

Process Report

Project: Eyal-Salman203

Process: Retrieval Process

Created by: Luciano

Date: 05-27-2020

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| 1 | | Phase: | Extract |
| | | Activity: | Divide features with LSI |
| | | Description: | Use LSI to divide features and classes into common and variable partitions; |
| | | Retrieval Technique: | Latent Semantic Indexing |
| | Artifact:1 | Input | |
| | | Name: | Objected-oriented Source Code |
| | | Type | Development |
| | | Description: | Souce code of the argoUML |
| | | Extension: | .java |
| | | Link (url): | https://github.com/argouml-tigris-org/argouml |
| | | Last Update: | 05-24-2020 by Luciano |
| | Artifact:2 | Input | |
| | | Name: | Feature Description |
| | | Type | Domain |
| | | Description: | Description of features of the argoUML system. |
| | | Extension: | .doc |
| | | Link (url): | https://github.com/argouml-tigris-org/argouml |
| | | Last Update: | 05-24-2020 by Luciano |
| | Artifact:3 | Output | |
| | | Name: | Common and variable partitions |
| | | Type | Development |
| | | Description: | Classes that implement common and optional features |
| | | Extension: | .lsi |
| | | Link (url): | https://github.com/argouml-tigris-org/argouml |
| | | Last Update: | 05-27-2020 by Luciano |
| 2 | | Phase: | Extract |
| | | Activity: | Fragment variable partitions with FCA |
| | | Description: | Fragment variable partitions into minimal disjoint sets using FCA |
| | | Retrieval Technique: | Formal Concept Analysis |
| | Artifact:1 | Input | |
| | | Name: | Objected-oriented Source Code |
| | | Type | Development |

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| | | Description: | Source code of the argoUML |
| | | Extension: | .java |
| | | Link (url): | https://github.com/argouml-tigris-org/argouml |
| | | Last Update: | 05-24-2020 by Luciano |
| | Artifact:2 | Input | |
| | | Name: | Feature Description |
| | | Type | Domain |
| | | Description: | Description of features of the argoUML system. |
| | | Extension: | .doc |
| | | Link (url): | https://github.com/argouml-tigris-org/argouml |
| | | Last Update: | 05-24-2020 by Luciano |
| | Artifact:3 | Input | |
| | | Name: | Common and variable partitions |
| | | Type | Development |
| | | Description: | Classes that implement common and optional features |
| | | Extension: | .lsi |
| | | Link (url): | https://github.com/argouml-tigris-org/argouml |
| | | Last Update: | 05-27-2020 by Luciano |
| | Artifact:4 | Output | |
| | | Name: | Minimal disjoint sets |
| | | Type | Development |
| | | Description: | Variable partitions are fragmented into minimal disjoint sets using FCA. |
| | | Extension: | .fca |
| | | Link (url): | https://github.com/argouml-tigris-org/argouml |
| | | Last Update: | 05-27-2020 by Luciano |
| 3 | | Phase: | Group |
| | | Activity: | Derive code-topics from common class partitions; |
| | | Description: | Code-topics are derived based on their common class partitions; |
| | | Retrieval Technique: | Clustering |
| | Artifact:1 | Input | |
| | | Name: | Common and variable partitions |
| | | Type | Development |
| | | Description: | Classes that implement common and optional features |
| | | Extension: | .lsi |
| | | Link (url): | https://github.com/argouml-tigris-org/argouml |
| | | Last Update: | 05-27-2020 by Luciano |
| | Artifact:2 | Input | |
| | | Name: | Minimal disjoint sets |
| | | Type | Development |
| | | Description: | Variable partitions are fragmented into minimal |

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| | | | disjoint sets using FCA. |
| | | Extension: | .fca |
| | | Link (url): | https://github.com/argouml-tigris-org/argouml |
| | | Last Update: | 05-27-2020 by Luciano |
| | Artifact:3 | Output | |
| | | Name: | Code-topics |
| | | Type | Development |
| | | Description: | Code-topics derived from common class partition and each minimal disjoint set of classes |
| | | Extension: | .topic |
| | | Link (url): | https://github.com/argouml-tigris-org/argouml |
| | | Last Update: | 05-27-2020 by Luciano |
| 4 | | Phase: | Create Feature Model |
| | | Activity: | Perform traceability links between features and code-topics; |
| | | Description: | Analyzed and perform the traceability links between features and their code-topics; |
| | | Retrieval Technique: | Latent Semantic Indexing |
| | Artifact:1 | Input | |
| | | Name: | Code-topics |
| | | Type | Development |
| | | Description: | Code-topics derived from common class partition and each minimal disjoint set of classes |
| | | Extension: | .topic |
| | | Link (url): | https://github.com/argouml-tigris-org/argouml |
| | | Last Update: | 05-27-2020 by Luciano |
| | Artifact:2 | Output | |
| | | Name: | Traceability links |
| | | Type | Development |
| | | Description: | Traceability links between features and their possible corresponding code-topics |
| | | Extension: | .lsi |
| | | Link (url): | https://github.com/argouml-tigris-org/argouml |
| | | Last Update: | 05-27-2020 by Luciano |
| 5 | | Phase: | Create Feature Model |
| | | Activity: | Determine feature implementation |
| | | Description: | determine which classes implement each feature. |
| | | Retrieval Technique: | Rule Based |
| | Artifact:1 | Input | |
| | | Name: | Code-topics |
| | | Type | Development |
| | | Description: | Code-topics derived from common class partition and each minimal disjoint set of classes |

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| | | Extension: | .topic |
| | | Link (url): | https://github.com/argouml-tigris-org/argouml |
| | | Last Update: | 05-27-2020 by Luciano |
| | Artifact:2 | Input | |
| | | Name: | Traceability links |
| | | Type | Development |
| | | Description: | Traceability links between features and their possible corresponding code-topics |
| | | Extension: | .lsi |
| | | Link (url): | https://github.com/argouml-tigris-org/argouml |
| | | Last Update: | 05-27-2020 by Luciano |
| | Artifact:3 | Output | |
| | | Name: | Decomposed code-topics |
| | | Type | Development |
| | | Description: | Decomposed code-topic to its classes determining which classes that implement each feature. |
| | | Extension: | .topic |
| | | Link (url): | https://github.com/argouml-tigris-org/argouml |
| | | Last Update: | 05-27-2020 by Luciano |