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# Microsoft

## 70-354 PRACTICE EXAM

Universal Windows Platform - App Architecture and UX/UI

# Product Questions: 76

## Version: 8.0

### Case Study: 1

#### Contoso, Ltd.

##### Overview

Contoso, Ltd. is an international computer manufacturer that has 3,000 employees.

Contoso plans to develop a Universal Windows Platform (UWP) app named App1 to manage the details of the computers sold by the company. App1 will display all of the available computer models on its main page.

Users will be able to select a computer model to see its details. On the details page for each computer, there will be a picture of the respective computer. The users will be able to use touch gestures to rotate the picture and to click a button to hear a description of the computer model.

Contoso also plans to develop a REST service to provide data to App1. The data will be stored in a Microsoft SQL Server database.

##### Requirements

###### Conceptual Design Requirements

Contoso identifies the following conceptual design requirements for App1:

- App1 will use the Model-View-ViewModel (MVVM) pattern.
- Before implementing any code, a storyboard must be created.
- Every storyboard must be linked to a work item.
- From the storyboard design tool, you must be able to see the work items.
- From Microsoft Visual Studio 2015, you must be able to access the storyboards directly.

###### Technical Requirements

Contoso identifies the following technical requirements for App1:

- App1 must be developed in C# and XAML.
- App1 must run on laptops, tablets, and mobile devices.
- The same codebase must be used for the different device types, whenever possible.
- During the development of App1, you must be able to monitor the processor and memory use of App1.

##### Data Model

The following class was developed to store information about the computers

```

class Computer
{
    string model;
    public string Model
    {
        get
        {
            return model;
        }
        set
        {
            model = value;
        }
    }
    public override string ToString()
    {
        return Model;
    }
}

```

The data must be accessed only through the REST API, not by using a direct SQL Server connection.

#### Main Page Requirements

The main page file will be named MainPage.xaml. The following data context will be used for the main page.

```

class ContosoAppContext
{
    List<Computer> computers = new List<Computer>()
    {
        new Computer() { Model= "Model1" },
        new Computer() { Model = "Model2" }
    };
    public list<Computer> Computers
    {
        get
        {
            return computers;
        }
        set
        {
            computers = value;
        }
    }
}

```

#### Details Page Requirements

The Details page will use the following media element.

<MediaElement x:Name="media'7">

#### Development Requirements

Contoso identifies the following technical requirements for the development process of App1:

- Code files must be stored in a public cloud.
- Developers must be able to work simultaneously on the code files.
- Source code synchronization must be performed directly from Visual Studio.
- From Visual Studio, a developer must be able to ensure that other developers can review the code.

For the REST service, Contoso plans to outsource the development. Contoso identifies the following technical requirements:

- Code files must be stored in the cloud.
- Developers must be able to work simultaneously on the code files.
- Source code synchronization must be performed directly from Visual Studio.
- All of the developers must have the full history of the code on their workstation.

### **Tests Requirements**

Contoso identifies the following requirements for testing:

- Unit tests must be used.
- The tests must maximize code coverage.
- The effort required to implement the testing must be minimized.

### **Build Process**

Contoso defines the following build process:

- Build the solution.
- When the solution is built, any required NuGet packages must be installed automatically.
- If the solution is built successfully, run the associated tests.
- If the tests are all successful, deploy the binaries to a server named TestServer.

---

### **Question: 1**

You need to recommend which tool to use to create the storyboards.

What should you recommend?

- A. Microsoft Visio
- B. Microsoft PowerPoint
- C. Microsoft Visual Studio
- D. Microsoft Excel

---

**Answer: B**

---

### **Question: 2**

You need to recommend which repository must be used for the REST service.

What should you recommend?

- A. Team Foundation version control with Visual Studio Online
- B. Microsoft Azure virtual machines with Team Foundation version control
- C. Microsoft Azure Blob storage
- D. GitHub

---

**Answer: A**

---

### **Question: 3**

You need to recommend a solution to monitor App1.

What should you include in the recommendation?

- A. the Output window in Visual Studio
- B. Windows Performance Monitor

- C. Resource View in Visual Studio
- D. Class View in Visual Studio

---

**Answer: B**

---

#### **Question: 4**

You need to recommend a solution to ensure that the UI adapts to different devices.  
What is the best recommendation to achieve the goal? More than one answer choice may achieve the goal. Select the BEST answer.

- A. Create a single project and use VisualState.
- B. Create a project for the phones, a project for the tablets, and a project for the laptops.
- C. Create a single project and use a responsive .ess file.
- D. Create a single project and use the LESS CSS preprocessor.

---

**Answer: A**

---

#### **Question: 5**

You need to recommend a source control solution for the development of Appl What should you recommend?

- A. Microsoft Azure virtual machines with Team Foundation version control
- B. GitHub
- C. Team Foundation version control with Visual Studio Online
- D. Microsoft Azure Blob storage

---

**Answer: B**

---

#### **Question: 6**

You need to recommend a solution to meet the testing requirements. What should you include in the recommendation?

- A. a web performance test
- B. load testing
- C. IntelliTrace
- D. IntelliTest

---

**Answer: B**

---

#### **Question: 7**

You need to ensure that each computer in MainPage.xaml is displayed with an associated picture. What should you use?

- A. VisualStateManager
- B. DataTemplate
- C. AdaptiveTrigger

## D. VisualState

---

**Answer: C**

---

**Question: 8**

DRAG DROP

On the details page, you render the picture of the computer inside an object of the Rectangle type.

You need to implement the ability to rotate the rectangle that contains the picture.

How should you complete the code? To answer, drag the appropriate code elements to the correct targets. 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.

**Code Elements**

DeltaManipulation  
ManipulationOrigin  
OriginalSource  
RenderTransform

**Answer Area**

```
void Window_ManipulationDelta(object sender, ManipulationDeltaEventArgs e)
{
    Rectangle rectToMove = e. Code element as Rectangle;

    Matrix rectsMatrix = ((MatrixTransform)rectToMove. Code element).Matrix;

    rectsMatrix.RotateAt(e. Code element.Rotation,
                        e. Code element.X,
                        e. Code element.Y);

    rectToMove.RenderTransform = new MatrixTransform(rectsMatrix);
```

---

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

```
void Window_ManipulationDelta(object sender, ManipulationDeltaEventArgs e)
{
    Rectangle rectToMove = e. OriginalSource as Rectangle;

    Matrix rectsMatrix = ((MatrixTransform)rectToMove. Code element).Matrix;

    rectsMatrix.RotateAt(e. DeltaManipulation.Rotation,
                        e. ManipulationOrigin.X,
                        e. ManipulationOrigin.Y);

    rectToMove.RenderTransform = new MatrixTransform(rectsMatrix);
```

**Case Study: 2****Fabrikam, inc.****OverView**

A company named Fabrikam, Inc is hired to develop a Universal Windows Platform (UWP) app named CityPlaner. The app will provide city employees with the ability to plan and manage city operations. City operations include all operations that a municipality might administer, such as emergency services and city maintenance.

The Cityplanner app will be deployed to different devices. CityPlanner will use Microsoft Azure to store data.

### **Existing Environment**

### **Development Environment**

Each developer has a laptop that has the following configurations:

- \* Operating System : Windows 8.1 (x64) pro.
- \* Memory: 4GB of RAM.

Each developer use a Hyper V virtual machine for development. Each virtual machine has the following configurations:

- \* Development environment: Microsoft visual studio 2015 Express.
- \* Operating System: Windows 8.1 (x64) pro.
- \* Source control: Git

Visual Studio Online will be used for application lifecycle management.

The City maintains its own NuGet repository library to help share and distribute code.

### **Application on Testing**

You have the following test environment:

- \* A machine group named Test Machines is configured. Three virtual machines for testing are provisioned in Azure and added to the group.
- \* Windows PowerShell is added to all of the testing virtual machines.

You identify the following requirements for testing:

- While testing the CityPlanner app internally, test users require the ability to record screenshots and the actions they perform in CityPlanner.
- A group of 200 beta testers will test CityPlanner. The app will be distributed to the beta testers through the Microsoft Store. During beta testing, CityPlanner must not be available by searching in the Store. Beta testing will last for 30 days.

### **Technical Background:**

Data for the CityPlanner app is stored in an Azure database and accessed through an Azure API App named CityData.

CityPlanner will be tested for various devices by using emulators.

The final version of CityPlanner will be distributed through the Microsoft Store.

### **Requirements:**

#### **Business Requirement:**

The CityPlanner app will need to be deployed to 1,000 city employees. Data operations will consist of approximately 90 percent read operations and 10 percent write operations.

You identify the following performance requirements:

- Data read performance must be optimized.
- Network communications must be minimized.

