



Rapport de conception

Groupe B2
Mathis PONCET

Table of contents

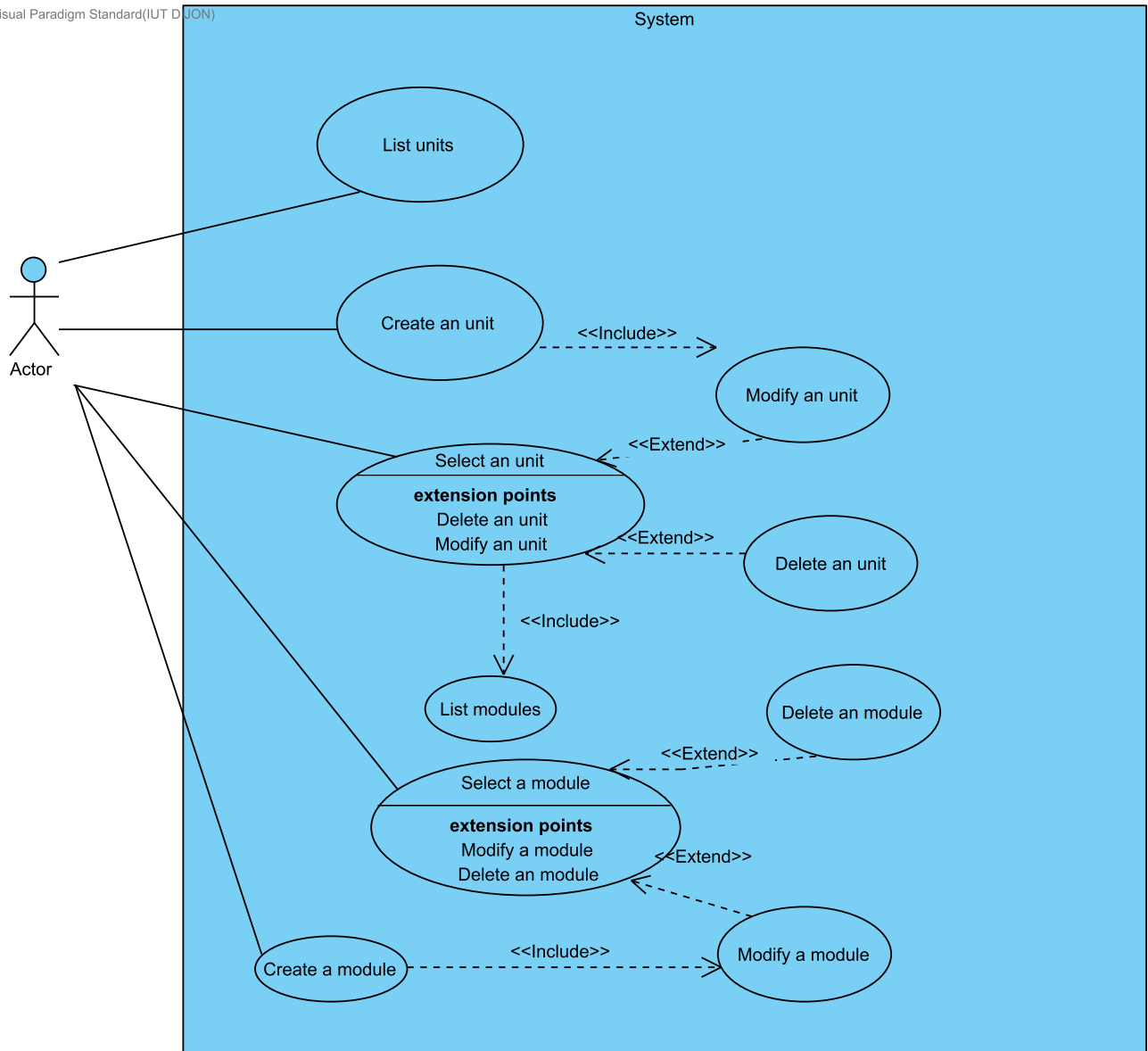
1 Features.....	4
2 Architecture.....	5
2.1 hmi.....	5
2.2 logic.....	5
2.3 storage.....	5
2.4 tests.....	5
3 logic Class Diagram.....	5
3.1 EducationnalElement.....	5
3.2 Exam.....	5
3.3 Module.....	6
3.4 NoteBook.....	6
3.5 Unit.....	6
4 EducationnalElement.....	6
4.1 Properties.....	6
4.2 Attributes Summary.....	6
4.3 Operations Summary.....	6
4.4 Attributes.....	6
4.4.1 Coef.....	6
4.4.2 Name.....	6
4.5 Operations.....	6
4.5.1 ToString.....	6
4.6 Relationships.....	7
5 Exam.....	7
5.1 Properties.....	7
5.2 Attributes Summary.....	7
5.3 Attributes.....	7
5.3.1 Coef.....	7
5.3.2 DateExam.....	7
5.3.3 IsAbsent.....	7
5.3.4 Score.....	8
5.3.5 Teacher.....	8
5.4 Relationships.....	8
6 Module.....	8
6.1 Properties.....	8
6.2 Relationships.....	8
7 NoteBook.....	8
7.1 Properties.....	8
7.2 Operations Summary.....	9

