

LAMPIRAN A Source Code Ontologi Hasil Modifikasi

Berikut ini adalah sebagian *source code* ontologi objek pembelajaran dari ALOCoM yang telah dimodifikasi. Terdiri atas definisi *class Course*, *Object Property prerequisite*, dan *Datatype Property description*.

```
<?xml version="1.0"?>
<rdf:RDF
  xmlns:owl2xml="http://www.w3.org/2006/12/owl2-xml#"
  xmlns:swrla="http://swrl.stanford.edu/ontologies/3.3/swrla.owl#"
  xmlns:owl2="http://www.w3.org/2006/12/owl2#"
  xmlns:swrl="http://www.w3.org/2003/11/swrl#"
  xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
  xmlns:owl="http://www.w3.org/2002/07/owl#"
  xmlns:assert="http://www.owl-ontologies.com/assert.owl#"
  xmlns:xsp="http://www.owl-ontologies.com/2005/08/07/xsp.owl#"
  xmlns:swrlb="http://www.w3.org/2003/11/swrlb#"
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:protege="http://protege.stanford.edu/plugins/owl/protege#"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema#"
  xmlns:loco="http://jelenajovanovic.net/ontologies/loco/alocom-
core.rdf#"
  xmlns:sqwrl="http://sqwrl.stanford.edu/ontologies/built-
ins/3.4/sqwrl.owl#"
  xmlns:dc="http://purl.org/dc/elements/1.1/"
  xml:base="http://jelenajovanovic.net/ontologies/loco/alocom-core.rdf">

  <owl:Ontology rdf:about="">
    <dc:creator xml:lang="en">Katrien Verbert</dc:creator>
    <dc:creator xml:lang="en">Dragan Gasevic</dc:creator>
    <dc:creator xml:lang="en">Jelena Jovanovic</dc:creator>
    <owl:imports rdf:resource="http://www.owl-
ontologies.com/assert.owl"/>
    <dc:title xml:lang="en">ALOCOM Content Structure Ontology</dc:title>
    <dc:description xml:lang="en">The ontology formally defines the
information objects within a learning object with the goal of making each
component directly accessible and thus reusable.</dc:description>
    <dc:date xml:lang="en">2008-11-21</dc:date>
    <dc:contributor xml:lang="en">Erik Duval</dc:contributor>
  </owl:Ontology>

  <owl:Class rdf:about="#Course">
    <owl:disjointWith>
      <owl:Class rdf:about="#Contributor"/>
    </owl:disjointWith>
