Tutorials

These tutorials include code for various different versions of Geotools including 2.0, 2.1 and 2.2. Some of the code might still work in recent versions of Geotools but, then again, these examples might not work. We are working (Summer 2006) to clear up this situation and develop a good set of tutorials for the 2.2 release.

Tutorials

Tutorials to get you started coding with **Geotools**.

Background on Geotools

- Introduction
- Getting Started
- Feature List - give a general view of the geotools features
- Using the SNAPSHOT releases - building your own project against the latest snapshots automaticaly
- Utility and Support Classes
- Objects, Interfaces and Factories

Instant Gratification

- How to create a custom MapLayer -- jdk 1.5 geotools 2.1.M4

The Geometric Model

- Geometry Tutorial
  - Working with JTS Geometries from DataStores

The Georeferencing Model

- Spatial referencing
- Coordinate Transformation Services - general positioning, coordinate systems, and coordinate transformations
  - Coordinate Transformation Services for Geotools 2.1
- How to add new projections

The Feature Model

- Features - the geographic data you may want to manage or analyse with a GIS
  - Feature definitions
  - Feature API Overview
  - Creating Features and Feature types
  - Features class diagram

The Query Model

- Filters and Expressions
  - Expressions
  - Filters

The Data Access and Storage Model

- Data access basic - read and write feature data in files or databases

    - DataStore
    - Data Reading
    - Data Writing
- Grid Coverage
    - Using Grid Coverage - Rasters, that generate a value for any point within its domain
    - Using Grid Coverage Exchange - to access a Grid Coverage
- WorldImageReader formats
- Catalog

The Display Model

- Maps and styles - a map as an ordered list of layers, styles to specify how to render features
    - 05 Style
        - 07 Symbolizers
        - XMLEncoder and SLDTransformer
    - Maps
    - Renderers and map panes
        - RendererLite
    - Putting everything together

Advanced Geometry Model

- Graphs - defines the concept of a graph (or network)

Demonstration Code

- Demo Code
- Using Open Web Services]
    - Using WFS plugin to access a Web Feature Service. - using the WFS data store in order to handle features stored on a WFS
      server.
    - Web Map Server Client

Extending Geotools

Tutorials that show you how to extend the capabilities of the geotools library:

- Data Wrangling
    - 0 Introducing PropertyDataStore
    - Developing GridCoverage Formats
    - Extending the JDBCDataStore
    - Extending The XML Parser

Geotools 2.0 Tutorials

The main difference between Geotools 2.0 and 2.1 is the change of CoordinateReferenceSystem. Unfortantly MapPane is based on this construct and nobody has had time to upgrade it.

- Coordinate Transformation Services for Geotools 2.0

- 0 Introducing PropertyDataStore ⭐
- Renderer2D

⭐ indicates a tutorial where a 2.1 version is needed