7.3 Operations.....	9
7.3.1 AddUnit.....	9
7.3.2 ListUnits.....	9
7.3.3 RemoveUnit.....	9
7.4 Relationships.....	9
8 Unit.....	9
8.1 Properties.....	9
8.2 Operations Summary.....	9
8.3 Operations.....	10
8.3.1 Add.....	10
8.3.2 ListModules.....	10
8.3.3 Remove.....	10
8.4 Relationships.....	10
9 hmi Class Diagram.....	10
9.1 EditElementWindow.....	10
9.2 EditUnitsWindow.....	10
9.3 EducationnalElement.....	11
9.4 MainWindow.....	11
9.5 NoteBook.....	11
10 EditElementWindow.....	11
10.1 Properties.....	11
10.2 Operations Summary.....	11
10.3 Operations.....	11
10.3.1 EditElementWindow.....	11
10.3.2 Validate.....	11
10.4 Relationships.....	11
11 EditUnitsWindow.....	11
11.1 Properties.....	11
11.2 Operations Summary.....	12
11.3 Operations.....	12
11.3.1 CreateModule.....	12
11.3.2 CreateUnit.....	12
11.3.3 DrawModules.....	12
11.3.4 DrawUnits.....	12
11.3.5 EditModule.....	12
11.3.6 EditUnit.....	12
11.3.7 EditUnitsWindow.....	13
11.3.8 RemoveModule.....	13
11.3.9 RemoveUnit.....	13
11.3.10 SelectUnit.....	13
11.4 Relationships.....	13

11.5 Sub Diagrams.....	13
11.5.1 CreateModule Sequence Diagram.....	13
11.5.2 CreateUnit Sequence Diagram.....	14
11.5.3 EditUnit Sequence Diagram.....	14
11.5.4 RemoveUnit Sequence Diagram.....	15
11.5.5 SelectUnit Sequence Diagram.....	15
12 EducationnalElement.....	15
12.1 Properties.....	15
12.2 Relationships.....	15
13 MainWindow.....	16
13.1 Properties.....	16
13.2 Operations Summary.....	16
13.3 Operations.....	16
13.3.1 GoEditUnits.....	16
13.4 Relationships.....	16
14 NoteBook.....	16
14.1 Properties.....	16
14.2 Relationships.....	16