    <rdfs:comment rdf:datatype="http://www.w3.org/2001/XMLSchema#string"
>Course aggregate Lessons</rdfs:comment>
    <rdfs:subClassOf>
      <owl:Restriction>
        <owl:onProperty>
          <owl:ObjectProperty rdf:about="#hasPart"/>
        </owl:onProperty>
        <owl:allValuesFrom rdf:resource="#Lesson"/>
      </owl:Restriction>
    </rdfs:subClassOf>
    <owl:disjointWith rdf:resource="#Lesson"/>
    <rdfs:subClassOf>
      <owl:Restriction>
        <owl:onProperty>
```

```

        <owl:FunctionalProperty rdf:about="#isCreatedBy"/>
    </owl:onProperty>
    <owl:allValuesFrom>
        <owl:Class rdf:about="#Contributor"/>
    </owl:allValuesFrom>
</owl:Restriction>
</rdfs:subClassOf>
<owl:disjointWith>
    <owl:Class rdf:about="#ShareableContentObject"/>
</owl:disjointWith>
<owl:disjointWith rdf:resource="#Asset"/>
<rdfs:label rdf:datatype="http://www.w3.org/2001/XMLSchema#string"
>Course</rdfs:label>
<rdfs:subClassOf>
    <owl:Restriction>
        <owl:onProperty>
            <owl:ObjectProperty rdf:ID="prerequisite"/>
        </owl:onProperty>
        <owl:allValuesFrom rdf:resource="#Course"/>
    </owl:Restriction>
</rdfs:subClassOf>
<rdfs:subClassOf rdf:resource="http://www.w3.org/2002/07/owl#Thing"/>
</owl:Class>

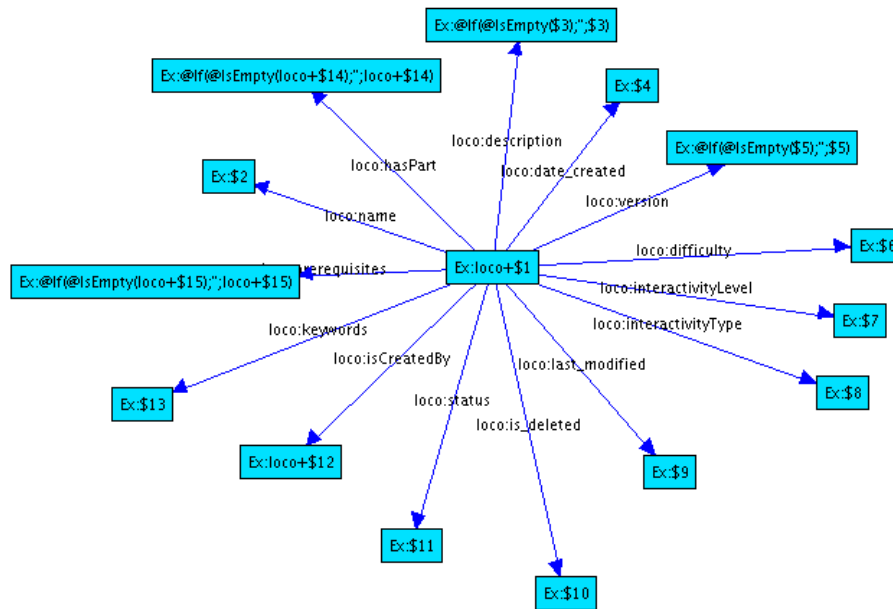
<owl:ObjectProperty rdf:about="#prerequisite">
    <rdfs:domain rdf:resource="#Course"/>
    <rdfs:range rdf:resource="#Course"/>
</owl:ObjectProperty>

</owl:DatatypeProperty>
<owl:DatatypeProperty rdf:ID="description">
    <rdf:type
rdf:resource="http://www.w3.org/2002/07/owl#FunctionalProperty"/>
    <rdfs:domain>
        <owl:Class>
            <owl:unionOf rdf:parseType="Collection">
                <owl:Class rdf:about="#ShareableContentObject"/>
                <owl:Class rdf:about="#Lesson"/>
                <owl:Class rdf:about="#Course"/>
            </owl:unionOf>
        </owl:Class>
    </rdfs:domain>
    <rdfs:range rdf:resource="http://www.w3.org/2001/XMLSchema#string"/>
</owl:DatatypeProperty>

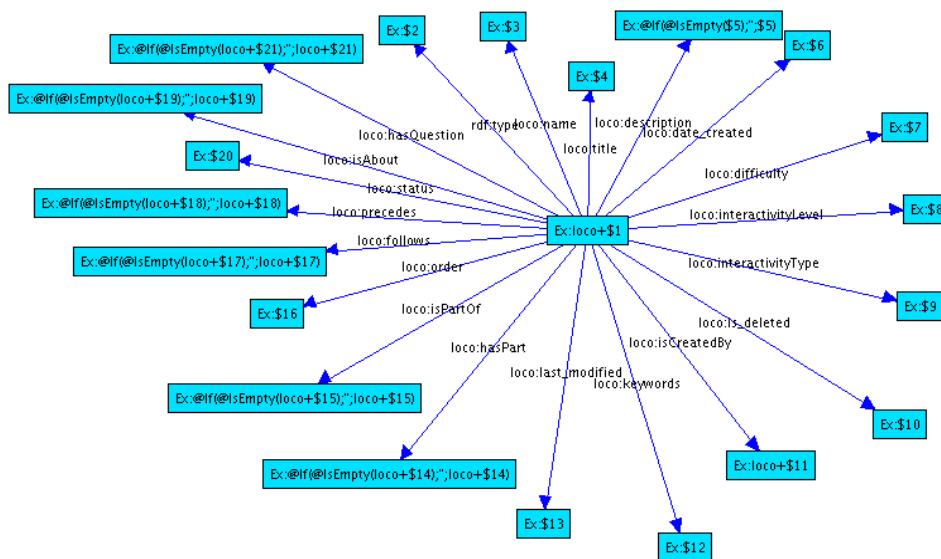
```

