

Exam : 70-484

Title : Essentials of Developing

Windows Store Apps using

C#

Version: V11.02

1.Topic 1, Scenario 1

Background

You are developing a Windows Store app by using C# and XAML. The app will allow users to share and rate photos. The app will also provide information to users about photo competitions.

Application Structure

The app stores data by using a class that is derived from the DataStoreBase class.

The app coordinates content between users by making calls to a centralized RESTful web service.

The app has a reminder system that displays toast notifications when a photo competition is almost over.

The app gets the competition schedule data from the web service.

The app displays a list of images that are available for viewing in a data-bound list box. The image file list stores paths to the image files. The app downloads new images from the web service on a regular basis. Relevant portions of the app files are shown. (Line numbers are included for reference only and include a two-character prefix that denotes the specific file to which they belong.)

Business Requirements

The app must allow users to do the following:

- Run the app on a variety of devices, including devices that have limited bandwidth connections.
- Share and synchronize high resolution photographs that are greater than 1 MB in size.
- Rate each photo on a scale from 1 through 5.

Technical Requirements

The app must meet the following technical requirements:

- Retain state for each user and each device.
- Restore previously saved state each time the app is launched.
- Preserve user state and photo edits when switching between this app and other apps.
- When the app resumes after a period of suspension, refresh the user interface, tile images, and data with current information from the web service.
- Update the image list box as new images are added to the image file list.
- Convert the image paths into images when binding the image file list to the list box.

The app must store cached images on the device only, and must display images or notifications on the app tile to meet the following requirements:

- Regularly update the app tile with random images from the user's collection displayed one at a time.
- When a photo is displayed on the tile, one of the following badges must be displayed:
- If the photo has a user rating, the tile must display the average user rating as a badge.
- If the photo does not have a rating, the tile must display the Unavailable glyph as a badge.
- Update the app tile in real time when the app receives a notification.
- Display only the most recent notification on the app tile.

The app must display toast notifications to signal the end of a photo competition.

The toast notifications must meet the following requirements:

- Display toast notifications based on the schedule that is received from the web service.

- Display toast notifications for as long as possible.
- Display toast notifications regardless of whether the app is running.
- When a user clicks a toast notification that indicates the end of the photo competition, the app must display the details of the photo competition that triggered the toast notification.

App.xaml.cs

```
AX01 usingSystem;
AXO2 usingWindows.ApplicationModel
AXO3 usingWindows.UI.Xaml;
AXO4 usingWindows.UI.Xaml.Controls;
AXO5 namespaceApplication1
AX06 {
AXO7
       sealedpartialclassApp: Application
AXO8
AXO9
         privateDispatcherTimertileUpdateTimer =
newDispatcherTimer();
         privateDispatcherTimerbadgeUpdateTimer =
AX10
newDispatcherTimer();
AX11
         publicApp()
AX12
AX13
           this. InitializeComponent();
AX14
           tileUpdateTimer.Tick += TileUpdateTimer Tick;
           tileUpdateTimer.Interval = newTimeSpan(\overline{0}, 0, 10);
AX15
AX16
           tileUpdateTimer.Start();
AX17
           badgeUpdateTimer.Tick += BadgeUpdateTimer_Tick;
AX18
           badgeUpdateTimer.Interval = newTimeSpan(0, 1, 0);
AX19
           badgeUpdateTimer.Start();
AX20
         }
AX21
         privatevoidSendNotification(XmlDocumentcurrentTemplate)
AX22
AX23
           vartileUpdater = TileUpdateManager
.CreateTileUpdaterForApplication();
AX24
AX25
AX26
         voidTileUpdateTimer Tick(objectsender, objecte)
AX27
AX28
AX29
AX30
         voidBadqeUpdateTimer Tick(objectsender, objecte)
AX31
         {
AX32
AX33
         protectedoverridevoidOnLaunched
(LaunchActivatedEventArgsargs)
AX35
         {
           varrootFrame = newFrame();
AX36
AX37
           rootFrame.Navigate(typeof(MainPage));
AX38
           Window.Current.Content = rootFrame;
AX39
           Window.Current.Activate();
AX40
AX41
       }
AX42 }
```

