

## Designing a FAIRification game for Research Software

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# Designing a FAIRification game for Research Software

Rohitha Ravinder, Dhvani Solanki, Claudio Carta, Bruna dos Santos Vieira, Johannes Keller, Marco Roos, and Leyla Jael Castro

## OBJECTIVE

A gamified training tool designed to enhance awareness and understanding of the FAIR principles.

This initiative offers an engaging approach to tackle FAIRness challenges associated with research software metadata.

Participants embark on a gamification journey, playing to achieve a collective goal while emphasizing the critical aspects of Findability, Accessibility, Interoperability, and Reusability specific to research software.



## QUEST

Embark on a maze challenge with two contestants — one well-versed in ontologies and FAIR principles, and the other facing hurdles due to a lack of knowledge. The Ontology Room at the maze's center is a knowledge hub, emphasizing harmonization through a controlled vocabulary.



## MISSION

Find software tailored to their needs based on specific characteristics

## BACKGROUND

Gamification effectiveness in training tools is evident, with the FAIRification game for Rare Disease Data as a successful precedent.

The game navigates players through the benefits of FAIR data principles featuring an overall task, RS cards, and an ontology room for harmonizing descriptors.

The poster outlines the initial steps in designing the FAIRification game for Research Software and emphasizes its potential impact.

**EBI TOOLS**

Task : Sequence Similarity Search  
Protein function analysis  
Multiple sequence alignment

