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LEARNING arcgis

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Table of Contents

About
Chapter 1: Getting started with arcgis
Remarks2
Examples2
Installation or Setup
Chapter 2: ArcGIS JS API
Introduction
Examples
Loading ArcGIS JS API CDN
Loading Map3
Loading ESRI CSS
Loading Dojo specific CSS
Chapter 3: ArcPy
Introduction
Remarks5
Examples5
Importing ArcPy modules5
Credits



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Chapter 1: Getting started with arcgis

Remarks

ArcGIS is a suite of geographic information system (GIS) software developed by Esri.

Examples

Installation or Setup

Detailed instructions on getting arcgis set up or installed.

Read Getting started with arcgis online: https://riptutorial.com/arcgis/topic/8309/getting-startedwith-arcgis

Chapter 2: ArcGIS JS API

Introduction

Build Compelling 2D Web Mapping Apps

The ArcGIS API for JavaScript is designed to maximize your productivity for building engaging, beautiful web mapping applications. The API combines modern web technology and powerful geospatial capabilities enabling you to create high-performing apps and smarter visualizations of your data.

Examples

Loading ArcGIS JS API CDN

Reference the ArcGIS JavaScript API from our CDN and you are ready to get started:

Loading Map

```
require(["esri/map", "dojo/domReady!"], function(Map) {
  var map = new Map("map", {
    center: [-118, 34.5],
    zoom: 8,
    basemap: "topo"
  });
});
```

Loading ESRI CSS

Starting with version 3.2 of the ArcGIS API for JavaScript, developers must include an additional Cascading Style Sheet (CSS) file: esri.css.

The URL for this file is:

```
// versions 3.11 and forward
<link rel="stylesheet" href="https://js.arcgis.com/API-VERSION/esri/css/esri.css">
// versions prior to 3.11
<link rel="stylesheet" href="https://js.arcgis.com/API-VERSION/js/esri/css/esri.css">
```

For instance, this CSS file would be included via a link tag:

<link rel="stylesheet" href="https://js.arcgis.com/3.19/esri/css/esri.css">

The esri.css file contains the CSS for various widgets, including CSS for the map.

Because all CSS is in a single file, retrieving CSS for the API is done in a single request. Reducing

the number of http requests is one way for apps to improve performance.

Loading Dojo specific CSS

The esri.css file does not include the CSS for various Dojo widgets or themes like tundra or claro; those files must be included separately. Exceptions are the Grid and RangeSlider, which are used by widgets in the API. Grid styles must be explicitly included.

For instance, this CSS file would be included via an additional link tag:

<link rel="stylesheet" href="https://js.arcgis.com/3.19/dijit/themes/claro/claro.css">

Legacy CSS

Prior to version 3.2, CSS files were appended to a page's DOM dynamically via JavaScript.

Dynamically appending CSS files makes overriding default styles cumbersome because CSS included via a link or style tag is parsed before JavaScript appends CSS to a page. This results in having to use !important to override default widget styles. Because widgets have been refactored to not dynamically append their CSS, !important is no longer necessary. API versions prior to 3.2 have not been modified so it is still necessary to use !important with older versions. Explicitly including CSS via a link tag instead of dynamically appending CSS also follows the convention used by components that ship with Dojo.

Read ArcGIS JS API online: https://riptutorial.com/arcgis/topic/8692/arcgis-js-api

Chapter 3: ArcPy

Introduction

ArcPy is a Python module that provides access to Esri's geographic data analysis, data conversion, and data management software.

While Esri software primarily uses C++ for its proprietary geoprocessing and mapping tools, the ArcPy library enables those tools to be executed as part of a Python script.

Organized in tools, functions, classes, and modules, ArcPy allows automation of Esri software products to build complex workflow

Remarks

Unlike many Python modules, ArcPy is not freeware and requires a licensed version of ArcGIS Desktop or ArcGIS Pro to function properly.

Examples

Importing ArcPy modules

ArcPy is composed of a number of modules:

- arcpy the basic functions and geoprocessing tools
- arcpy.mapping access to mapping and map document tools
- arcpy.da a data access module for working with feature classes and tables
- arcpy.sa the Spatial Analyst extension module
- arcpy.na the Network Analyst extension module

Note: Some of these modules require additional licensing from Esri.

These can be imported all at once (import arcpy) or individually (import arcpy.sa as sa)

Read ArcPy online: https://riptutorial.com/arcgis/topic/8672/arcpy

Credits

S. No	Chapters	Contributors
1	Getting started with arcgis	Community, Erica
2	ArcGIS JS API	Vikash Pandey
3	ArcPy	Erica