

# Layer Visibility Hands-on Exercise

Estimated complete time: 10-15 minutes (Resource Level: )

Prerequisites – To complete this exercise, you need the following

- AppStudio for ArcGIS Desktop 2.1 can be downloaded from <http://doc.arcgis.com/en/appstudio/download/>
- AppStudio for ArcGIS Player2.1 can be downloaded from <http://doc.arcgis.com/en/appstudio/download/>

## Step 1. Create a new app using the Simple Layout (Material Design) template

- Download and install AppStudio Desktop
- Launch AppStudio Desktop
- Sign in using your ArcGIS Org account
- Click on the **New App** button
- Click on the **Layouts** tab
- Choose the **Simple Layout (Material Design)** template and click on the **Create** button

## Step 2. Adding map and layers

- Open the app in Qt Creator
  - Select the app you created from step 1, then click on the **Edit** tool
  - You would see Qt Creator IDE window open
- Start coding on MyApp.qml
  - Add import statement for Esri ArcGIS Runtime on the top of the page next to other import statements

```
import Esri.ArcGISRuntime 100.1
```

- Edit the Header title to “My Mapping Application”

```
header: Toolbar{
    ...
    RowLayout{
        ...
        Label {
            ...
            text: qsTr("My Mapping Application")
            ...
        }
    }
}
```

- Add MapView code right after the Header section ends

```
header: Toolbar{
    ...
}
// Header Section ends
// TODO:-Add Code here
MapView{
    id:mapView
    anchors.fill:parent
}
```

- Add Map and Basemap to MapView - BasemapImagery{}

```
MapView{
    id:mapView
    anchors.fill:parent
    Map{
        BasemapImagery{}
    }
}
```

- Add Map Service in Map

<http://sampleserver6.arcgisonline.com/arcgis/rest/services/USA/MapServer>

```
ArcGISMapImageLayer{
    id:mapServiceLayer
    url:"http://sampleserver6.arcgisonline.com/arcgis/rest/services/USA/MapServer"
}
```

- Set the viewpoint of the MapView to the Map service full extent on the onLoadStatusChanged event of the Map Service layer

```
ArcGISMapImageLayer{
...
onLoadStatusChanged: {
    if(loadStatus === Enums.LoadStatusLoaded){
        mapView.setViewpointGeometry(mapServiceLayer.fullExtent);
    }
}
...
}
```

- Add Feature Layer in the Map -

<http://sampleserver6.arcgisonline.com/arcgis/rest/services/Wildfire/MapServer/0>

```
FeatureLayer{
    id:citiesLayer
    visible: false
    featureTable:citiesFeatureTable
}
ServiceFeatureTable{
    id: citiesFeatureTable
    url:
"http://sampleserver6.arcgisonline.com/arcgis/rest/services/Wildfire/MapServer/0"
}
```

### Step 3. Add the Layer List to the Dialog

- Comment out the following lines from the Dialog

```
Dialog {
...
/*
    Label {
        id: message
        text: qsTr("Welcome to AppStudio!")
        opacity: 0.9
        wrapMode: Label.Wrap
        width: parent.width
        height: implicitHeight
    }
*/
.....
}
```

- Change the title of the Dialog and add height properties

```
Dialog {  
    ...  
    title: qStr("Layer List")  
    height: parent.height/3  
    ...  
}
```

- Replace the commented code with the following code

```
Dialog {  
    ...  
    ListView {  
        model: mapView.map.operationalLayers  
        anchors.fill: parent  
        delegate: RowLayout{  
            spacing: 10  
            Switch{  
                text:name  
                checked:layerVisible  
                onCheckedChanged: {  
                    layerVisible = checked;  
                }  
            }  
        }  
    }  
    ...  
}
```

#### Step 4. Run the app

- Go to **Tools** -> **External** -> **AppStudio** -> **Run**
- Or press **SHIFT + ALT + R** key on your keyboard for Windows or Mac

Your app should look like screenshots below,

