GSCF Data model examples for LIMS discussion

- TemplateField
  - Name (string)
  - Type: any of
    - STRING, STRINGLIST
    - FLOAT, DOUBLE, ...
    - ONTOLOGYTERM, FILE
    - DATE, RELDATE
  - Unit [references Units of measurement ontology]
  - Extra properties:
    - STRINGLIST: items in list
    - ONTOLOGYERM: ontologies to choose from

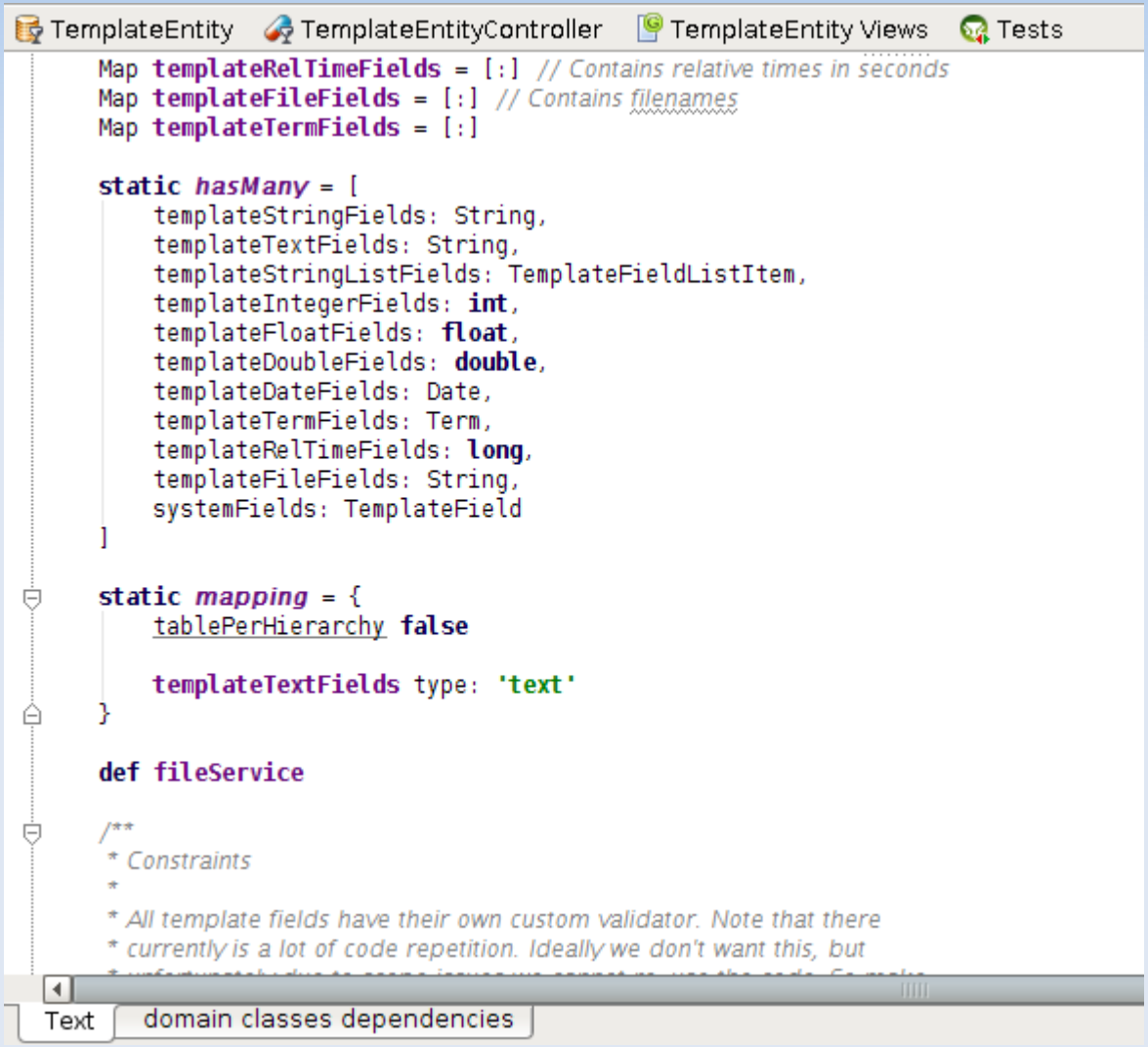
Template

- Template
  - Name
  - Target entity (Study, Subject etc.)
  - Collection of TemplateFields
- TemplateEntity
  - Superclass of Study, Subject, Event, Sample...
  - Instances implement 1 template
  - Allows to iterate over collection of 'domain fields' + 'template fields'

Example resulting object

- Subject implements TemplateEntity:
  - Domain field Subject.name
  - Domain field Subject.species
  - Template fields... e.g. for template Human:
    - BMI
    - Date of birth
    - etc.