Data for CityPlanner will be placed in the categories described in the following table.

<b>Data store name</b>	<b>Description</b>
CityOperations	<ul style="list-style-type: none"><li>▪ Maintains a list of city operations, such as firefighting services, police services, and city offices, including maintenance offices</li><li>▪ Centrally stored in Azure</li></ul>
IssueList	<ul style="list-style-type: none"><li>▪ Maintains a list of active city issues that are categorized and prioritized so that the appropriate staff can manage them</li><li>▪ Centrally stored in Azure</li></ul>

The city employees will work in many different languages to support the municipality. Often the employees will have different difficult languages configured different devices.

Each employee will be able to write a personal note for any individual issue. The note will be private to that employee. When a note is typed the input language settings must be saved alongside the note.

### **Application Usage:**

You identify the following application usage behaviors for the CityPlanner app:

- There is an average of 300 active city issues in a single category.
- In a single day, approximately 25 percent of the CityOperations data will be used by the staff.
- When individual city employees work with the CityOperations data, they will work with the same data for a long period of time.
- When individual city employees work with the IssueList data, they will read all of the issues in a single category. The employees will open and close many issues frequently during a short period of time. They will often reopen an issue that they just closed.

The top-level navigation for the app will provide the city employees with the ability to select between managing the City Operations data and the issuesList dat

a. The employees will switch between these views frequently. The employees must be able to switch between the different data views easily.

All users of the CityPlanner app must be authenticated. Administrator account for the app must be accessible only by Fabrikam developers.

### **Issue Lists:**

On a page named issueList.xaml, you must add an option for users to sort the IssueList data by date, importance, or alphabetical order by using an AppBarButton on the interface.

The following code is used on the IssueList.xaml page.

```
<Page
    x:Class="CityPlanner.IssuesList"
    xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation"
    xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"
    xmlns:local="using:CityPlanner"
    xmlns:d="http://schemas.microsoft.com/expressionblend/2008"
    xmlns:mc="http://schemas.openxmlformats.org/markup-compatibility/2006"
    mc:Ignorable="d">

    <Page.Resources>
        <Style x:Key="ListViewStyle1" TargetType="ListView">
            <Setter Property="ItemContainerTransitions">
                <Setter.Value>
                    <TransitionCollection>
                        <ReorderThemeTransition/>
                        <EntranceThemeTransition IsStaggeringEnabled="True" />
                    </TransitionCollection>
                </Setter.Value>
            </Setter>
        </Style>
    </Page.Resources>
    <Page.Transitions>
        <TransitionCollection>
            <NavigationThemeTransition>
                <NavigationThemeTransition.DefaultNavigationTransitionInfo>
                    <CommonNavigationTransitionInfo />
                </NavigationThemeTransition.DefaultNavigationTransitionInfo>
            </NavigationThemeTransition>
        </TransitionCollection>
    </Page.Transitions>
    <Grid x:Name="gridView1" Background="{ThemeResource ApplicationPageBackgroundThemeBrush}">
        <ScrollViewer>
            <StackPanel>
                <ListView x:Name="listView1" SelectionChanged="listView1_SelectionChanged" Style="{StaticResource ListViewStyle1}">
                    <ListView.ItemTemplate>
                        <DataTemplate>
                            <Grid Height="70" Margin="6">
```

```

<Grid.ColumnDefinitions>
    <ColumnDefinition Width="Auto"/>
    <ColumnDefinition Width="*"/>
</Grid.ColumnDefinitions>
<Border>
    <Background>{StaticResource ListViewItemPlaceholderBackgroundThemeBrush}</Background>
    <Width>50</Width>
    <Height>50</Height>
    <Image Source="{Binding StatusImage}" Stretch="UniformToFill"/>
</Border>
<StackPanel Grid.Column="1" VerticalAlignment="Center" Margin="10,0,0,0">
    <TextBlock Text="{Binding Title}" TextWrapping="NoWrap"/>
    <TextBlock Text="{Binding Subtitle}" TextWrapping="NoWrap"/>
    <TextBlock Text="{Binding Description}" MaxHeight="60"/>
</StackPanel>
</Grid>
</DataTemplate>
</ListView.ItemTemplate>
</ListView>
</StackPanel>
</ScrollViewer>
</Grid>
</Page>

```

### Future Requirement:

You identify the following long-term requirements:

- CityPlanner is the first in a series of apps that will be built for the city. Future apps must maximize code reuse.
- To keep a consistent look and feel, reusable controls must maintain their own template and properties.
- The reusable controls must be inheritable, to ensure that they can be used to create other controls.
- Fabrikam plans to make the CityPlanner app available to other cities.

### Question: 1

You plan to add Cortana support to the CityPlanner app.

The employees need to be able to search for an issue in CityPlanner by using either of the following phrases:

- CityPlanner, show the issues with "search phrase".
- Show me the issues with "search phrase", CityPlanner.

What should you add to the Voice Command Definition (VCD) file?

- A. 

```
<ListenFor RequireAppName="BeforePhrase">
    show [me] the issues with {searchPhrase}
</ListenFor>
<ListenFor RequireAppName="AfterPhrase">
    show [me] the issues with {searchPhrase}
</ListenFor>
```
- B. 

```
<ListenFor RequireAppName="ExplicitlySpecified">
    {searchPhrase} {builtin:AppName}
</ListenFor>
<ListenFor RequireAppName="ExplicitlySpecified">
    {builtin:AppName} {searchPhrase}
</ListenFor>
```
- C. 

```
<ListenFor RequireAppName="BeforeOrAfterPhrase">
    {builtin:AppName}
</ListenFor>
<ListenFor RequireAppName="ExplicitlySpecified">
    show [me] the issues with {searchPhrase}
</ListenFor>
```
- D. 

```
<ListenFor RequireAppName="BeforePhrase">
    {builtin:AppName}
</ListenFor>
<ListenFor RequireAppName="AfterPhrase">
    show [me] the issues with {searchPhrase}
</ListenFor>
```

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

---

**Answer: C**

---

### Question: 2

---

You are developing code to meet the requirements of the personal notes.  
 Which code should you include?

- A. using Windows.Globalization;  
`var languageFontGroup = new Fonts.LanguageFontGroup  
(Windows.System.UserProfile.GlobalizationPreferences.Languages[0]);`
- B. using Windows.Globalization;  
`var languageFontGroup = new Fonts.LanguageFontGroup  
(Language.CurrentInputMethodLanguageTag);`
- C. using Windows.Globalization;  
`var languageFontGroup = new Fonts.LanguageFontGroup(ApplicationLanguages.Languages [0]);`
- D. using Windows.Globalization;  
`var languageFontGroup = new Fonts.LanguageFontGroup((new GeographicRegion()).Code);`

---

**Answer: B**

---

**Question: 3**

You need to recommend a procedure to ensure that the CityPlanner app passes the certification process. What should you include in the recommendation?

- A. Submit CityPlanner and ensure that authentication is disabled. When the app passes certification, upload a new version that has authentication enabled.
- B. Add a test user account to CityPlanner. Under the App description, add the credentials to the release notes of the app.
- C. In the Organizational licensing section, select Allow disconnected (offline) licensing for organizations.
- D. Add a test user account to CityPlanner. Add the credentials to the Notes for certification page.

---

**Answer: B**

---

**Question: 4**

**HOTSPOT**

Which animations will appear when the employees view the IssueList.xaml page? For each of the following statements, select Yes if the statement is true. Otherwise, select No.

<b>Statements</b>	<b>Yes</b>	<b>No</b>
The listView1 items animate when the page loads.	<input type="radio"/>	<input type="radio"/>
The listView1 items animate when items are added to the end of the list.	<input type="radio"/>	<input type="radio"/>
The listView1 items animate at different times when the page loads.	<input type="radio"/>	<input type="radio"/>

---

**Answer:**

<b>Statements</b>	<b>Yes</b>	<b>No</b>
The listView1 items animate when the page loads.	<input type="radio"/>	<input checked="" type="radio"/>
The listView1 items animate when items are added to the end of the list.	<input checked="" type="radio"/>	<input type="radio"/>
The listView1 items animate at different times when the page loads.	<input checked="" type="radio"/>	<input type="radio"/>

---

**Question: 5**

Which two actions should you perform to provide beta testers with access to the CityPlanner app? Each correct answer presents part of the solution.

- A. Create one promotional code for each day that the beta phase is available.
- B. On the Pricing and availability page, create a new sale that has a price tier of free.
- C. On the Pricing and availability page, set the base price to Free.
- D. Create one promotional code for each tester.
- E. Create a promotional code for each Windows 10 platform.