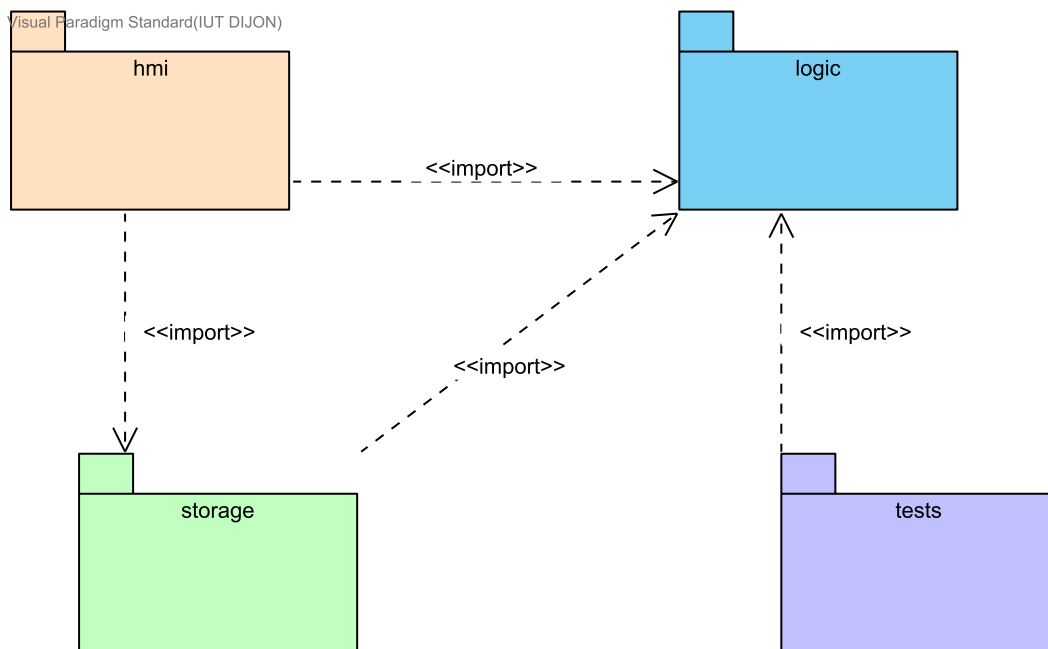
1. Features

Visual Paradigm Standard(IUT D UON)



Features of notebook

2. Architecture



Describes the global architecture of the application

2.1. hmi

the presentation layer of the application

2.2. logic

the core layer (business logic) of the app

2.3. storage

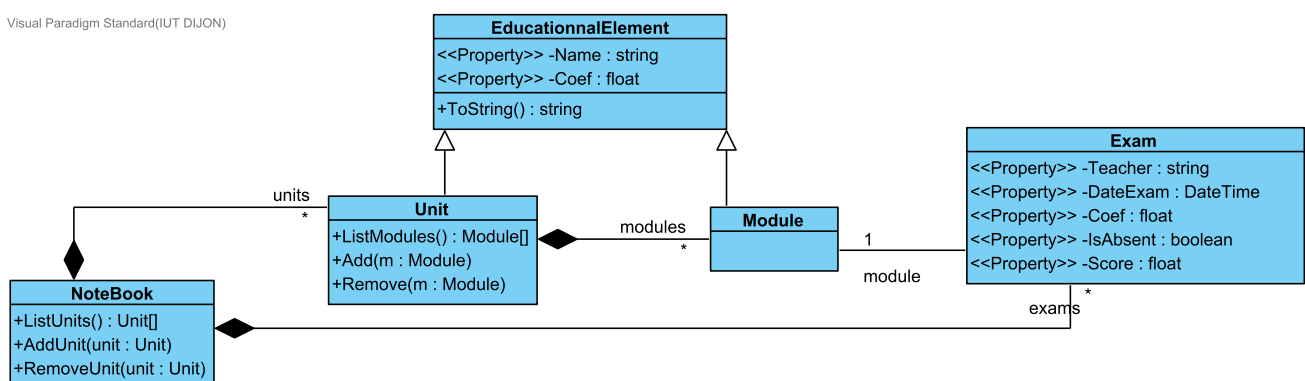
the storage layer

2.4. tests

Units tests

3. logic Class Diagram

Visual Paradigm Standard(IUT DIJON)



Describes the logic layer

3.1. EducationalElement

3.2. Exam

An exam is given by a teacher, at a certain date, with a coefficient; the student may be absent. If not, he must have a note.