LAMPIRAN B Map Graphs

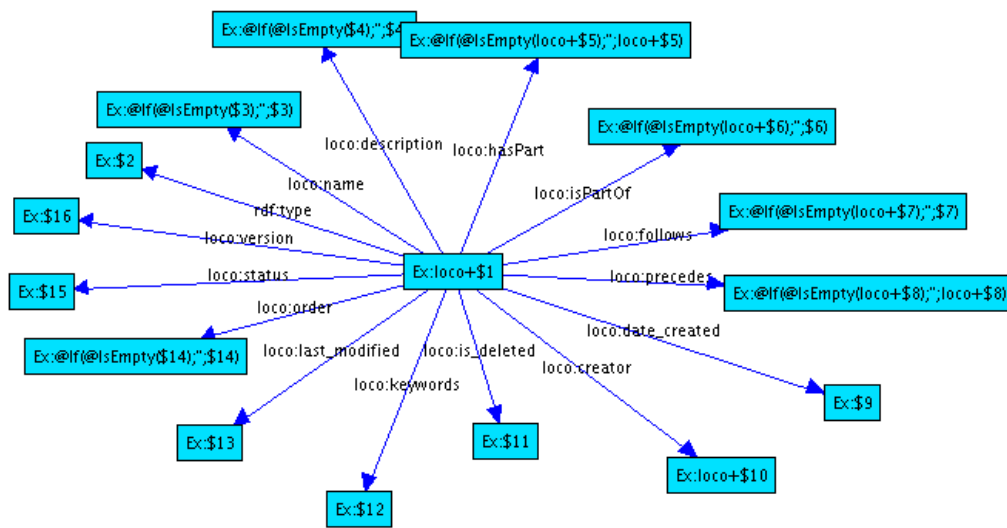
Berikut adalah *map graph* yang dibuat dengan RDF123 untuk mengkonversi data dari tiap objek dari *spreadsheet* ke RDF-N3.