F. On the Pricing and availability page, select Hide this app and stop selling.

---

**Answer: C, E**

---

**Question: 6**

---

You need to recommend a solution to ensure that CityOperations meets the performance requirements. What should you include in the recommendation?

- A. Implement data caching in the CityData Azure API.
- B. Use asynchronous methods in the CityPlanner app to read the IssueList data.
- C. Implement data caching in the CityPlanner app.
- D. Use asynchronous methods in the CityData Azure API app to read the IssueList data.

---

**Answer: C**

---

**Question: 7**

---

You need to recommend a change to ensure that the developers can test CityPlanner. What should you recommend?

- A. Install the UWP SDK on the virtual machines.
- B. Upgrade the operating system of the virtual machines to Windows 10.
- C. Install Visual Studio 2015 on the developers' laptops.
- D. Upgrade Visual Studio on the virtual machines to Visual Studio Professional 2015.

---

**Answer: D**

---

**Question: 8**

---

What is the best control to use for the top-level navigation? More than one answer choice may achieve this goal. Select the BEST answer.

- A. SemanticZoom
- B. Pivot
- C. SplitView
- D. ListView

---

**Answer: B**

---

**Question: 9**

---

DRAG DROP

How should you complete the code for AppBarButton? To answer, drag the appropriate code elements to the correct targets. 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.

**Code Elements**

AppBar  
ContentDialog  
Flyout  
MenuFlyout

**Answer Area**

```
<AppBarButton Icon="Sort" IsCompact="True">
  <AppBarButton. [Code element] >
    < [Code element] >
      <MenuFlyoutItem Text="By date" Click="sortItem_Click" Tag="date" />
      <MenuFlyoutItem Text="By importance" Click="sortItem_Click" Tag="importance" />
      <MenuFlyoutItem Text="Alphabetical" Click="sortItem_Click" Tag="alphabetical" />
    </ [Code element] >
  </AppBarButton. [Code element] >
</AppBarButton>
```

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

```
<AppBarButton Icon="Sort" IsCompact="True">
  <AppBarButton. [Flyout] >
    < [MenuFlyout] >
      <MenuFlyoutItem Text="By date" Click="sortItem_Click" Tag="date" />
      <MenuFlyoutItem Text="By importance" Click="sortItem_Click" Tag="importance" />
      <MenuFlyoutItem Text="Alphabetical" Click="sortItem_Click" Tag="alphabetical" />
    </ [MenuFlyout] >
  </AppBarButton. [Flyout] >
</AppBarButton>
```

**Case Study: 3****Litware, Inc.****Overview**

Litware, Inc. is an international bike manufacturer that has 3.000 employees. Litware is developing a Universal Windows Platform (UWP) app that will provide its customers with the ability to see its inventory of bikes. The app will be used on various Windows 10 devices.

**Requirements****App Design**

The app will display all of the available bike models on its main page.

The app will have an Application Bar from which the customers will be able to save a report in a csv file of all the available bikes.

On desktop computers and laptops, the app will be displayed in a window. The window of the app will be resized frequently.

Once the app is developed successfully, a Windows 8.1 version of the app will be created.

**App Files**

The app has the following files:

- MainPage.xaml and MainPage.xaml.cs, which contain the code for the main page
- Bike.cs, which is the class that defines a bike
- LitwareDataContext.cs, which contains the data context for the main page
- DataLayer.cs, which contains the methods used to access data

**App Code**

```

MP01.  <Page
MP02.    x:Class="Litware.MainPage"
MP03.    xmlns=http://schemas.microsoft.com/winfx/2006/xaml/presentation
MP04.    xmlns:x=http://schemas.microsoft.com/winfx/2006/xaml
MP05.    xmlns:local="using:Litware"
MP06.    xmlns:d=http://schemas.microsoft.com/expression/blend/2008
MP07.    xmlns:mc=http://schemas.openxmlformats.org/markup-compatibility/2006
MP08.    mc:Ignorable="d">
MP09.    <Page.Resources>
MP10.      <Style x:Name="RedFontStyle" TargetType="TextBlock">
MP11.        <Setter Property="Foreground" Value="Red" />
MP12.      </Style>
MP13.    </Page.Resources>
MP14.    <Grid Background="{ThemeResource ApplicationPageBackgroundThemeBrush}">
MP15.      <VisualStateManager.VisualStateGroups>
MP16.        <VisualStateGroup>
MP17.          <VisualState x:Name="WideState">
MP18.            <VisualState.StateTriggers>
MP19.              <AdaptiveTrigger MinWindowWidth="320" />
MP20.            </VisualState.StateTriggers>
MP21.            <VisualState.Setters>
MP22.              <Setter Target="listBoxBike.Background" Value="Gray" />
MP23.            </VisualState.Setters>
MP24.          </VisualState>
MP25.          <VisualState x:Name="NarrowState">
MP26.            <VisualState.StateTriggers>
MP27.              <AdaptiveTrigger MinWindowWidth="0" />
MP28.            </VisualState.StateTriggers>
MP29.            <VisualState.Setters>
MP30.              <Setter Target="listBoxBike.Background"
MP31.                Value="Orange" />
MP32.            </VisualState.Setters>
MP33.          </VisualState>
MP34.        </VisualStateGroup>
MP35.      </VisualStateManager.VisualStateGroups>
MP36.      <ListBox Margin="10,11,10,16" ItemsSource="{Binding Bikes}"
MP37.        Name="listBoxBike">
MP38.        <ListBox.ItemTemplate>
MP39.          <DataTemplate>
MP40.            <StackPanel Tapped="StackPanel_Tapped">
MP41.              <TextBlock PointerPressed="TextBlock_PointerPressed"
Style="{StaticResource RedFontStyle}" Text="{Binding Name}" />
MP42.              <TextBlock Text=" , " />
MP43.              <TextBlock Foreground="Blue" Text="{Binding Size}" />
MP44.            </StackPanel>
MP45.          </DataTemplate>
MP46.        </ListBox.ItemTemplate>
MP47.      </ListBox>
MP48.    </Grid>
MP49.    <Page.BottomAppBar>
MP50.      <AppBar x:Name="bottomAppBar" Padding="10,0,10,0">
MP51.        <Grid>

```

```

MP52.          <StackPanel Orientation="Horizontal">
MP53.              <Button Content="Print"/>
MP54.              <Button Content="Files" x:Name="Files" Click="Files_Click"/>
MP55.          </StackPanel>
MP56.      </Grid>
MP57.  </AppBar>
MP58. </Page.BottomAppBar>
MP59. </Page>

```

MainPage.xaml.cs

```

MC01. public sealed partial class MainPage : Page
MC02. {
MC03.     public MainPage()
MC04.     {
MC05.         this.InitializeComponent();
MC06.         LitwareDataContext lDC = new LitwareDataContext();
MC07.         lDC.Bikes = DataLayer.GetBikes();
MC08.         this.DataContext = lDC;
MC09.     }
MC10.     private void StackPanel_Tapped(object sender, TappedRoutedEventArgs e)
MC11.     {
MC12.         var item = (Bike) this.listBoxBike.SelectedItem;
MC13.         ((StackPanel) sender).Background = new SolidColorBrush(item.BikeColor);
MC14.     }
MC15.     private void files_Click(object sender, RoutedEventArgs e)
MC16.     {
MC17.     }
MC18.     }
MC19.     }
MC20.     private async void TextBlock_PointerPressed(object sender, PointerRoutedEventArgs e)
MC21.     {
MC22.         if (e.GetCurrentPoint(this).Properties.IsRightButtonPressed)
MC23.         {
MC24.             var dialog = new MessageDialog("Detail is not available for now");
MC25.             await dialog.ShowAsync();
MC26.         }
MC27.     }
MC28. }

```

---

## Bike.cs

```
BI01. public class Bike
BI02. {
BI03.     Color bikeColor;
BI04.     string name;
BI05.     int size;
BI06.     public Color BikeColor
BI07.     {
BI08.         get
BI09.         {
BI10.             return bikeColor;
BI11.         }
BI12.         set
BI13.         {
BI14.             bikeColor = value;
BI15.         }
BI16.     }
BI17.     public string Name {
BI18.     {
BI19.         get
BI20.         {
BI21.             return name;
BI22.         }
BI22.         set
BI23.         {
BI24.             name = value;
BI25.         }
BI26.     }
BI27.     public int Size
BI28.     {
BI29.         get
BI30.         {
BI31.             return size;
BI32.         }
BI33.         set
BI34.         {
BI35.             size = value;
BI36.         }
BI37.     }
BI38. }
```

### LitwareDataContext.cs

```
LD01. class LitwareDataContext
LD02. {
LD03.     ObservableCollection<Bike> bikes = new ObservableCollection<Bike>();
LD04.     public ObservableCollection<Bike> Bikes
LD05.     {
LD06.         get
LD07.         {
LD08.             return bikes;
LD09.         }
LD10.         set
LD11.         {
LD12.             bikes = value;
LD13.         }
LD14.     }
LD15. }
```

### DataLayer.cs

```
DL01. public static class DataLayer
DL02. {
DL03.     public static ObservableCollection<Bike> GetBikes()
DL04.     {
DL05.         ObservableCollection<Bike> bikes = new ObservableCollection<Bike>();
DL06.         bikes.Add(new Bike()
DL07.         {
DL08.             Name = "RoadBike",
DL09.             Size = 1,
DL10.             BikeColor = Colors.Blue
DL11.         });
DL12.         bikes.Add(new Bike()
DL13.         {
DL14.             Name = "RoadBike",
DL15.             Size = 2,
DL16.             BikeColor = Colors.Blue
DL17.         });
DL18.         bikes.Add(new Bike()
DL19.         {
DL20.             Name = "MountainBike",
DL21.             Size = 2
DL22.         });
DL23.         return bikes;
DL24.     }
DL25. }
```

---

### Question: 1

---

HOTSPOT

You are evaluating the implementation of the Application Bar for the app.