3.3. Module

A module is a root pedagogical element

3.4. NoteBook

Is a facade of the logic layer

3.5. Unit



An unit contains modules and is an pedagogical element

4. EducationnalElement


4.1. Properties

Visibility	public
Abstract	false
Leaf	false
Root	false
Active	false

4.2. Attributes Summary

Name	Description
 Coef	The coefficient of the element
 Name	the name of the element

4.3. Operations Summary

Name	Description
 ToString	Return string of element in form of "Note: coef"

4.4. Attributes

4.4.1. Coef

The coefficient of the element

Visibility	private
Type	float

4.4.2. Name

the name of the element

Visibility	private
Type	string





4.5. Operations

4.5.1. ToString

Return string of element in form of "Note: coef"

Visibility	public
Return Type	string

4.6. Relationships

Relationship	From	To
←unnamed	 EducationnalElement	 Unit
←unnamed	 EducationnalElement	 Module






5. Exam

An exam is given by a teacher, at a certain date, with a coefficient; the student may be absent. If not, he must have a note.

5.1. Properties

Visibility	public
Abstract	false
Leaf	false
Root	false
Active	false

5.2. Attributes Summary

Name	Description
 Coef	
 DateExam	
 IsAbsent	
 Score	
 Teacher	

5.3. Attributes

5.3.1. Coef

Visibility	private
Type	float

5.3.2. DateExam

Visibility	private
Type	DateTime

5.3.3. IsAbsent

Visibility	private
-------------------	---------

Type boolean

5.3.4. Score

Visibility private







Type float

5.3.5. Teacher

Visibility private

Type string

5.4. Relationships

Relationship	From	To
 unnamed	 Exam	 Module
 unnamed	 NoteBook	 Exam

6. Module

A module is a root pedagogical element

6.1. Properties

Visibility public










Abstract false

Leaf false

Root false

Active false

6.2. Relationships

Relationship	From	To
 unnamed	 EducationnalElement	 Module
 unnamed	 Unit	 Module
 unnamed	 Exam	 Module

7. NoteBook

Is a facade of the logic layer

7.1. Properties

Visibility public




Abstract false

Leaf false

Root false

Active false

7.2. Operations Summary

Name	Description
 AddUnit	Add units in list of units which is contains in notebook
 ListUnits	List of units
 RemoveUnit	Remove units in list of units

7.3. Operations

7.3.1. AddUnit

Add units in list of units which is contains in notebook

Visibility	public
------------	--------

7.3.2. ListUnits

List of units

Visibility	public
------------	--------





Return Type [Unit\[\]](#)

7.3.3. RemoveUnit

Remove units in list of units

Visibility	public
------------	--------

7.4. Relationships

Relationship	From	To
— unnamed	 NoteBook	 Unit
— unnamed	 NoteBook	 Exam




8. Unit

An unit contains modules and is an pedagogical element

8.1. Properties

Visibility	public
Abstract	false
Leaf	false
Root	false
Active	false

8.2. Operations Summary

Name	Description
 Add	Add module in list of modules which unit contains
 ListModules	List of modules which unit contains
 Remove	Remove module in modules contains in specific unit

8.3. Operations

8.3.1. Add

Add module in list of modules which unit contains

Visibility public

8.3.2. ListModules

List of modules which unit contains

Visibility public







Return Type [Module\[\]](#)