DataStoreBase.cs

```
DB01 usingSystem;
DB02 namespaceApplication1
DBO3 {
DBO4
       publicabstractclassDataStoreBase
DBO5
DB06
       publicabstractboolSaveLocalSetting(stringkey, stringvalue);
DBO7
       publicabstractboolSaveRoamingSetting(stringkey, stringvalue);
DBO8
       publicabstractboolSaveDataToWebService(stringkey, stringjsonString);
DB09
       publicabstractboolSaveDataToLocalStorage(stringkey, stringjsonString);
DB10
       publicabstractboolSaveDataToRoamingStorage(stringkey, stringjsonString);
DB11
       publicabstractboolSaveDataToAzureStorage(stringkey, stringjsonString);
DB12
       publicabstractstringGetLocalSetting(stringkey);
DB13
       publicabstractstringGetRoamingSetting(stringkey);
DB14
       publicabstractstringGetDataFromWebService(stringkey);
DB15
       publicabstractstringGetDataFromLocalStorage(stringkey);
DB16
       publicabstractstringGetDataFromRoamingStorage(stringkey);
DB17
       publicabstractstringGetDataFromAzureStorage(stringkey);
DB18
DB19 }
```

You need to ensure that launching the app displays the required information.

From which ApplicationExecutionState enumeration should you configure the user interface state?

- A. ClosedByUser
- B. Suspended
- C. NotRunning
- D. Running
- E. Terminated

Answer: E

Explanation:

The user closes the app through the close gesture or Alt+F4 and takes longer than 10 seconds to activate the app again.

*From scenario: The app must meet the following technical requirements:

Retain state for each user and each device.

Restore previously saved state each time the app is launched.

Your app can use activation to restore previously saved data in the event that the operating system terminates your app, and subsequently the user re-launches it. The OS may terminate your app after it has been suspended for a number of reasons. The user may manually close your app, or sign out, or the system may be running low on resources.

Ref: http://msdn.microsoft.com/en-us/library/windows/apps/hh464925.aspx

2. You need to choose the appropriate data binding strategy for the image list box.

Which method should you use?

- A. System.Drawing.ImageConverter.ConvertToString ()
- B. IValueConverter.ConvertBack ()
- C. IValueConverter.Convert ()
- D. System.Drawing.ImageConverter-ConvertFromStrin ()

Answer: C

Explanation:

IValueConverter.Convert

The data binding engine calls this method when it propagates a value from the binding source to the binding target.

3. You need to configure toast notifications for the photo competition.

Which code segment should you use?

```
C A ((XmlElement) currentTemplate.CreateElement("notify")).SetAttribute
    ("duration", "5000");

C B. ((XmlElement) currentTemplate.GetElementsByTagName("toast")[0]).SetAttribute
    ("duration", "long");

C C. ((XmlElement) currentTemplate.GetElementsByTagName("toast")[0]).SetAttribute
    ("duration", "short");

C D. ((XmlElement) currentTemplate.CreateElement("duration")).SetAttribute
    ("value", "long");
```

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

Answer: B

Explanation:

The app must display toast notifications to signal the end of a photo competition. The toast notifications must meet the following requirements:

/ Display toast notifications for as long as possible

4. You need to ensure that only the correct information is preserved when the user switches to another app.

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

- A. Save application state by calling the SaveDataToRoamingStorage () method,
- B. Save photographs by calling the SaveDataToLocalStorage () method.
- C. Save photographs by calling the SaveDataToWebService () method.
- D. save application state by calling the SaveDataToLocalStorage () method.

Answer: A, B Explanation:

A: From scenario: The app must meet the following technical requirements:

Retain state for each user and each device.

B: From scenario: The app must store cached images on the device only

5. You need to ensure that the app resumes according to the requirements.

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

- A. Retrieve new user content by using the Window.Current.Dispatcher.ProcessEvents () method in the App_Resuming event handler.
- B. update the user interface by using the Window.Current.Dispatcher.Invoke () method in the App_Resuming event handler.
- C. Override the OnLaunched event handler.
- D. Retrieve new user content by using the Window.Current.Dispatcher.ProcessEvents () method in the OnLaunched event handler when the ActivationKind is Launch.
- E. Update the user interface by using the Window.Current.Dispatcher.Invoke () method in the OnLaunched event handler when the ActivationKind is Launch.
- F. Register the App_Resuming event handler for the Resuming event.

Answer: A, B **Explanation:**

From scenario:

The app must meet the following technical requirements:

/ When the app resumes after a period of suspension, refresh the user interface, tile images, and data with current information from the web service.