GSoC 2020: Switching from XML Mappings to Annotations on OpenMRS domain Objects

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Abstract
The OpenMRS domain objects currently heavily rely on the xml mapping files. These not only make it difficult to for new developers to figure out how the object defined variables end up in the database, but also processing the metadata related to the domain object becomes more difficult. This project will address the challenges faced when depending on xml mappings as well as address the possible bugs that could be uncovered when migrating to annotations' usage.

Project Champions
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Skills Needed
- Excellent understanding of Java
- Good understanding of the hibernate library
- General understanding of the OpenMRS data model
- Familiarity with Liquibase

Objectives
- Switch from xml mappings to annotations on all OpenMRS Core domains

Resources
- Hibernate Annotations

Approved tickets
- TRUNK-5837 - Cohort Domain - Switching from Hibernate Mappings to Annotations [IN PROGRESS]
- TRUNK-5797 - Field Domain - Switching from Hibernate Mappings to Annotations [IN PROGRESS]
- TRUNK-5804 - Form Domain - Switching from Hibernate Mappings to Annotations [IN PROGRESS]
- TRUNK-5810 - Relationship Domain - Switching from Hibernate Mappings to Annotations [IN PROGRESS]
- TRUNK-5949 - User Domain - Switching from Hibernate Mappings to Annotations [IN PROGRESS]
- TRUNK-5793 - AllergyReaction Domain - Switching from Hibernate Mappings to Annotations [IN PROGRESS]
- TRUNK-5796 - CareSetting Domain - Switching from Hibernate Mappings to Annotations [IN PROGRESS]
- TRUNK-5913 - ClobDatatypeStorage Domain - Switching from Hibernate Mappings to Annotations [IN PROGRESS]
- TRUNK-5803 - ConceptAnswer Domain - Switching from Hibernate Mappings to Annotations [IN PROGRESS]
- TRUNK-5899 - ConceptAttributeType Domain - Switching from Hibernate Mappings to Annotations [IN PROGRESS]
Incomplete Tasks

- **TRUNK-5749** - Drug Domain - Switching from Hibernate Mappings to Annotations - has missing database table column resulting from annotated superclass
- **TRUNK-5809** - Program Domain - Switching from Hibernate Mappings to Annotations - has missing database table column resulting from annotated superclass
- **TRUNK-5852** - Provider Domain - Switching from Hibernate Mappings to Annotations - has missing database table column resulting from annotated superclass
- **TRUNK-5902** - CohortMembership Domain - Switching from Hibernate Mappings to Annotations - has missing database table column resulting from annotated superclass
- **TRUNK-5836** - ConceptDatatype Domain - Switching from Hibernate Mappings to Annotations - has missing database table column resulting from annotated superclass
- **TRUNK-5830** - FieldType Domain - Switching from Hibernate Mappings to Annotations - has missing database table column resulting from annotated superclass
- **TRUNK-5822** - FormField Domain - Switching from Hibernate Mappings to Annotations - has missing database table column resulting from annotated superclass
- **TRUNK-5948** - LocationAttribute Domain - Switching from Hibernate Mappings to Annotations - has missing database table column resulting from annotated superclass
- **TRUNK-5819** - OrderFrequency Domain - Switching from Hibernate Mappings to Annotations - has missing database table column resulting from annotated superclass
- **TRUNK-5867** - OrderSetMember Domain - Switching from Hibernate Mappings to Annotations - has missing database table column resulting from annotated superclass
- **TRUNK-5842** - ProgramWorkflow Domain - Switching from Hibernate Mappings to Annotations - has missing database table column resulting from annotated superclass
- **TRUNK-5891** - ProgramWorkflowState Domain - Switching from Hibernate Mappings to Annotations - has missing database table column resulting from annotated superclass
- **TRUNK-5808** - Location Domain - Switching from Hibernate Mappings to Annotations - has missing database table
- TRUNK-5881 - Order Domain - Switching from Hibernate Mappings to Annotations - ERROR: Editing the fields [changedBy, dateChanged] on Order is not allowed

- TRUNK-5872 - Patient Domain - Switching from Hibernate Mappings to Annotations - it extends person, and I had some problems annotating that base class

- TRUNK-5953 - Person Domain - Switching from Hibernate Mappings to Annotations - ERROR: Not all named super-types (extends) were found: [Person]

- TRUNK-5890 - Privilege Domain - Switching from Hibernate Mappings to Annotations - ERROR: null not allowed for column "creator"

- TRUNK-5903 - Role Domain - Switching from Hibernate Mappings to Annotations - ERROR: null not allowed for column "creator"

- TRUNK-5928 - PersonAdress Domain - Switching from Hibernate Mappings to Annotations - ERROR: null not allowed for column "creator"