8.3.3. Remove

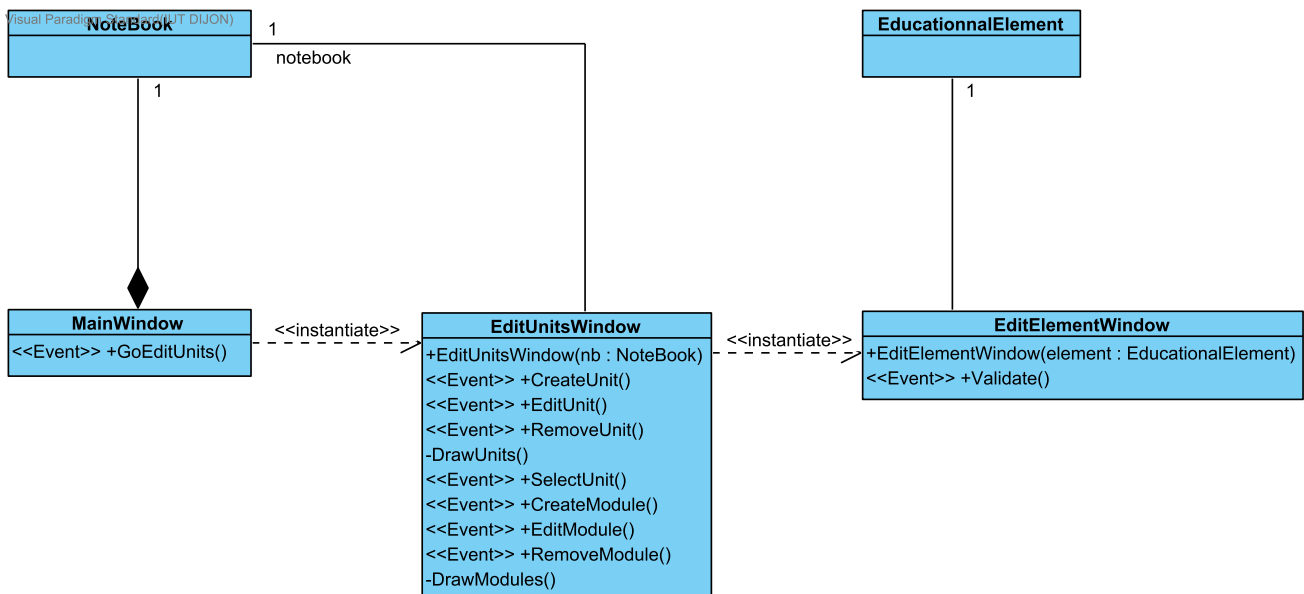
Remove module in modules contains in specific unit

Visibility public

8.4. Relationships

Relationship	From	To
—unnamed	 Unit	 Module
←unnamed	 EducationnalElement	 Unit
—unnamed	 NoteBook	 Unit

9. hmi Class Diagram



Describe the hmi interaction

9.1. EditElementWindow

Window which allow to modify pedagogical element

9.2. EditUnitsWindow

Window which allow to see units and their modules associated

9.3. EducationnalElement

9.4. MainWindow

Main window of application which allow to access to differents windows

9.5. NoteBook



10. EditElementWindow

Window which allow to modify pedagogical element

10.1. Properties

Visibility	public
Abstract	false
Leaf	false
Root	false
Active	false

10.2. Operations Summary

Name	Description
 EditElementWindow	Constructor initialization
 Validate	Save information of element which are setted in different components

10.3. Operations

10.3.1. EditElementWindow

Constructor initialization





Visibility	public
------------	--------

10.3.2. Validate

Save information of element which are setted in different components

Visibility	public
------------	--------

10.4. Relationships

Relationship	From	To
—unnamed	 EditElementWindow	 EducationnalElement
--->unnamed	 EditUnitsWindow	 EditElementWindow

11. EditUnitsWindow











Window which allow to see units and their modules associated

11.1. Properties

Visibility	public
------------	--------

Abstract	false
Leaf	false
Root	false
Active	false

11.2. Operations Summary

Name	Description
 CreateModule	Open new element window to create a new module associated of unit
 CreateUnit	Allow to modify list element. When the modif is finish, list of units is refreshed
 DrawModules	Update component of hmi which contains list of modules
 DrawUnits	Update component which contains units
 EditModule	Edit module of unit and open new Element window with property of specific module which is selected
 EditUnit	Event called when user double-clc on unit
 EditUnitsWindow	Constructor initialization
 RemoveModule	Remove module from list of modules which unit selected contains
 RemoveUnit	Remove unit from list of units that application contains
 SelectUnit	Select a unit in list of units of hmi

11.3. Operations

11.3.1. CreateModule

Open new element window to create a new module associated of unit

Visibility	public
-------------------	--------

11.3.2. CreateUnit

Allow to modify list element. When the modif is finish, list of units is refreshed