Leveraging Grails...



Hibernate/Grails persists to database

SAMPLE

ID	MATERIAL_ID	NAME	PARENT_EVENT_ID	PARENT_SUBJECT_ID
1	6	11_B	12	31
2	6	9_B	12	29
3	6	7_B	12	27
4	6	8_B	12	28
5	6	6_B	12	26
6	6	3_B	12	23
7	6	10_B	12	30
8	6	4_B	12	24
9	6	5_B	12	25
10	6	1_B	12	21
11	6	2_B	12	22

SAMPLE_TEMPLATE_DATE_FIELDS

SAMPLE_ID	TEMPLATE_DATE_FIELDS_DATE	TEMPLATE_DATE_FIELDS_ELT

SAMPLE_TEMPLATE_DOUBLE_FIELDS

SAMPLE_ID	TEMPLATE_DOUBLE_FIELDS_DOUBLE	TEMPLATE_DOUBLE_FIELDS_ELT

SAMPLE_TEMPLATE_FIELD

SAMPLE_SYSTEM_FIELDS_ID	TEMPLATE_

SAMPLE_TEMPLATE_FILE_FIELDS

SAMPLE_ID	TEMPLATE_FILE_FIELDS_ELT	TEMPLATE_FILE_FIELDS_IDX

SAMPLE_TEMPLATE_FLOAT_FIELDS

SAMPLE_ID	TEMPLATE_FLOAT_FIELDS_ELT	TEMPLATE_FLOAT_FIELDS_FLOAT

SAMPLE_TEMPLATE_INTEGER_FIELDS

SAMPLE_ID	TEMPLATE_INTEGER_FIELDS_ELT	TEMPLATE_INTEGER_FIELDS_IDX

Generic Study Capture Framework

a joint initiative of the NMC and NuGO

Study wizard

Add subjects to your study

Describe the subjects studied with all details available. Use the template that contains the necessary fields. New templates can be defined (based on existing templates). To add select the correct species and template, input the number of subjects you want to add, and click 'Add'. They will appear below the 'Add' button. As multiple species may be studie is no hard link between the template and the species.

Note that you can edit multiple subjects at once by selecting multiple rows by either ctrl-clicking them or dragging a selection over them in the space between the fields.

Note that depending on the size of your browser window and the template, additional fields can be reached by the slider at the bottom of the page.

