Lab 4 Tutorial

**How to Build Two Maps Screen Mobile app in Esri App Studio Qt**

Two Maps screen is useful to display two different base map layers side by side on one screen. Among the benefits of doing this is to use the second map as locator map.

**Prerequisites**

To develop this Two\_Maps screen, we have to have Esri online account and installed Esri App Studio on our machine. Once you get your account, go to <https://www.esri.com/landing-pages/appstudio> download and install Esri App Studio. Qt Creator (AppStudio for ArcGIS) will be installed with Esri App Studio.

**Developing Two\_Maps Screen Mobile app**

Once the necessary applications are installed open Esri app studio on your desktop and login.

On upper right corner click New App

On the Tittle give name of your app. From the three items under starter, select Hello World (run time), then click on create to create your app.

Now you should see your newly created app in ESRI App studio gallery. Right click on it, from the drop-down options, select Edit in Qt Creator.

Now we created a mobile app with one map screen with the default buttons and basemap (Topographic basemap).

Our aim is to add the following additional functionalities and basemap.

* Add additional basemap (Making the app two have two Maps on the same screen and with different basemap types)
* Making the extent of each map half of the parent window.

To add additional map to the screen, go to the Myapp.qml and copy codes from line 68 to 160

MapView {

id:*mapView*

property real initialMapRotation: 0

anchors {

left: *parent*.left

right: *parent*.right

top: *titleRect*.bottom

bottom: *parent*.bottom

}

rotationByPinchingEnabled: true

zoomByPinchingEnabled: true

locationDisplay {

positionSource: PositionSource {

}

}

// add a basemap

Map{

id:*map*

BasemapTopographic{}

initialViewpoint: ViewpointCenter {

id:*initialViewpoint*

center: Point {

x: -11e6

y: 6e6

spatialReference: SpatialReference {wkid: 102100}

}

targetScale: 9e7

}

}

// map control buttons

Column{

id:*buttons*

spacing: 5 \* *scaleFactor*

anchors {

verticalCenter: *parent*.verticalCenter

right: *parent*.right

margins: 5 \* *scaleFactor*

}

Button{

id:*homeButton*

Image{

source: "./images/home.png"

height: 40 \* *scaleFactor*

width : *height*

anchors.centerIn: *parent*

}

height: 40 \* *scaleFactor*

width : *height*

onHoveredChanged: *hovered* ? *homeButton*.opacity = 1 : *homeButton*.opacity = .5;

opacity: .5

onClicked:{

*mapView*.setViewpointWithAnimationCurve(*map*.initialViewpoint, 1.0, Enums.AnimationCurveEaseInOutCubic)

*mapView*.setViewpointRotation(*mapView*.initialMapRotation)

}

}

Button{

id:*locationButton*

Image{

source:"./images/location.png"

height: 30 \* *scaleFactor*

width: *height*

anchors.centerIn: *parent*

}

onHoveredChanged: *hovered* ? *locationButton*.opacity = 1 : *locationButton*.opacity = .5;

height: 40 \* *scaleFactor*

width : *height*

opacity: .5

onClicked: {

if (!*mapView*.locationDisplay.started) {

*mapView*.locationDisplay.start()

*mapView*.locationDisplay.autoPanMode = Enums.LocationDisplayAutoPanModeRecenter

} else {

*mapView*.locationDisplay.stop()

}

}

}

}

}

and paste below line 160

Now we have two Maps in our app to be displayed on the screen. But we have to change one of the basemaps.

**Change basemap**

The default basemap is Topographic basemap. So, lets change the second one to NationalGeographic. To do so go to line 185, replace

BasemapStreets{} with BasemapNationalGeographic{}

In line 161, change id:*mapView to* id:*mapView2*

In line 183, change id:*map to* id:*map2*

**Setting Right and Left Maps and setting the width of the maps**

Go to line 75 and deactivate the right alignment so that this map is displayed on the left corner of the screen.

left: *parent*.left

//right: parent.right

top: *titleRect*.bottom

bottom: *parent*.bottom

To set the width of the map to half of the screen, write the following code

width: *parent*.width \* 0.5

it should look like as below

anchors {

left: *parent*.left

//right: parent.right

top: *titleRect*.bottom

bottom: *parent*.bottom

}

width: *parent*.width \* 0.5

In the same way, go to line 166 in the second map, deactivate the left alignment so that the map will be displayed on the right side of the screen

//left: parent.left

right: *parent*.right

top: *titleRect*.bottom

bottom: *parent*.bottom

}

width: *parent*.width \* 0.5

**Lab 4 Tutorial 2**

**Closest Facility**

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**Developing Two\_Maps Screen Mobile app**

Once the necessary applications are installed open Esri app studio on your desktop and login.

On upper right corner click New App

On the Tittle give name of your app, I gave mine “Closest Hospital”. From the three items under starter, select Hello World (run time), then click on create to create your app.

Now you should see your newly created app in ESRI App studio gallery. Right click on it, from the drop-down options, select Edit in Qt Creator.

Now we created a mobile app with one map screen with the default buttons and basemap (Topographic basemap).