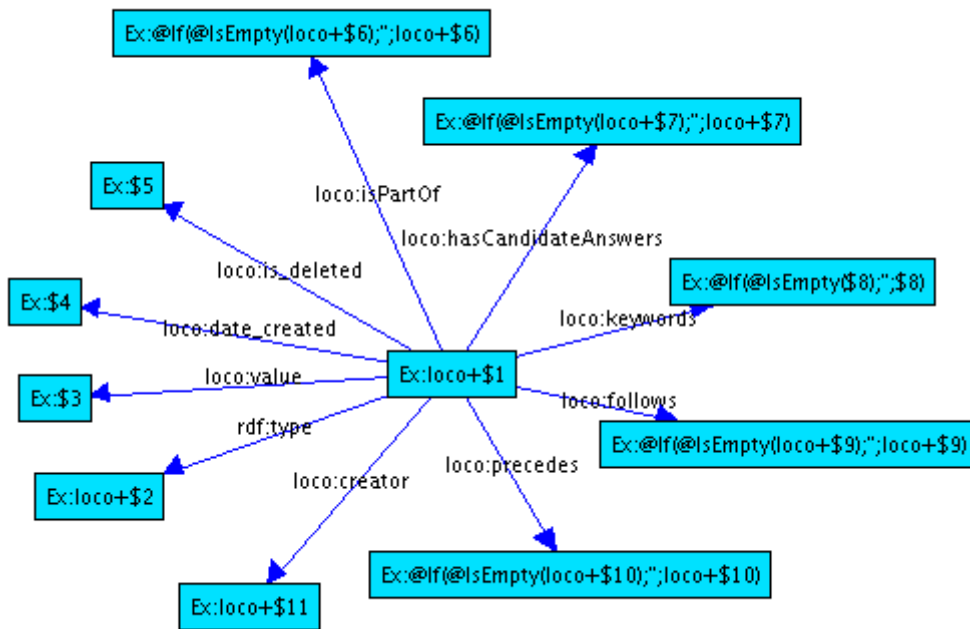
LAMPIRAN B.1 Map Graph Course



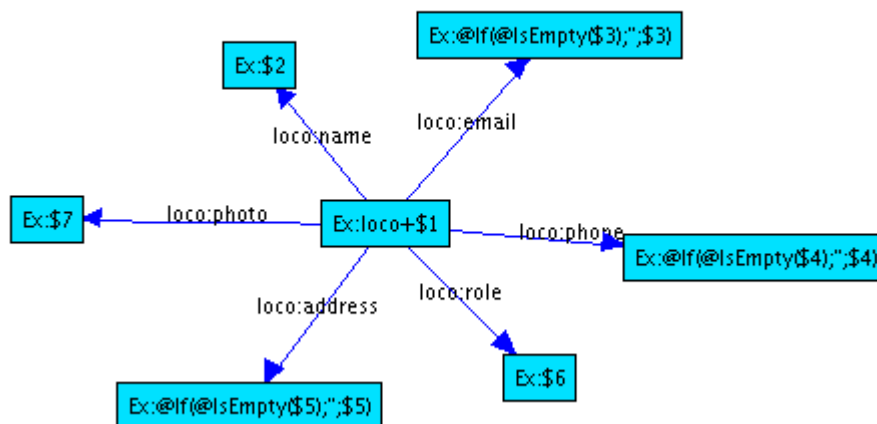
LAMPIRAN B.2 Map Graph Lesson



LAMPIRAN B.3 Map Graph Shareable Content Object



LAMPIRAN B.4 Map Graph Asset



LAMPIRAN B.5 Map Graph Contributor



LAMPIRAN C Data Instances

Berikut ini adalah contoh *source code* untuk data *instances* pada objek *Shareable Content Object*.

```
# Base: http://mybase
@prefix : <#> .
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
@prefix loco: <http://jelenajovanovic.net/ontologies/loco/alocom-core.rdf#> .
@prefix rdf123: <http://rdf123.umbc.edu/ns/> .

loco:p2
  a loco:Paragraph ;
  loco:isCreatedBy loco:heri ;
  loco:date_created "18-Jun-09" ;
  loco:description "bla bla bla" ;
  loco:hasPart loco:t9 ;
  loco:is_deleted "FALSE" ;
  loco:keywords "definition" ;
  loco:last_modified "20-Jun-09" ;
  loco:name "Definition" ;
  loco:order "3" ;
  loco:status "draft" ;
  loco:version "0.1" .

loco:p1
  a loco:Paragraph ;
  loco:isCreatedBy loco:heri ;
  loco:date_created "18-Jun-09" ;
  loco:description "bla bla bla" ;
  loco:hasPart loco:t1 ;
  loco:is_deleted "FALSE" ;
  loco:keywords "bla" ;
  loco:last_modified "20-Jun-09" ;
  loco:name "Advantage" ;
  loco:order "3" ;
  loco:status "draft" ;
  loco:version "0.1" .

loco:p3
  a loco:Paragraph ;
  loco:isCreatedBy loco:heri ;
  loco:date_created "18-Jun-09" ;
  loco:description "bla bla bla" ;
  loco:hasPart loco:t9 ;
  loco:is_deleted "FALSE" ;
  loco:keywords "bla" ;
  loco:last_modified "20-Jun-09" ;
  loco:name "Utilization" ;
  loco:order "3" ;
  loco:status "draft" ;
  loco:version "0.1" .

loco:ans1