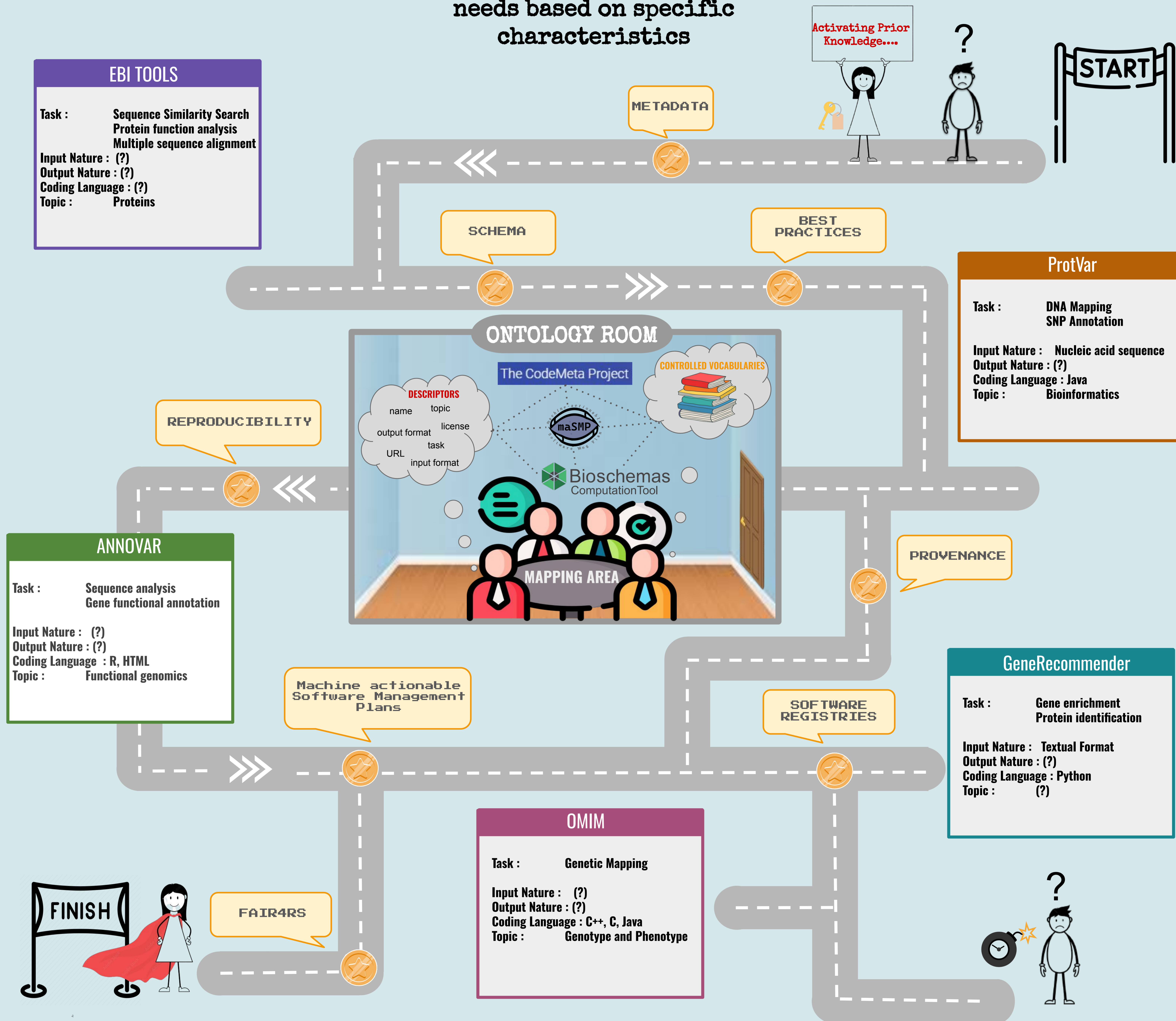
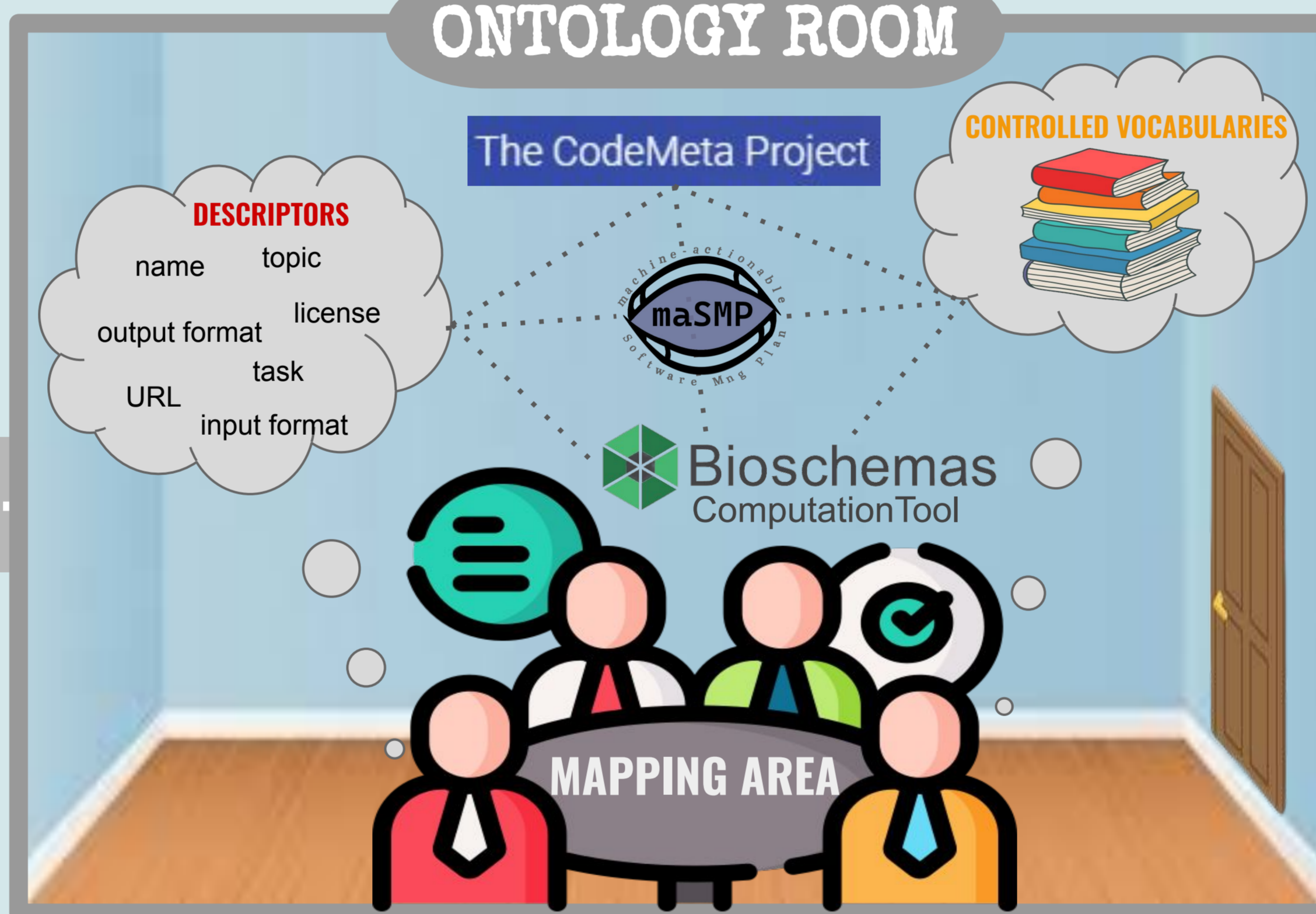
Input Nature : (?)  
Output Nature : (?)  
Coding Language : (?)  
Topic : Proteins

**ANNOVAR**

Task : Sequence analysis  
Gene functional annotation

Input Nature : (?)  
Output Nature : (?)  
Coding Language : R, HTML  
Topic : Functional genomics

### ONTOLOGY ROOM



**ProtVar**

Task : DNA Mapping  
SNP Annotation

Input Nature : Nucleic acid sequence  
Output Nature : (?)  
Coding Language : Java  
Topic : Bioinformatics

**GeneRecommender**

Task : Gene enrichment  
Protein identification

Input Nature : Textual Format  
Output Nature : (?)  
Coding Language : Python  
Topic : (?)

**OMIM**

Task : Genetic Mapping

Input Nature : (?)  
Output Nature : (?)  
Coding Language : C++, C, Java  
Topic : Genotype and Phenotype