Number of subjects to add: 1

of species: Arabidopsis thaliana

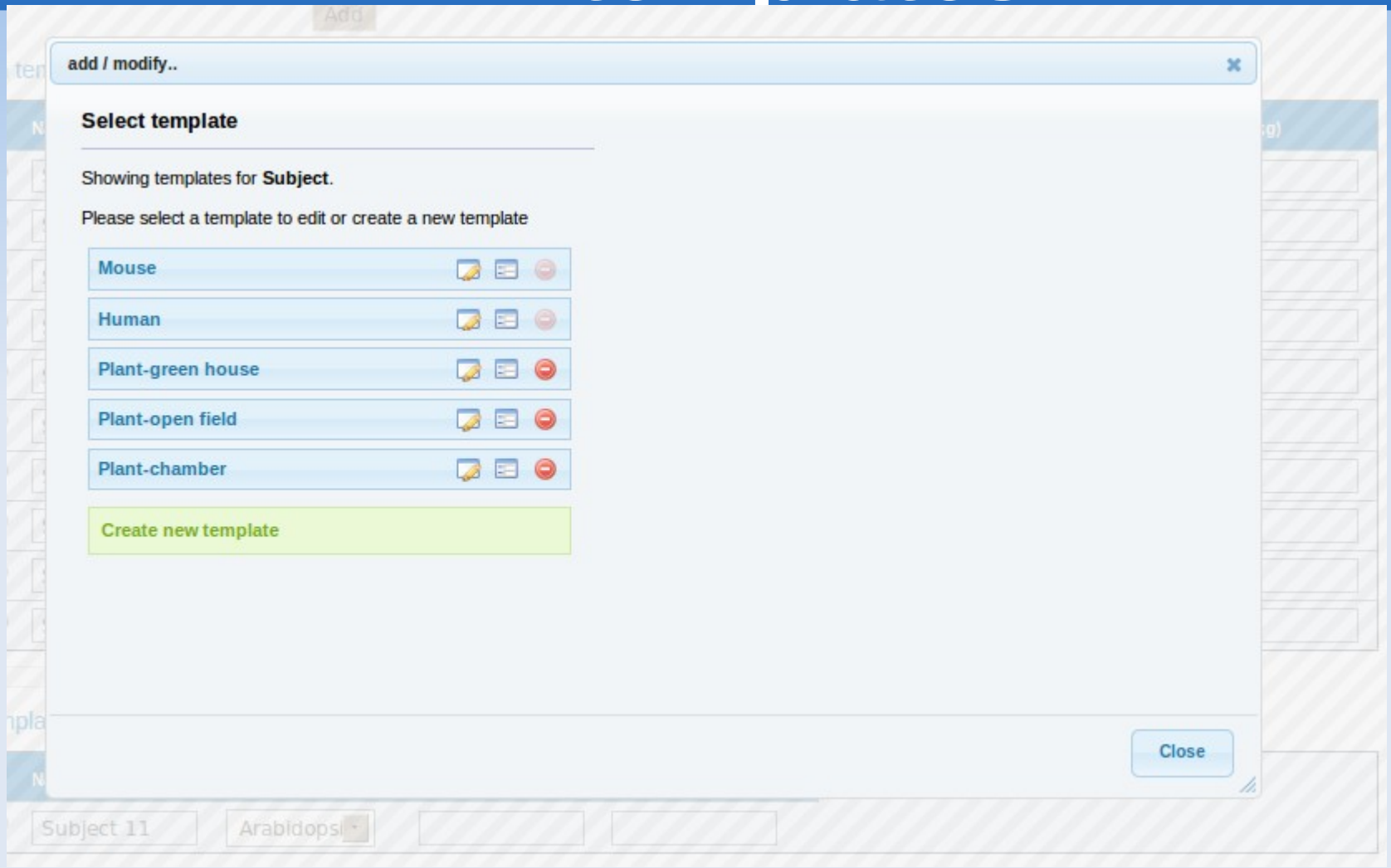
with template: Human

- Human
- Mouse
- Plant-chamber
- Plant-green house
- Plant-open field
- test
- add / modify..