  a loco:Answer ;
  loco:isCreatedBy loco:ami ;
  loco:date_created "18-Jun-09" ;
  loco:description "bla bla bla" ;
  loco:hasPart loco:t1, loco:t2 ;
```

```

    loco:is_deleted "FALSE" ;
    loco:keywords "bla" ;
    loco:last_modified "20-Jun-09" ;
    loco:order "1" ;
        loco:name "Answer 1" ;
        loco:precedes loco:p1 ;
    loco:status "revised" ;
    loco:version "1.0" .

loco:ans2
    a      loco:Answer ;
    loco:isCreatedBy loco:ami ;
    loco:date_created "18-Jun-09" ;
    loco:description "bla bla bla" ;
        loco:follows loco:p3 ;
    loco:hasPart loco:t4 ;
    loco:is_deleted "FALSE" ;
    loco:keywords "bla" ;
    loco:last_modified "20-Jun-09" ;
    loco:order "1" ;
        loco:name "Answer 2" ;
    loco:status "revised" ;
    loco:version "1.1" .

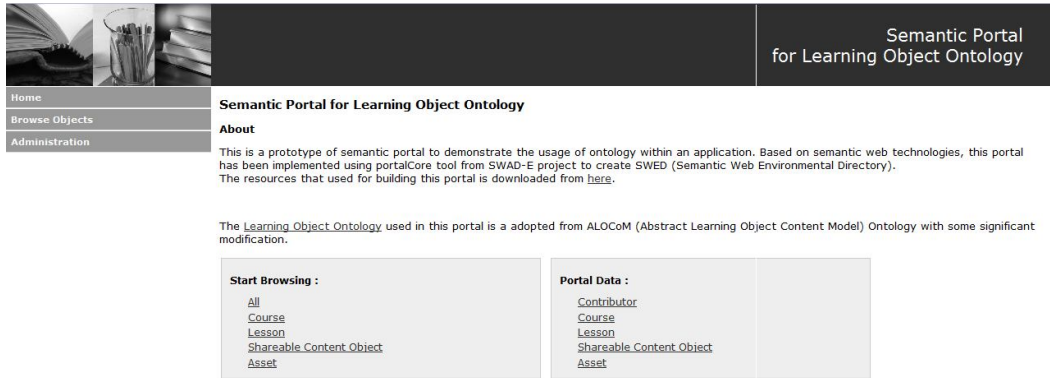
loco:ref1
    a      loco:Reference ;
    loco:isCreatedBy loco:heri ;
    loco:date_created "18-Jun-09" ;
    loco:description "bla bla bla" ;
    loco:hasPart loco:t11 ;
    loco:is_deleted "FALSE" ;
    loco:keywords "bla" ;
    loco:last_modified "20-Jun-09" ;
        loco:name "Reference 1" ;
    loco:order "3" ;
    loco:status "draft" ;
    loco:version "0.1" .

loco:qil
    a      loco:QuestionItem ;
    loco:isCreatedBy loco:heri ;
    loco:date_created "18-Jun-09" ;
        loco:hasCandidateAnswer loco:ans1, loco:ans2 ;
    loco:description "bla bla bla" ;
    loco:hasPart loco:t3 ;
    loco:is_deleted "FALSE" ;
    loco:keywords "bla" ;
    loco:last_modified "20-Jun-09" ;
        loco:name "Question Item 1" ;
    loco:order "3" ;
    loco:status "draft" ;
    loco:version "0.1" .