Use the drop-down menus to select the answer choice that completes each statement based on the information presented in the case study.

To make the Application Bar appear, a user must [answer choice] in the app window.

swipe from left to right
swipe from right to left
tap with one finger
tap with two fingers

The buttons appear [answer choice] of the Application Bar.

in the center
on the left
on the left and on the right
on the right

---

Answer:

---

To make the Application Bar appear, a user must [answer choice] in the app window.

swipe from left to right
swipe from right to left
tap with one finger
tap with two fingers

The buttons appear [answer choice] of the Application Bar.

in the center
on the left
on the left and on the right
on the right

---

## Question: 2

---

HOTSPOT

You are evaluating the style and themes of the app.

Use the drop-down menus to select the answer choice that completes each statement based on the information presented in the case study.

The text color used to display the name of the bike is [answer choice].

black
blue
gray
orange
red

The text color used to display the size of the bike is [answer choice].

black
blue
gray
orange
red

---

Answer:

---

The text color used to display the name of the bike is [answer choice].

black
blue
gray
orange
red

The text color used to display the size of the bike is [answer choice].

black
blue
gray
orange
red

### Question: 3

HOTSPOT

You are evaluating the rendering of the list box.

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

Statements	Yes	No
The list box will display a total of three items.	<input type="radio"/>	<input type="radio"/>
The size of the bike will appear to the right of the name.	<input type="radio"/>	<input type="radio"/>
The data template for the list box can be referenced from another XAML page.	<input type="radio"/>	<input type="radio"/>

Answer:

Statements	Yes	No
The list box will display a total of three items.	<input checked="" type="radio"/>	<input type="radio"/>
The size of the bike will appear to the right of the name.	<input checked="" type="radio"/>	<input type="radio"/>
The data template for the list box can be referenced from another XAML page.	<input type="radio"/>	<input checked="" type="radio"/>

### Question: 4

HOTSPOT

You are evaluating the user interactions when using the app.

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

<b>Statements</b>	<b>Yes</b>	<b>No</b>
If a user clicks the text RoadBike on the list of bikes, the background color will change to blue.	<input type="radio"/>	<input type="radio"/>
If a user clicks the text MountainBike on the list of bikes, an exception will be thrown.	<input type="radio"/>	<input type="radio"/>
If a user taps the text RoadBike on the list of bikes, the background color will change to blue.	<input type="radio"/>	<input type="radio"/>

---

**Answer:**

---

<b>Statements</b>	<b>Yes</b>	<b>No</b>
If a user clicks the text RoadBike on the list of bikes, the background color will change to blue.	<input checked="" type="radio"/>	<input type="radio"/>
If a user clicks the text MountainBike on the list of bikes, an exception will be thrown.	<input type="radio"/>	<input checked="" type="radio"/>
If a user taps the text RoadBike on the list of bikes, the background color will change to blue.	<input checked="" type="radio"/>	<input type="radio"/>

---

### **Question: 5**

---

You are reviewing MainPage.xaml.

The contents of which element prevents MainPage.xaml from working on a desktop computer that runs Windows 8.1?

- A. AppBar
- B. VisualStateGroup
- C. DataTemplate
- D. Style

---

**Answer: A**

---

---

### **Question: 6**

---

HOTSPOT

You are evaluating the touch input of the app.

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

**Answer Area**

<b>Statements</b>	<b>Yes</b>	<b>No</b>
When the user taps with two fingers on the text block that contains the name of a bike, a message appears.	<input type="radio"/>	<input type="radio"/>
If the list box contains a large number of items, a user can scroll through the list box by swiping in the list box.	<input type="radio"/>	<input type="radio"/>
On a tablet, when a user swipes from the bottom of the app window, the Application Bar appears.	<input type="radio"/>	<input type="radio"/>

---

**Answer:**

**Answer Area**

<b>Statements</b>	<b>Yes</b>	<b>No</b>
When the user taps with two fingers on the text block that contains the name of a bike, a message appears.	<input checked="" type="radio"/>	<input type="radio"/>
If the list box contains a large number of items, a user can scroll through the list box by swiping in the list box.	<input type="radio"/>	<input checked="" type="radio"/>
On a tablet, when a user swipes from the bottom of the app window, the Application Bar appears.	<input checked="" type="radio"/>	<input type="radio"/>

---

**Question: 7**

**DRAG DROP**

You create an app package for the app.

You need to sign the app digitally before you publish the app to the Microsoft Store.

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

Tools

MakeCert
Pvk2Pfx
Regasm
Regsvcs
SignTool

Answer Area



---

Answer:

---

Answer Area

MakeCert
Pvk2Pfx
SignTool

**Case Study: 4**  
**Mix Questions**

**Question: 1**

---

**DRAG DROP**

You are developing a Universal Windows Platform (UWP) app.

The app manipulates accounts by using a class named Account that you developed.

You need to automate tests for the debit method of the Account class.

How should you complete the code? To answer, drag the appropriate code elements to the correct targets. 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.

**Code Elements**

TestClass  
Test  
class  
interface  
TestMethod  
Assert  
int32

**Answer Area**

```
[ [ Code element ] ]
public [ Code element ] UnitTest1
{
    [ Code element ]
    public void TestDebit1()
    {
        int expected = 1;
        int actual = Account.debit(1);
        [ Code element ].AreEqual(expected, actual, 0.001, "Error Message");
    }
}
```

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

```
[ TestClass ]
public class UnitTest1
{
    [ TestMethod ]
    public void TestDebit1()
    {
        int expected = 1;
        int actual = Account.debit(1);
        Assert.AreEqual(expected, actual, 0.001, "Error Message");
    }
}
```

**Question: 2****DRAG DROP**

You plan to use Microsoft Visual Studio Online for version control.

You need to identify which actions must be performed before you can use Visual Studio Online for version control.

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.

**Actions**

Create a Visual Studio Online account.

Create a team project in Visual Studio Online.

Deploy Team Foundation Server (TFS) on a Microsoft Azure virtual machine.

Create a Microsoft account.

Create a Microsoft Office 365 subscription.

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

### **Answer Area**

Create a Microsoft account.

Create a Visual Studio Online account.

Create a team project in Visual Studio Online.

### **Question: 3**

#### **DRAG DROP**

You are developing an app in Microsoft Visual Studio 2015. The source code is stored in a team project in Visual Studio Online. Visual Studio Online is configured to use Team Foundation version control. The team project is configured to use a Builds check-in policy.

After you make some changes to the code, the project fails to build because of code errors.

You need to provide another developer with the ability to review the code changes.

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.

#### **Actions**

#### **Answer Area**

Browse to the Visual Studio Online project home page.

Click Request Review.

Assign a new task to the developer.



Select the Work Items pane in Visual Studio.



Click Submit.

Install Microsoft Feedback Client.

Assign the developer as a reviewer.

Select the My Work pane in Visual Studio.

**Answer:**

Browse to the Visual Studio Online project home page.

Click Request Review.

Assign a new task to the developer.

Install Microsoft Feedback Client.

#### **Question: 4**

You need to perform exploratory testing of a Universal Windows Platform (UWP) app.

What are two possible products that you can use? Each correct answer presents a complete solution.

- A. Microsoft Visual Studio
- B. Microsoft Visual Studio Online
- C. Microsoft Test Manager
- D. the Microsoft Platform Ready Test Tool
- E. Microsoft Blend for Visual Studio

**Answer: BC**

#### **Question: 5**

##### **DRAG DROP**

You are developing a Universal Windows Platform (UWP) app. All of the code sources are hosted in GitHub.