Visibility	public
-------------------	--------

11.3.3. DrawModules

Update component of hmi which contains list of modules

Visibility	private
-------------------	---------

11.3.4. DrawUnits

Update component which contains units

Visibility	private
-------------------	---------

11.3.5. EditModule

Edit module of unit and open new Element window with property of specific module which is selected

Visibility	public
-------------------	--------

11.3.6. EditUnit

Event called when user double-clc on unit

Visibility public

11.3.7. EditUnitsWindow

Constructor initialization

Visibility public

11.3.8. RemoveModule

Remove module from list of modules which unit selected contains

Visibility public

11.3.9. RemoveUnit

Remove unit from list of units that application contains







Visibility public

11.3.10. SelectUnit

Select a unit in list of units of hmi

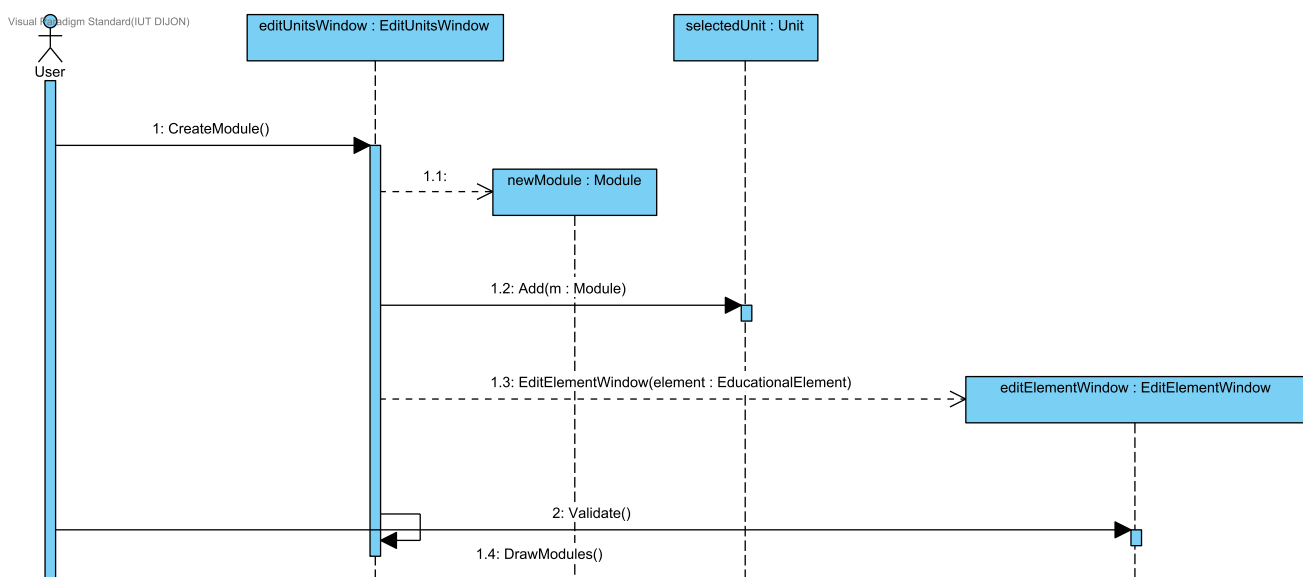
Visibility public

11.4. Relationships

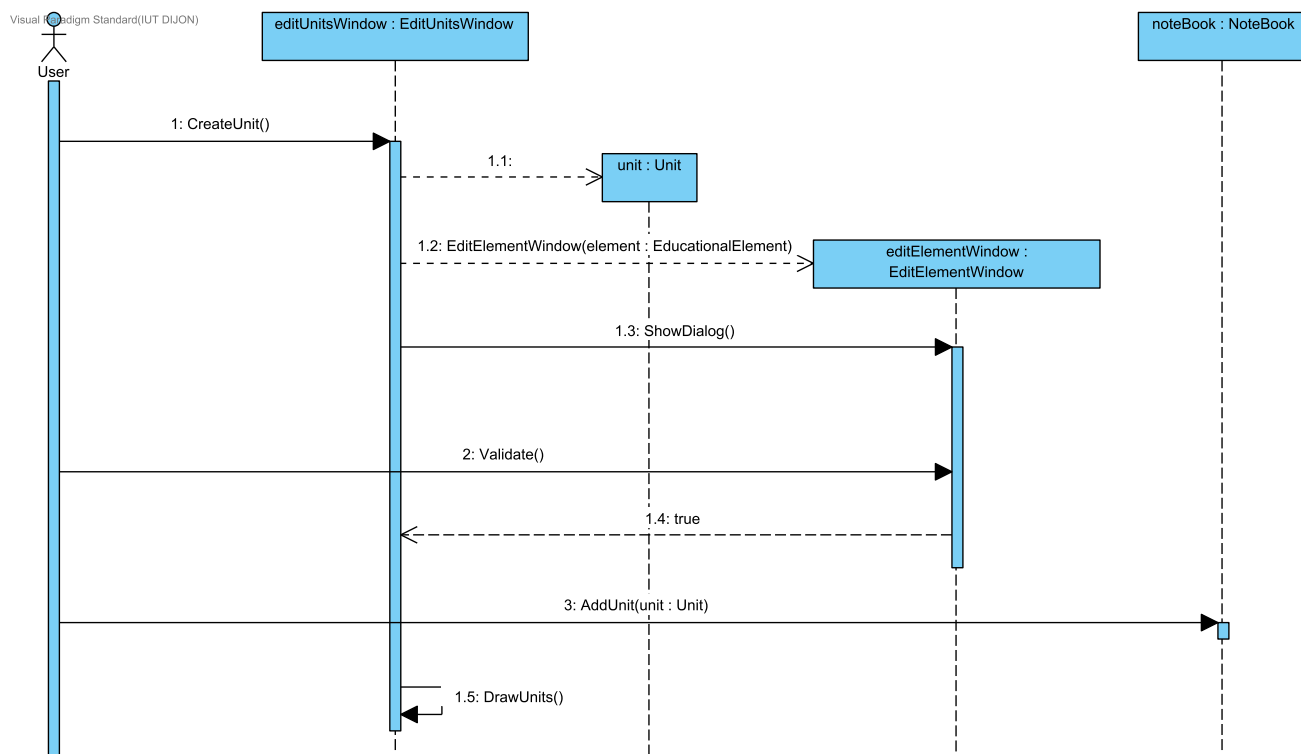
Relationship	From	To
--->unnamed	 EditUnitsWindow	 EditElementWindow
--->unnamed	 MainWindow	 EditUnitsWindow
—unnamed	 NoteBook	 EditUnitsWindow