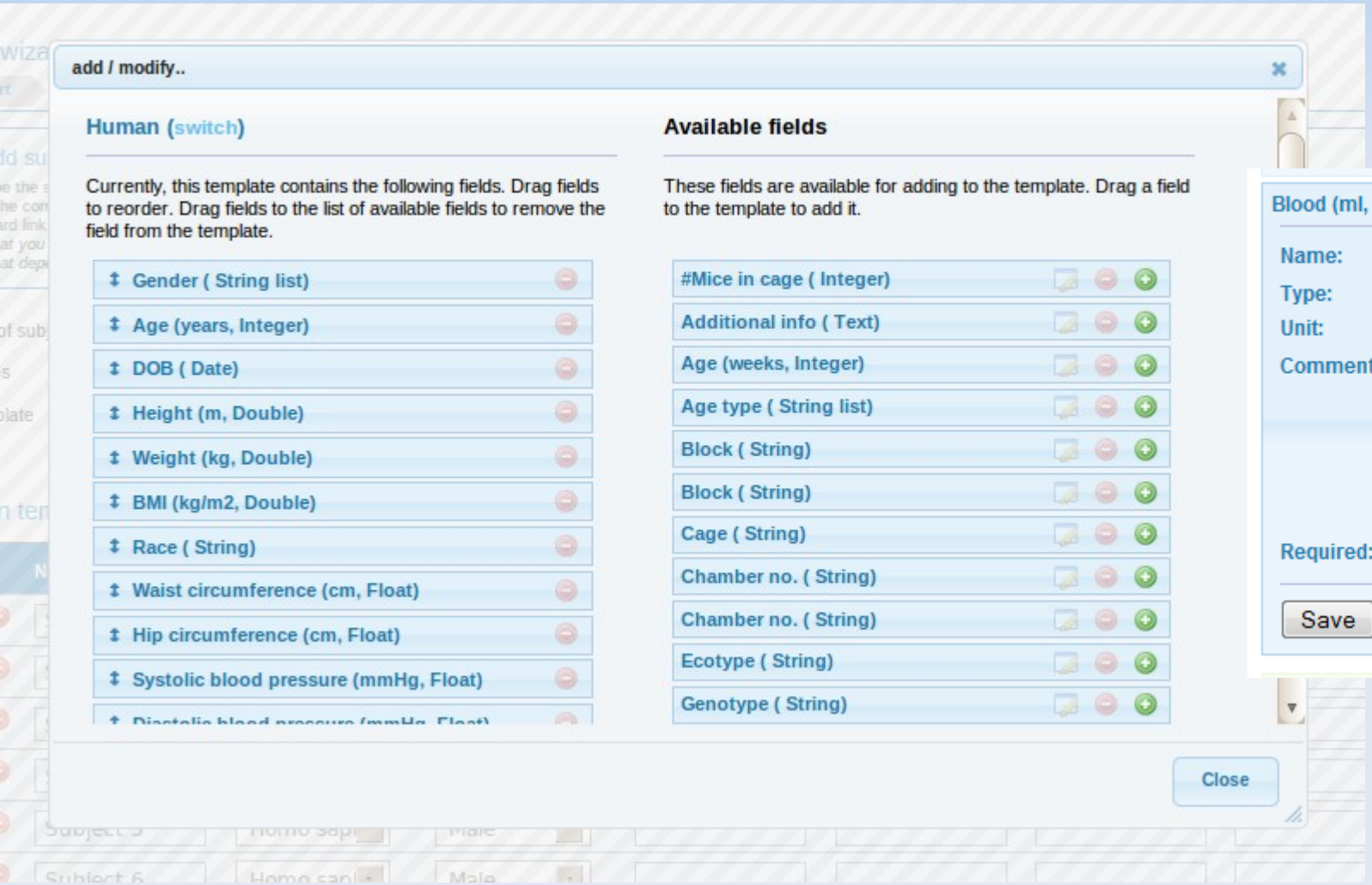
Human template

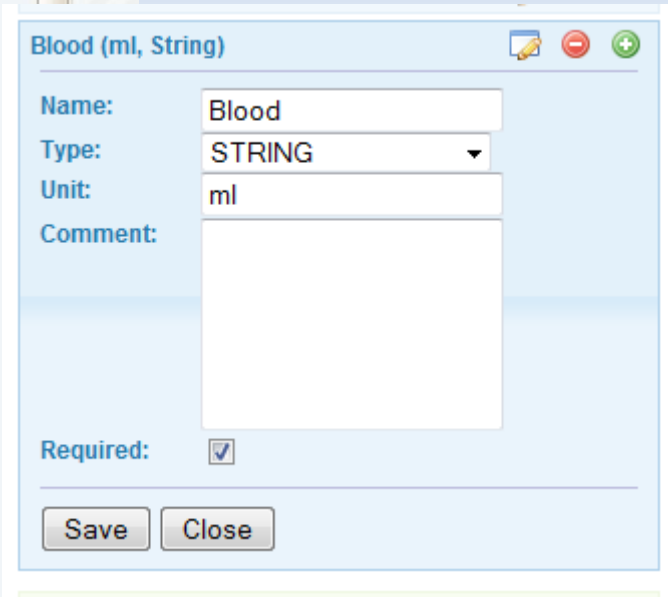
#		Name	Species		Age (years)	DOB	Height (m)
1		Subject 1	Homo sapi	Male			
2		Subject 2	Homo sapi	Male			
3		Subject 3	Homo sapi	Male			
4		Subject 4	Homo sapi	Male			

Template editor: Subject templates



Template editor





Ontology template field

- Example: Subject.species: Ontology field that targets the NCBI species taxonomy