```

LAMPIRAN D Halaman *Semantic Portal*

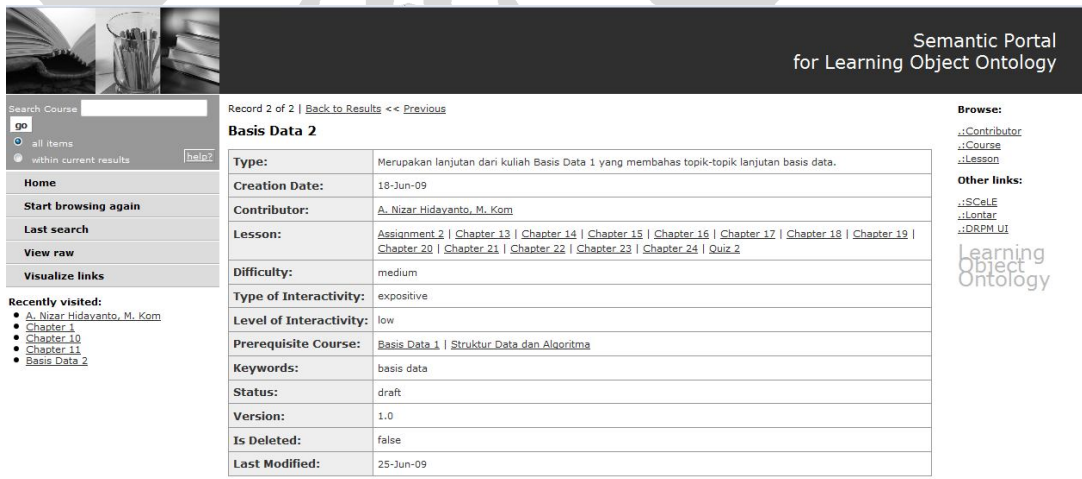
Berikut adalah beberapa halaman *portal* yang menampilkan contoh *resources page* untuk masing-masing objek *Course*, *Lesson*, *Shareable Content Object*, *Asset*, dan *Contributor*.



The screenshot shows the homepage of the Semantic Portal for Learning Object Ontology. It features a navigation menu on the left with links for Home, Browse Objects, and Administration. The main content area includes a title, an 'About' section explaining the portal's purpose and implementation, and two columns for browsing and portal data. The 'Start Browsing' column lists categories like All, Course, Lesson, Shareable Content Object, and Asset. The 'Portal Data' column lists Contributor, Course, Lesson, Shareable Content Object, and Asset.



Lampiran D.1 Halaman Utama



The screenshot shows the course page for 'Basis Data 2'. It includes a search bar, navigation links, and a detailed metadata table for the course. The table lists various attributes such as Type, Creation Date, Contributor, Lesson, Difficulty, Type of Interactivity, Level of Interactivity, Prerequisite Course, Keywords, Status, Version, Is Deleted, and Last Modified. A sidebar on the right provides additional links and a 'Learning Object Ontology' logo.

Basis Data 2	
Type:	Merupakan lanjutan dari kuliah Basis Data 1 yang membahas topik-topik lanjutan basis data.
Creation Date:	18-Jun-09
Contributor:	A. Nizar Hidayanto, M. Kom
Lesson:	Assignment 2 Chapter 13 Chapter 14 Chapter 15 Chapter 16 Chapter 17 Chapter 18 Chapter 19 Chapter 20 Chapter 21 Chapter 22 Chapter 23 Chapter 24 Quiz 2
Difficulty:	medium
Type of Interactivity:	expositive
Level of Interactivity:	low
Prerequisite Course:	Basis Data 1 Struktur Data dan Algoritma
Keywords:	basis data
Status:	draft
Version:	1.0
Is Deleted:	false
Last Modified:	25-Jun-09



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Lampiran D.2 Halaman *Course*

Semantic Portal
for Learning Object Ontology

Search Lesson

all items
 within current results

Home

Start browsing again

Last search

View raw

Visualize links

Recently visited:

- [Basis Data 1](#)
- [A. Nizar Hidavanto, M. Kom](#)
- [Chapter 1](#)
- [Chapter 10](#)
- [Chapter 11](#)