You need to create a new branch in GitHub.

What commands should you run? To answer, drag the appropriate values to the correct targets. Each value 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.

Values	Answer Area
checkin	Value
checkout	Value
git	Value
pull	Value
push	-b newBranch origin newBranch

**Answer:**

**Answer Area**

git	checkout	-b newBranch
git	push	origin newBranch

---

**Question: 6**

You are developing a Universal Windows Platform (UWP) app that has the following unit test.

```
public class UnitTest1
{
    [TestMethod]
    public void TestMethod1()
    {
    }
}
```

You need to ensure that TestMethod1 appears in the Test Explorer window of Microsoft Visual Studio. What should you add?

- A. [TestProperty("AutoStart", "True")] before the TestMethod1 declaration
- B. [TestCategory("Enabled")] before the UnitTest1 declaration
- C. [TestProperty("Enabled", "True")] before the TestMethod1 declaration
- D. [TestClass] before the UnitTest1 declaration

---

**Answer: D**

---

**Question: 7**

Your company uses Git repositories with topic branches and Microsoft Visual Studio for Universal Windows Platform (UWP) app development.

You are developing a new feature for an app named App1.

You need to provide three developers with the ability to review the code and provide comments in the code.

Which action should you use from Visual Studio?

- A. Commit
- B. New Pull Request
- C. Request feedback
- D. Code Review

---

**Answer: B**

---

**Question: 8**

Your company uses the Agile methodology for software development.

You need to recommend a tool that provides you with the ability to manage the sprint backlog and to link the work

items to the source code.

What should you recommend?

- A. Microsoft Visual Studio Online
- B. Microsoft Excel Online
- C. Microsoft Visual Studio Release Management
- D. Git

---

**Answer: A**

---

### Question: 9

---

DRAG DROP

You are developing a Universal Windows Platform (UWP) app that will have ink capabilities.

You have the following code that configures the InkCanvas control.

```

<Grid>
    <Grid.RowDefinitions>
        <RowDefinition Height="Auto" />
        <RowDefinition Height="Auto" />
        <RowDefinition Height="Auto" />
    </Grid.RowDefinitions>
    <Grid.ColumnDefinitions>
        <ColumnDefinition Width="Auto" />
        <ColumnDefinition Width="Auto" />
    </Grid.ColumnDefinitions>
    <TextBlock Text="Enter Date:" />
    <TextBox x:Name="DateInput" Grid.Column="1" />
    <ComboBox x:Name="CultureInput" Grid.Row="1" Grid.Column="1">
        <ComboBoxItem>en-US</ComboBoxItem>
        <ComboBoxItem>fr-FR</ComboBoxItem>
        <ComboBoxItem>fr-CA</ComboBoxItem>
        <ComboBoxItem>de-DE</ComboBoxItem>
    </ComboBox>
    <TextBlock Text="Select culture setting:" Grid.Row="1" />
    <Button Content="Submit" Click="Button_Click" Grid.Row="2" />
    <TextBlock x:Name="DateOutput" Grid.Row="2" Grid.Column="1" />
</Grid>
```

You need to develop the code for Button\_Click.

You write the following code.

```

01. private void Button_Click(object sender, RoutedEventArgs e)
02. {
03.
04. }
```

Which code should you insert at line 03? Develop the solution by selecting and arranging the required code blocks in the correct order.

NOTE: You will not need all of the code blocks.

**Code Blocks**

```

DateOutput.Text = ${inputDate.ToUniversalTime
()}"';

DateTime inputDate;
result = DateTime.TryParse(DateInput.Text,
    culture.DateTimeFormat, styles,
out inputDate);

DateTime inputDate = DateTime.Parse
(DateInput.Text, culture.DateTimeFormat,
styles);

if (!result)
{
    DateOutput.Text = "Unable to recognize";
    return;
}

bool result = false;
var culture = new CultureInfo
(CultureInput.SelectedValuePath);
DateTimeStyles styles = DateTimeStyles.AllowInnerWhite
| DateTimeStyles.AllowLeadingWhite
| DateTimeStyles.AllowTrailingWhite;

if (result)
{
    DateOutput.Text = "Unable to recognize";
    return;
}

```

**Answer:**

```

bool result = false;
var culture = new CultureInfo
(CultureInput.SelectedValuePath);
DateTimeStyles styles = DateTimeStyles.AllowInnerWhite
| DateTimeStyles.AllowLeadingWhite
| DateTimeStyles.AllowTrailingWhite;

DateTime inputDate;
result = DateTime.TryParse(DateInput.Text,
    culture.DateTimeFormat, styles,
out inputDate);

if (!result)
{
    DateOutput.Text = "Unable to recognize";
    return;
}

DateOutput.Text = ${inputDate.ToUniversalTime
()}"';

```

**Question: 10****HOTSPOT**

You have the following code:

```

private void GetMultipleFilesButton_Click(object sender, RoutedEventArgs e)
{
    FileOpenPicker filePicker = new FileOpenPicker();
    filePicker.ViewMode = PickerViewMode.List;
    filePicker.SuggestedStartLocation = PickerLocationId.DocumentsLibrary;
    filePicker.FileTypeFilter.Add("*");
    filePicker.PickMultipleFilesAndContinue();
}

```

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

### Answer Area

Statements	Yes	No
The SuggestedStartLocation property will override the last location to which the user navigated.	<input type="radio"/>	<input type="radio"/>
PickMultipleFilesAndContinue() will be executed asynchronously.	<input type="radio"/>	<input type="radio"/>
The FileTypeFilter.Add method will accept a list of file types to display.	<input type="radio"/>	<input type="radio"/>

### Answer:

Statements	Yes	No
The SuggestedStartLocation property will override the last location to which the user navigated.	<input type="radio"/>	<input checked="" type="radio"/>
PickMultipleFilesAndContinue() will be executed asynchronously.	<input type="radio"/>	<input checked="" type="radio"/>
The FileTypeFilter.Add method will accept a list of file types to display.	<input checked="" type="radio"/>	<input type="radio"/>

### Question: 11

#### DRAG DROP

You are developing a Universal Windows Platform (UWP) app.

You have the following XAML code.

```

<Grid Background="{ThemeResource ApplicationPageBackgroundThemeBrush}">
    <Viewbox HorizontalAlignment="Stretch" VerticalAlignment="Stretch" Grid.Column="1" Grid.Row="1" >
        <TextBlock x:Uid="message" Text="Hello" />
    </Viewbox>
</Grid>

```

You need to localize the app so that it displays "Bonjour" if the current language in Windows is set to French.

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.

## Actions

## Answer Area

In Resources.resw, add the localized text.

Create a folder named Strings and two subfolders named en-us and fr-fr.

In Resources.resw, add a new resource named message.

For Resources.resw, set the Build Action to **Embedded Resource**.

In the en-us and fr-fr folders, create a new .xml file named Resources.xml.



In Resources.resw, add a new resource named message.Text.



In the en-us and fr-fr folders, create new resource file named Resources.resw.

**Answer:**

Create a folder named Strings and two subfolders named en-us and fr-fr.

In the en-us and fr-fr folders, create new resource file named Resources.resw.

In Resources.resw, add the localized text.

For Resources.resw, set the Build Action to **Embedded Resource**.

**Question: 12**

## DRAG DROP

You are developing a Universal Windows Platform (UWP) app.

You need to ensure that the app can respond to speech.

How should you complete the code? To answer, drag the appropriate code elements to the correct targets. 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.

## Code Elements

await  
new  
SpeechRecognitionResult  
SpeechRecognizer  
SpeechSynthesizer  
VoiceCommandManager

## Answer Area

```
private async void StartRecognizing_Click(object sender, RoutedEventArgs e)
{
    var sr = Code element Code element ();
    await sr.CompileConstraintAsync();
    Code element output = Code element sr.RecognizeWithUIAsync();
    var messageDialog = Code element Code element MessageDialog(output.Text, "Text spoken");
    await messageDialog.ShowAsync();
}
```

**Answer:**

**Answer Area**

```

private async void StartRecognizing_Click(object sender, RoutedEventArgs e)
{
    var sr = new SpeechRecognizer();
    await sr.CompileConstraintsAsync();
    SpeechRecognitionResult output = await sr.RecognizeWithUIAsync();
    var messageDialog = new MessageDialog(output.Text, "Text spoken");
    await messageDialog.ShowAsync();
}

```

**Question: 13****DRAG DROP**

You are developing a Universal Windows Platform (UWP) app that will be used on desktop computers and phones. The app will use facial recognition.

You need to develop a method that verifies whether a camera is present.

How should you complete the code? To answer, drag the appropriate code elements to the correct targets. 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.

