LexEVS 5.0 Boot Camp

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The caBIG® LexEVS 5.0 Developer Boot Camp was held November 17th, 18th, and 19th, 2009, at the NCI CBIIT Training facility in Rockville, Md. This intermediate to advanced level hands-on training session was focused on understanding the terminology model as well as on how to use the LexEVS API in local, distributed, and grid environments to develop efficient LexEVS-aware services and applications. There was a specific focus for those migrating from EVS 3.x/LexEVS 4.x to LexEVS 5.0.

Learning Objectives for Attendees

- Identify architecture components that are new in LexEVS 5.0 as well as model elements in the 2009 model
- Utilize the different levels of the API
- Differentiate between the Local, Distributed, and Grid LexEVS Environments
- Download and set up LexEVS 5.0 for Local Environment
- Recognize basic interfaces, LexEVS entry points, extensions, loaders, and convenience methods
- Utilize the GUI
- Download and set up LexEVS for Distributed Environment
- Download and set up LexEVS 5.0 for Grid Service Environment
- Query content utilizing the grid
- Demonstrate searching and processing results in the LexEVS 5.0
- Identify methods of extending LexEVS 5.0 by utilizing specific extensions
- Utilize Manifest and Preferences to correctly configure LexEVS
- Discuss how Ontologies are mapped to LexGrid

Audience and Requirements for Attendees

- The intended audience for this boot camp includes intermediate or senior level programmers with knowledge of Java programming language.
- Participants should have a working knowledge of EVS and/or LexEVS/LexBIG.
- There are are required readings that must be completed prior to attending the boot camp.

Required Reading

LexEVS 5.0

Presentations Given at the Bootcamp

- Ia.LexEVS Architecture
  Course objectives are to define the architecture components that are new in 5.0 and/or replace older components and discuss the architecture components that make up the local, distributed and grid environments

- Ib.LexGrid Model
  Course objectives are to understand the core structure and relations of the LexGrid Data Model and the LexBIG Service models; define the purpose of the LexBIG model in relation to the LexGrid model and the LexEVS API; discuss the model elements that are new in 2009 and/or changes from the previous model(s) and understand how those changes may affect legacy program implementation.

- IIa.Loader Mapping
  Course objective is to discuss how native format content is loaded into LexEVS

- IIb.LexEVS API
  Course objectives are to identify the different levels of the API and how to utilize them (core services, extensions, loaders, convenience methods, GUI); differentiate between the LexEVS environments and to identify which environment meets the user's needs (local, distributed, grid)

- IIIa.Local LexEVS
  Course objectives are to discuss the LexEVS API in a local environment; install and configure LexEVS for the local environment; perform local code implementation exercises; utilize LexEVS loader technology and to demonstrate the use of the lbGUI for loading and code implementation.

- IIIb. LexEVS Distributed
  Course objectives are to discuss the components required for installing a distributed environment; discuss the download and setup of LexEVS 5.0 for distributed environment and to provide hands-on code exercises.

- IIIc. LexEVS Grid
  Course objectives are to discuss the components required for installing a distributed environment; discuss the download and setup of LexEVS 5.0 for the caGrid Environment and to provide hands-on code exercises.

- IVa. Query Optimization
  Course objectives are to understand ways to optimize searching and processing results using Query Optimization in LexEVS 5.0 (Restrictions and resolution, Iterator Handling, Combinatorial Queries)

- IVb. Migration Guide
  Course objectives are to understand the differences between the new LexEVS 5.0 architecture and previous version of LexEVS (4.2) and EVS 3.x; learn how to change EVS code to LexEVS code via the highlights of our migration guide's method to method comparison between EVS and LexEVS; Gain detailed knowledge of sample EVS to LexEVS migration by examining some example code and to master sample migration examples by doing some exercises in converting EVS code to LexEVS API calls.

- IVc. ValueDomain Picklist
  Course objectives are to understand and definte the core structure of Value Domain and Pick List Definitions of the LexGrid Model and to define all the Value Domain and Pick List services in LexEVS API.

- IVd. Configuration Options
  Course objectives are to demonstrate how to utilize the Coding Scheme Manifest to best configure LexEVS and customize content and to demonstrate ways to customize a LexEVS loader by using a loader preferences file.

Source Materials Used at the Bootcamp

- Bootcamp Eclipse Projects
  Code samples used at the boot camp ready to be imported into Eclipse.

- Complete LexEVS JBoss Server

- Incomplete LexEVS JBoss Server

- LexEVS 5.0 Analytical Grid Service Web Application

- LexEVS 5.0 Data Grid Service Web Application

- LexEVS 5.0 Distributed Web Application

- LexEVS 5.0 Grid Services Configuration

- LexEVS 5.0 Javadocs

- LexEVS API Config File

- MySQL Driver

- Shel.doc