Record 1 of 24 | [Back to Results](#) << | [Next](#) >>

Chapter 1
Database and Database Users

Description:	Defines the basic terms used in database environment, introduce the database actors, and also explain about characteristics and advantages of databases
Course:	Basis Data 1
Part:	Basic Concepts
Creation Date:	12-Jun-09
Creation Date:	12-Jun-09
Contributor:	Siti Aminah, M.Kom
Difficulty:	easy
Type of Interactivity:	expositive
Level of Interactivity:	low
Keywords:	advantages characteristics definition user
Status:	draft
Last Modified:	14-Jun-09
Next Chapters:	Chapter 10 Chapter 11 Chapter 2 Chapter 24 Chapter 3 Chapter 4 Chapter 5 Chapter 6
Content:	<ul style="list-style-type: none"> • Advantage • Definition

Browse:

[:Contributor](#)

[:Course](#)

[:Lesson](#)

Other links:

[:SCeLE](#)

[:Lenter](#)

[:DRPM UI](#)

Learning
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Ontology

Lampiran D.3 Halaman *Lesson*

Semantic Portal
for Learning Object Ontology

Search Shareable Content Object

all items
 within current results

Home

Start browsing again

Last search

View raw

Visualize links

Recently visited:

- [Chapter 10](#)
- [Chapter 11](#)
- [Basis Data 2](#)
- [Advantage](#)
- [Definition](#)

Record 2 of 3 | [Back to Results](#) << [Previous](#) | [Next](#) >>

Definition

Description:	bla bla bla
Lesson:	Assignment 2 Chapter 1 Chapter 13 Chapter 20 Chapter 3
Creation Date:	18-Jun-09
Contributor:	Hen Kurniawan, M. Kom
Keywords:	definition
Status:	draft
Version:	0.1
Last Modified:	20-Jun-09
Include:	Text 9

Browse:

[:Contributor](#)

[:Course](#)

[:Lesson](#)

Other links:

[:SCeLE](#)

[:Lenter](#)

[:DRPM UI](#)

Learning
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Lampiran D.4 Halaman *Shareable Content Object*

Semantic Portal
for Learning Object Ontology

Search Asset

all items
 within current results

Home

Start browsing again

Last search

View raw

Visualize links

Recently visited:

- [Image 1](#)
- [Text 1](#)
- [Text 10](#)
- [Text 11](#)
- [Text 12](#)

Record 3 of 17 | [Back to Results](#) << [Previous](#) | [Next](#) >>

Text 11

Content of:	Reference 1
Creation Date:	20-Jun-09
Contributor:	A. Nizar Hidavanto, M. Kom
Keywords:	model
Previous Assets:	Text 10
Next Assets:	Text 12
Content:	Agrawal, R. and Gehani, N. [1989] ODE: The Language and Data Model, in SIGMOD [1989].

Browse:

[:Contributor](#)

[:Course](#)

[:Lesson](#)

Other links:

[:SCeLE](#)

[:Lenter](#)


[:DRPM UI](#)

Learning
Object
Ontology



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Lampiran D.5 Halaman *Asset*



Semantic Portal
for Learning Object Ontology

Search Course

all items
 within current results

Home

Start browsing again


Last search

View raw

Visualize links

Recently visited:

- Basis Data 1
- A. Nizar Hidayanto, M. Kom



A. Nizar Hidayanto, M. Kom
teacher

Email: nizar@cs.ui.ac.id
Phone: (021)786-3419
Address: Beji, Depok

Contribution

Course	Basis Data 1 Basis Data 2 Struktur Data dan Algoritma
Lesson	Chapter 3 Chapter 4 Chapter 5 Chapter 6 Chapter 7
Asset	Text 10 Text 11 Text 8


Browse:

- [Contributor](#)
- [Course](#)
- [Lesson](#)

Other links:

- [SCeLE](#)
- [Lontar](#)
- [DRPM UI](#)

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Lampiran D.6 Halaman *Contributor*