**Code Elements**

async  
await  
DeviceClass.ImageScanner  
DeviceClass.VideoCapture  
DeviceInformation  
HardwareIdentification  
SystemCondition

**Answer Area**

```

private static async Task<DeviceInformation>
FindCameraDeviceAsync(Panel desiredPanel)
{
    var allVideoDevices =
        .FindAllAsync( );
    ...
}

```

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

```

private static async Task<DeviceInformation>
FindCameraDeviceAsync(Panel desiredPanel)
{
    var allVideoDevices =
        await DeviceInformation
            .FindAllAsync( DeviceClass.VideoCapture );
    ...
}

```

**Question: 14****DRAG DROP**

You are building a Universal Windows Platform (UWP) app.

You need to ensure that users can start the app by using voice command in Cortana.

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.

**Actions****Answer Area**

Create a new .json file that contains the commands to start the app.

Implement the IServiceProvider interface.

Read the Voice Command Definition (VCD) file.

Create a new .xml file that contains the commands to start the app.

Call the InstallCommandDefinitionFromStorageFileAsync method.

Override the OnLaunched event.

**Answer:**

Create a new .xml file that contains the commands to start the app.

Call the InstallCommandDefinitionFromStorageFileAsync method.

Override the OnLaunched event.

**Question: 15****DRAG DROP**

You are developing a Universal Windows Platform (UWP) app that will provide users with the ability to assign tasks to their contacts. The app will have a button that users click to display their contact list.

You need to develop the click event handler for the button.

How should you complete the code? To answer, drag the appropriate code elements to the correct targets. 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.

**Code Elements**

async  
await  
Contact  
ContactPicker  
PickContactAsync

**Answer Area**

```
private Code element void button_Click(object sender, RoutedEventArgs e)
{
    var var1 = new Code element ();
    var var2 = Code element var1. Code element ();
}
```

**Answer:**

**Answer Area**

```

private async void button_Click(object sender, RoutedEventArgs e)
{
    var var1 = new ContactPicker();
    var var2 = await var1.PickContactAsync();
}

```

**Question: 16****DRAG DROP**

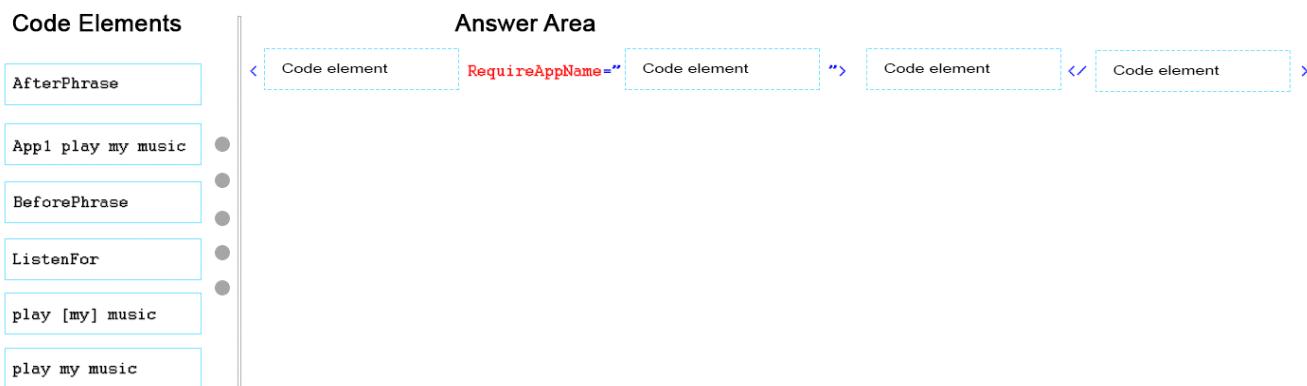
You are developing a Universal Windows Platform (UWP) app named App1.

App1 can be started by using Cortan

a. To start the app, users must be able to say "App1 play my music" or "App1 play music".

You need to write the Voice Command Definition (VCD) file to meet the requirement.

How should you complete the code? To answer, drag the appropriate code elements to the correct targets. 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.

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

< ListenFor      RequireAppName="App1"      BeforePhrase      ">"      play [my] music      </ ListenFor >

**Question: 17****HOTSPOT**

You are designing a Universal Windows Platform (UWP) app that will access external data sources. The data sources have the following requirements:

The data must be stored in a relational database.

The data sources must be stored in a public cloud.

The app must not connect directly to the database.

The app must access the data sources by using HTTP verbs.

You need to identify the appropriate data storage type and the appropriate method to use to access the data sources.

What should you identify? To answer, select the appropriate options in the answer area.

**Data storage type:**

Microsoft Azure DocumentDB  
 Microsoft Azure SQL Database  
 Microsoft Azure Table Storage  
 Microsoft Azure worker role

**Data access method:**

SOAP  
 UDP sockets  
 Web API

**Answer:****Data storage type:**

Microsoft Azure DocumentDB  
**Microsoft Azure SQL Database**  
 Microsoft Azure Table Storage  
 Microsoft Azure worker role

**Data access method:**

SOAP  
 UDP sockets  
**Web API**

**Question: 18**

DRAG DROP

You are developing a Universal Windows Platform (UWP) app that will take photos. The app will be used across Windows 10 device families.

You need to ensure that when the app runs on a phone, the app can use the built-in features of the phone.

How should you complete the code? To answer, drag the appropriate code elements to the correct targets. 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.

**Code Elements**

ApiInformation.IsEventPresent  
 ApiInformation.IsTypePresent  
 Collapsed  
 Visible  
 Windows.Media.Devices  
 Windows.Phone.UI.Input

**Answer Area**

```
if ( Code element ) ( " Code element .HardwareButtons"))  

{  

  HardwareButtons.CameraPressed += HardwareButtons_CameraPressed;  

  BackButton.Visibility = Visibility.Code element  

}  

)
```

**Answer:**

## **Answer Area**

```
if ( ApiInformation.IsTypePresent( " Windows.Phone.UI.Input .HardwareButtons" ) )
{
    HardwareButtons.CameraPressed += HardwareButtons_CameraPressed;
    BackButton.Visibility = Visibility. Visible
}
```

### **Question: 19**

You are developing a Universal Windows Platform (UWP) app. The application architecture uses the Model-View-ViewModel (MVVM) pattern.

You are designing a form to add new contacts to the app. The form contains an input field named LastName and a Save button.

You need to ensure that when LastName is empty, the Save button is disabled.

What should you use?

- A. On the Save button, change the IsDefaulted property and the IsDefault property.
- B. Use an InputType enumeration that has a Command member.
- C. Use a CommandBinding object that contains a CanExecute event.
- D. On the Save button, change the IsSealed value.

---

**Answer: C**

---

### **Question: 20**

You are developing a Universal Windows Platform (UWP) app that will support two displays. The primary display will have a maximum resolution of 1080 p. The secondary display will support a maximum resolution of 4 K and will not support interactivity.

Your need to ensure that the app can use the full resolution of each display.

What is the best approach to achieve the goal? More than one answer choice may achieve the goal. Select the BEST answer.

- A. Set the AutoSizeMode property for the app.
- B. Enable multiple display support by using the ApplicationView API.
- C. Enable multiple display support by using the ProjectionManager API.
- D. Set the AutoScaleMode property for the app.

---

**Answer: C**

---

### **Question: 21**

You are developing a Universal Windows Platform (UWP) app that will retrieve data from a Microsoft Azure SQL Database. The app will be used by multiple users simultaneously.

You need to ensure that the app can use optimistic concurrency.

What should you do?

- A. When data is accessed, set the transaction isolation level to Serializable.
- B. Add a column of the integer type named Lock that will be set to 1 when a user reads the row.
- C. When data is accessed, set the transaction isolation level to ReadUncommitted.
- D. Add a column named Version that contains a version number that will be incremented when a row is updated.

---

**Answer: D**

---

### **Question: 22**

---

You are developing a Universal Windows Platform (UWP) app by using Microsoft Visual Studio.

The app will use the AdMediatorControl control.

You need to select the ad providers that will be used by the app.

What should you add to the app?

- A. Connected Service
- B. Service Reference
- C. Azure API App Client
- D. Reference

---

**Answer: A**

---

### **Question: 23**

---

#### **DRAG DROP**

You are developing a Universal Windows Platform (UWR) app.

While testing the app, you discover performance issues.

You need to profile the performance of the app as the app runs.

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.

Actions	Answer Area
Change the target to Executable.	
Run the Code Analysis on the solution.	
Change the target to Startup Project.	>
Start the Diagnostic Tools without debugging.	^
Start the Performance Wizard.	▼

---

**Answer:**

---

Start the Diagnostic Tools without debugging.

