

Case study in SODA

Requirements Analysis Core Layer

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1 Requirements Analysis



Actor table

Actor	Description
Biologist	he is a scientist devoted to and producing results in biology through the study of organisms
Bioinformatics Expert	he adopts techniques including applied mathematics, informatics, statistics, etc. to solve biological problems usually on the molecular level



Requirement table

Requirement	Description
Elaborate knowledge	the knowledge should be retrieved and organised in a specific hierarchical way
Generate structure	the new protein structure should be generated according to the knowledge and specific algorithms
Easy Interaction	the knowledge and the results should be filtered and presented according to users interest
Feedback	users should be able to express feedback over the results



Actor-Requirement table

Actor	Requirement
Biologist	Feedback Easy Interaction
Bioinformatics Expert	Elaborate Knowledge Generate structure



LegacySystem table

Legacy-System	Description
External DB	this system contains knowledge about the protein structure
Algorithm	represents algorithm already defined that should be used in the application contest
Model	represents model already defined that should be used in the application contest
Heuristic	represents heuristic already defined that should be used in the application contest



ExternalEnvironment-LegacySystem table

External-Environment	Legacy-System
Bioinfo world	External DB Algorithm Model Heuristic



Relation table

Relation	Description
Information path	this relation represents the tie between system and the knowledge spread over the network
Algorithm relation	this relation presents the tie between system and the algorithm already defined
Model relation	this relation presents the tie between system and the model already defined
Heuristic relation	this relation presents the tie between system and the heuristic already defined
Feedback relation	the knowledge is tied with the user preferences and should be presented according them
Structure relation	the generation of the structure depends over the user feedback



Requirement-Relation table

Requirement	Relation
Elaborate knowledge	Information path, Algorithm relation Model relation, Heuristic relation Feedback relation
Generate structure	Information path, Algorithm relation Model relation, Heuristic relation Structure relation
Easy Interaction	Information path, Feedback relation Structure relation
Feedback	Information path, Feedback relation Structure relation



LegacySystem-Relation table

Legacy-System	Relation
External DB	Information path
Algorithm	Algorithm relation
Model	Model relation
Heuristic	Heuristic relation



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