

70-354

Universal Windows Platform “App
Architecture and UX/UI

DEMO

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1. Topic 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 (MVM) 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, the code files.
- Sourer 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 en 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.
- It the solution is built successfully, run the associated tests.
- If the test are all successful, deploy the binaries to a server named TestServer.

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