Change the target to Startup Project.

Run the Code Analysis on the solution.

---

### **Question: 24**

You are developing a Universal Windows Platform (UWP) app.

You plan to publish the app to the Microsoft Store. The app will have a 30-day trial mode.

During the trial mode, you need to limit the number of exposed features.

Which object should you use to ascertain whether the app is running in trial mode?

- A. CurrentApp
- B. ListingInformation
- C. Current
- D. Application

---

**Answer: D**

---

### **Question: 25**

You are packaging a Universal Windows Platform (UWP) app for the Microsoft Store.

You need to set the name of the app that will appear in the Store.

Which element should you define in Package.appxmanifest?

- A. the Name attribute in the Identity element
- B. the Application element
- C. the DisplayName attribute in the VisualElements element
- D. the DisplayName element

---

**Answer: C**

---

### **Question: 26**

You are developing a cross-platform app by using Microsoft Visual Studio 2015. The app will be available to Windows, Android, and iOS devices.

You need to gather usage telemetry for the app across all three platforms.

What should you use?

- A. Code Coverage
- B. Diagnostic Tools
- C. IntelliTrace
- D. Application Insights

---

**Answer: D**

---

### **Question: 27**

---

You are developing a Universal Windows Platform (UWP) app that will be published to the Microsoft Store.

You need to ensure that the app can access removable storage drives.

Which file should you modify?

- A. Package.appxmanifest
- B. Project.json
- C. Project.csproj
- D. App.xaml.cs

---

**Answer: A**

---

---

### **Question: 28**

---

You are creating a Universal Windows Platform (UWP) app by using Microsoft Visual Studio 2015.

You discover that the app uses more memory than expected. You suspect that a method named Method1 is consuming most of the memory.

You need to identify the changes in memory that are a direct result of executing Method1.

What should you do?

- A. From Visual Studio, set a breakpoint on the method and immediately after the method. From the Diagnostic Tools, click Take Snapshot when each breakpoint is hit.
- B. From the Debug tab in Visual Studio, click Start Diagnostic Tools Without Debugging, select Application Timeline, and then click Start.
- C. From the Windows Performance Analyzer, record the memory consumption.
- D. From Windows Performance Monitor, create a Data Collector Set (DCS). Start the DCS, run the app, and then stop the DCS.

---

**Answer: A**

---

---

### **Question: 29**

---

You are developing a Universal Windows Platform (UWP) app that will be published to the Microsoft Store.

You need to change the name of the app that will be displayed in the Store.

Which file should you modify?

- A. App.xaml.cs
- B. Package.appxmanifest
- C. AssemblyInfo.cs
- D. Project.json

---

**Answer: D**

---

---

### **Question: 30**

---

You are developing a Universal Windows Platform (UWP) app that will be published to the Microsoft Store.

The app will contain the following method.

```
public static string GetAnswer()
{ return "answer";
}
```

JavaScript in the app will call the method.

You need to implement the method.

What should you do first?

- A. Create a Windows Runtime Component project.
- B. Add a class file to the project.
- C. Create a portable class project.
- D. Add the method to the App.xaml.cs file.

---

**Answer: A**

---

### **Question: 31**

---

You are developing a Universal Windows Platform (UWP) app.

You need to convert a .resx file to a .resources file

Which tool should you use?

- A. Resgen
- B. Regasm
- C. Winres
- D. Regsvcs

---

**Answer: A**

---

### **Question: 32**

---

You are developing a Universal Windows Platform (UWP) app.

In MainPage.xaml, you have the following markup.

```
<TextBlock x:Name="Greeting" Text="Hello" />
```

You plan to implement localization for the following cultures:

de-DE  
fr-CA  
en-US

You create a folder within the project named Strings that contains a subfolder for each culture. Each subfolder contains a resource file named Greetings.resw. You need to ensure that TextBlock appears by using the appropriate localization.

Which two modifications should you make to MainPage.xaml? Each correct answer presents part of the solution.

- A. Replace x:Name with x:Phase.
- B. Change "Greeting" to "Resources/Greeting".
- C. Change "Greeting" to "Greetings/Greeting".
- D. Replace x:Name with x:FieldModifier.
- E. Replace x:Name with x:Uid.
- F. Change "Greeting" to "Greetings.resw/Greeting".

---

Answer: BE

---

**Question: 33**

---

**DRAG DROP**

You are developing a Universal Windows Platform (UWP) app.

You need to create a grid that has three rows and two columns. The grid must contain a button located at the first row and the second column.

How should you complete the code? To answer, drag the appropriate code elements to the correct targets. 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.

**Code Elements**

0	
1	
2	●
3	●
Column	●
ColumnDefinitions	
ColumnDefinitions	

**Answer Area**

```

<Grid>
    <Grid.RowDefinitions>
        <RowDefinition Height="auto" />
        <RowDefinition />
        <RowDefinition Height="auto" />
    </Grid.RowDefinitions>
    <Grid. [Code element] >
        <ColumnDefinition Width="*" />
        <ColumnDefinition Width="*" />
    </Grid. [Code element] >
    <Button Content="A button" Grid. [Code element] ="" Code element "" />
    <Grid. [Code element] Grid.Row="1" Code element "" />
</Grid>

```

---

**Answer:**

---

```

<Grid>
    <Grid.RowDefinitions>
        <RowDefinition Height="auto" />
        <RowDefinition />
        <RowDefinition Height="auto" />
    </Grid.RowDefinitions>
    <Grid. ColumnDefinitions >
        <ColumnDefinition Width="*" />
        <ColumnDefinition Width="*" />
    </Grid. ColumnDefinitions >
    <Button Content="A button"
        Grid. Column ="1" 
        Grid.Row="0" 0 >
    </Grid>

```

**Question: 34**

DRAG DROP

You are developing a Universal Windows Platform (UWP) app. In MainPage.xaml, you have the following markup.

```

<StackPanel>
    <TextBlock x:Name="pageTitle"
        HorizontalAlignment="Center"
        Text="Enter your name:" />
    <TextBox HorizontalAlignment="Center"
        Width="200"
        Name="name" />
    <HyperlinkButton Content="Click to go to page 1"
        Click="Hyperlink_Click"
        Tag="Page1"
        HorizontalAlignment="Center" />
    <HyperlinkButton Content="Click to go to page 2"
        Click="Hyperlink_Click"
        Tag="Page2"
        HorizontalAlignment="Center" />
</StackPanel>

```

You need to create an event handler for the app. How should you complete the code? To answer, drag the appropriate code elements to the correct targets. 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.

**Code Elements**

Click
Command
Frame
GoForward
Navigate
StackPanel

**Answer Area**

```
private void Hyperlink_ Code element (object sender, RoutedEventArgs e)
{
    string tag = ((HyperlinkButton)sender).Tag.ToString();
    Code element . Code element (Type.GetType("App1." + tag), name.Text);
}
```

**Answer:**

```
private void Hyperlink_ Click (object sender, RoutedEventArgs e)
{
    string tag = ((HyperlinkButton)sender).Tag.ToString();
    Frame . Navigate (Type.GetType("App1." + tag), name.Text);
}
```

**Question: 35****DRAG DROP**

You are developing a Universal Windows Platform (UWP) app.

The app will display a text box named TextBox1 and a button named Button2.

If a user types in the text box, you need to ensure that the box is resized dynamically based on the size of the text. The buttons must always remain to the right of the text box and must always remain aligned.

How should you complete the code? To answer, drag the appropriate code elements to the correct targets. 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.

**Code Elements**

AlignHorizontalCenterWithPanel
AlignRightWithPanel
LeftOf
RelativePanel
RightOf
RightPosition
StackPanel

**Answer Area**

```
< Code element >
<TextBox x:Name = " TextBox1 " Text = " TextBox1 " />
<Button x:Name = " Button2 " Content = " Button2 " Code element . Code element = " TextBox1 " />
<> Code element </>
```

**Answer:**

```

< RelativePanel >
    < TextBox x:Name = " TextBox1 " Text = " TextBox1 " />
    < Button x:Name = " Button2 " Content = " Button2 " RelativePanel >
        , RightOf = " TextBox1 " />
</ RelativePanel >

```

---

**Question: 36**

You are developing a Universal Windows Platform (UWP) app that will retrieve data from a Microsoft Azure SQL Database. The app will be used by multiple users simultaneously.

You need to ensure that the app can use optimistic concurrency.

What should you do?

- Add a column named TimeStamp that contains the last date the row was modified.
- When data is accessed, set the transaction isolation level to ReadCommitted.
- When data is accessed, set the transaction isolation level to ReadUncommitted.
- Add a column of the Boolean type named Lock that will be set to true when a user reads the row.

