**DOCUMENTATION**

This project contains the work done for end of the term assignment of Application Development IP, in python.

**Aim of the project:** To create two pdf map-books for all the Indian States and Union Territories by the use of

1. Bookmarks; and

2. Table., respectively.

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**Number of snippets:** 3.

1. Basic naming (*contributor: Venkatesh Nitchenakolla)* (<https://github.com/noufashub/AppDevIPCodes/blob/master/basic%20naming.py> )
2. Mapbook\_bm (*contributor: Noufa Cheerakkollil Konath* ) (<https://github.com/noufashub/AppDevIPCodes/blob/master/mapbook_bm.py> )
3. Mapbook\_cur (*contributor: Noufa Cheerakkollil Konath* ) (<https://github.com/noufashub/AppDevIPCodes/blob/master/mapbook_cur.py> )

**Data used:** India administrative boundary, India states and UT shapefile, sdei global summer land surface temperature (2013) (clipped to india) (Available at <https://github.com/noufashub/AppDevIPCodes/tree/master/India> )

**Arcgis pro project file** : <https://github.com/noufashub/AppDevIPCodes/blob/master/India/India2.aprx>

1. Basic naming

This snippet is aimed at getting the names of maps, layers, layouts, data source, elements etc. as a list by using list method in the arcpy.mp module. The methods used are listMaps(), listLayers(), listLayouts(), and listElements. The name property is used to return the name of the elements.

1. Mapbook\_bm

This python snippet returns 35 pdf files that corresponds to the temperature of 35 administrative untis of India (28 states and 7 Union Territories). Here, the extent for each map is defined with the help of bookmarks that are previously added to the ArcGIS pro project manually, as bookmark creation cannot be automated. Further, in the snippet, these bookmarks are called using mapFrame.map.listBookmarks() method, and is zoomed to the extend using mapFrame.zoomToBookmark(). Further, the title of the map is altered using the ‘name’ property of the bookmark. Finally, all of the pdf docs are added to the Pdf mapbook using append method, where those are added one by one. A title page was manually created and appended added first to the mapbook, which acts as the first page. The resultant map book can be accessed at <https://github.com/noufashub/AppDevIPCodes/blob/master/Mapbooks/StateTemp.pdf> .

1. Mapbook\_cur

This snippet is similar to that of (2), but here, the extent is defined using cursor object, which is used to access the table. With the help of cursor object (arcpy.da.SearchCursor), two fields were accessed, namely, shape and name of the rows in the table. Using this, the title of the maps was changed by looping through the ST\_name field, and the extent was defined using the camera object, mapFrame.camera.setExtent(item[0].extent), where item[0] is the ‘shape@’ property which includes the shape of the geometry object. Finally, all of the pdf docs are added to the Pdf mapbook using append method, where those are added one by one. A title page was manually created and appended added first to the mapbook, which acts as the first page. The resultant map book can be accessed at <https://github.com/noufashub/AppDevIPCodes/blob/master/Mapbooks/StateTemp2.pdf> .

