Snippet

**Answer:**

**Answer Area**

Target 1:

animation

Target 2:

animation

Target 3:

transform

Target 4:

animation

Target 5:

"X"

Explanation:

<http://msdn.microsoft.com/en-us/library/windows/apps/windows.ui.xaml.media.animation.storyboard.aspx>