---

**Answer: A**

---

---

**Question: 37**

You are designing a new Universal Windows Platform (UWP) app by using the Model-View-ViewModel (MVVM) pattern. You need to identify which app component must be implemented in a single layer only. Which component should you identify?

- the authentication process
- error handling
- the business rules
- the authorization process

---

**Answer: C**

---

---

**Question: 38**

You are developing a Universal Windows Platform (UWP) app.

The app has a custom class named Auditing that is used to track actions that users perform in the app. You implement auditing for many methods throughout the app.

You need to configure the auditing process to meet the following requirements:

- You must use a custom attribute to disable auditing for specific methods during automated testing of the app.
- During the automated testing, you must redirect auditing output.

You must use a custom attribute to disable auditing for specific methods during automated testing of the app. During the automated testing, you must redirect auditing output.

What should you do?

- A. Refactor the Auditing class by using the Observer pattern.
- B. Create a new audit interface and implement two different versions of the Auditing class.
- C. Refactor the Auditing class by using the Decorator pattern.
- D. Create a new audit interface and implement different versions of the Auditing class for every method that uses the Auditing class.

---

**Answer: A**

---

### Question: 39

---

#### DRAG DROP

You are evaluating the use of GitHub and Microsoft Visual Studio Team Services.

You need to identify a source control solution for application code. The solution must meet the following requirements:

Ensure that multiple branches can be created.

Provide continuous integration with Microsoft Azure web apps.

Ensure that multiple developers can modify the same file simultaneously.

Which repositories can be used to achieve each requirement? To answer, drag the appropriate repositories to the correct requirements.

Each repository 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.

Repositories	Answer Area
GitHub only	Ensure that multiple branches can be created: <span style="border: 1px solid red; padding: 2px;">Repository</span>
Visual Studio Team Services only	Ensure that multiple developers can modify the same file simultaneously: <span style="border: 1px solid red; padding: 2px;">Repository</span>
Either GitHub or Visual Studio Online	Provide continuous integration with Azure web apps: <span style="border: 1px solid red; padding: 2px;">Repository</span>

---

**Answer:**

---

Ensure that multiple branches can be created: Either GitHub or Visual Studio Online

Ensure that multiple developers can modify the same file simultaneously:

GitHub only

Provide continuous integration with Azure web apps:

Visual Studio Team Services only

---

### Question: 40

You are designing a new Universal Windows Platform (UWP) app by using a Model-View-ViewModel (MVVM) pattern.

You need to identify which components will interface directly with the Model layer.

Which two components should you identify? Each correct answer presents a complete solution.

- A. the business rules
- B. the XAML user interface

- C. the data bindings on a page
- D. the data sources

---

**Answer: A, D**

---

### **Question: 41**

---

You develop a Universal Windows Platform (UWP) app that is available in the Microsoft Store. Some users report that the app occasionally crashes. You review the health reports from the Windows Dev Center dashboard and you discover that there are no Failure logs for the app. You need to ensure that the app failure information is available in the health reports from the Windows Dev Center dashboard. What should you do before you republish the app?

- A. Create a custom logging event in the app.
- B. Create a Windows Push Notification Services (WNS) service and then add the cloud service URI to the client application.
- C. Create a new app package that includes the .pdb symbol files.
- D. Enable the code generation capability, and then create a new app package.

---

**Answer: C**

---

---

### **Question: 42**

---

You need to provide license metadata to the current app. Which class should you use?

- A. ListingInformation
- B. LicenseInformation
- C. ProductListing
- D. ProductLicense

---

**Answer: C**

---

---

### **Question: 43**

---

You are developing a Universal Windows Platform (UWP) app by using Microsoft Visual Studio 2015. You plan to perform unit testing. You need to automate the creation of the unit tests. What should you use?

- A. IntelliTest
- B. Application Insights
- C. Code Coverage
- D. Test Explorer

---

**Answer: A**

---

---

### **Question: 44**

---

You are developing a Universal Windows Platform (UWP) app that will display a list of contacts. When the app loads, it will display the alphabet and provide users with the ability to zoom in on a letter to display all of the contacts whose name starts with that letter. The app will use a SemanticZoom control. You need to identify which event you must use in the app. Which event should you identify?

- A. ViewChangeStarted
- B. Loaded
- C. Tapped
- D. ManipulationStarted

---

**Answer: A**

---

### **Question: 45**

---

You are developing a Universal Windows Platform (UWP) app. You need to implement remote debugging of the app on a tablet device. What should you run on the tablet?

- A. windbg.exe
- B. msvsmon.exe
- C. al.exe
- D. msbuild.exe

---

**Answer: A**

---

### **Question: 46**

---

You need to create a storyboard for a Universal Windows Platform (UWP) app that you are designing. For which application does Microsoft provide design templates for UWP apps?

- A. Microsoft Publisher
- B. Microsoft PowerPoint
- C. Adobe Photoshop
- D. Microsoft Sway

---

**Answer: B**

---

### **Question: 47**

---

Your company has a private GitHub repository. A new developer needs to make a change to a project in the repository. What should the developer do first?

- A. Create a new local branch of the repository.
- B. Create a new remote branch of the repository.
- C. Commit the remote repository.
- D. Clone the repository locally.

---

**Answer: D**

---

**Question: 48**

---

Your company uses Microsoft Visual Studio Team Services.

You are testing a Universal Windows Platform (UWP) app.

You need to record the actions performed in the app and record user comments. The test must not use a predefined set of steps.

What should you do?

- A. From Visual Studio Team Services, create a new test plan.
- B. From Visual Studio Team Services, create a new test case.
- C. From Microsoft Test Manager, perform exploratory testing.
- D. From Microsoft Test Manager, create a new test.

---

**Answer: C**

---

**Question: 49**

---

You are building a Universal Windows Platform (UWP) app that will be used to view images.

When a user clicks an image by using a mouse, the image will increase in size by 20 percent, and then return to its original size when the user releases the mouse.

You create event handlers to handle the PointerPressed and PointerReleased events for the image.

The user reports that occasionally, the image fails to return to its original size.

You need to ensure that the image returns to its original size.

Which three events should you handle? Each correct answer presents part of the solution.

- A. PointerExited
- B. PointerCaptureLost
- C. LostFocus
- D. PointerCanceled
- E. PointerMoved
- F. LostMouseCappture

---

**Answer: B, D, E**

---

**Question: 50**

---

HOTSPOT

You have the following code:

```
event1      +=      new      PointerEventHandler(Target_PointerPressed);      event2      +=      new
PointerEventHandler(Target_PointerWheelChange); event3 += new PointerEventHandler(Target_PointerReleased);
For each of the following statements, select Yes if the statement is true. Otherwise, select No.
```

<b>Statement</b>	<b>Yes</b>	<b>No</b>	<b>Answer:</b>
Event1 supports touch gestures.	<input type="radio"/>	<input type="radio"/>	
Event2 supports touch gestures.	<input type="radio"/>	<input type="radio"/>	
Event3 supports touch gestures	<input type="radio"/>	<input type="radio"/>	

**Question: 51**

DRAG DROP

How should you complete the code to read the currently-selected computer model? To answer, drag the appropriate code elements to the correct targets. 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.

**Code Elements**

- async**
- await**
- Play**
- SetBinding**
- SetSource**
- Speak**

**Answer Area**

```
this.synthesizer = new SpeechSynthesizer();

SpeechSynthesisStream synthesisStream;
synthesisStream = Code element

this.synthesizer.SynthesizeTextToStreamAsync(text);

this.media.AutoPlay = true;
this.media. Code element (synthesisStream, synthesisStream.ContentType);
this.media. Code element ():
```

**Answer:**

```

this.synthesizer = new SpeechSynthesizer();

SpeechSynthesisStream synthesisStream;
synthesisStream = await
    this.synthesizer.SynthesizeTextToStreamAsync(text);

this.media.AutoPlay = true;
this.media. SetSource
    (synthesisStream, synthesisStream.ContentType);
this.media. Play
();

```

## Question: 52

---

You are designing a Universal Windows Platform (UWP) app that will access external data sources. The data sources have the following requirements:

- \*The data must be stored in a relational database.
- \*The data sources must be stored in a public cloud.
- \*The app must not connect directly to the database.
- \*The app must access the data sources by using HTTP verbs.

You need to identify the appropriate data storage type and the appropriate method to use to access the data sources. What should you identify? Select two.

- A. Data storage type: SQL Server
- B. Data storage type: SQL Azure
- C. Data storage type: Oracle Data Provider
- D. Data storage type: XML
- E. Data access method: ASMX Services
- F. Data access method: WCF Services
- G. Data access method: OData
- H. Data access method JSON

---

**Answer: B, G**

---