11.5. Sub Diagrams

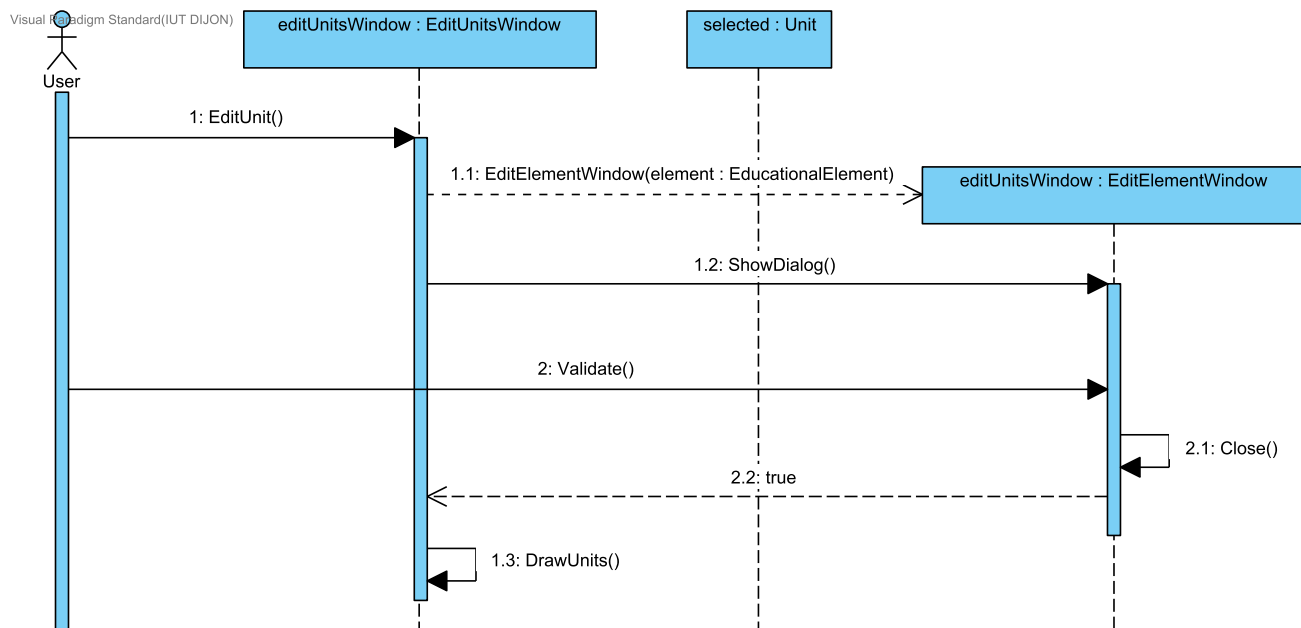
11.5.1. CreateModule Sequence Diagram



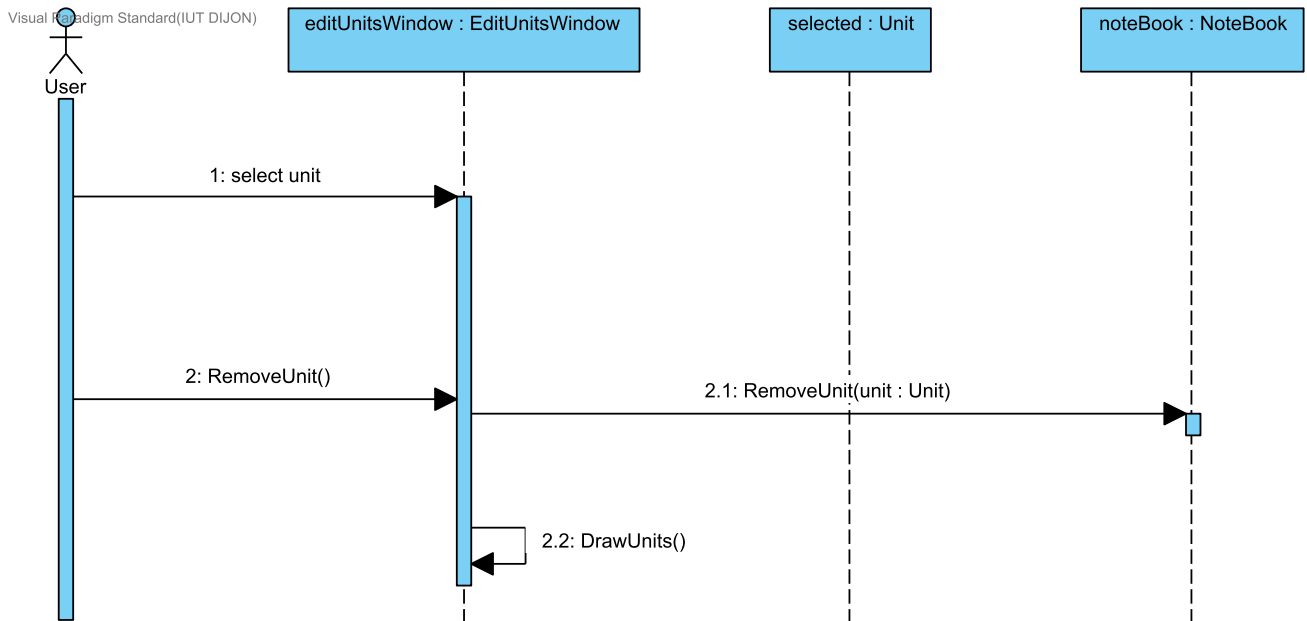
11.5.2. CreateUnit Sequence Diagram



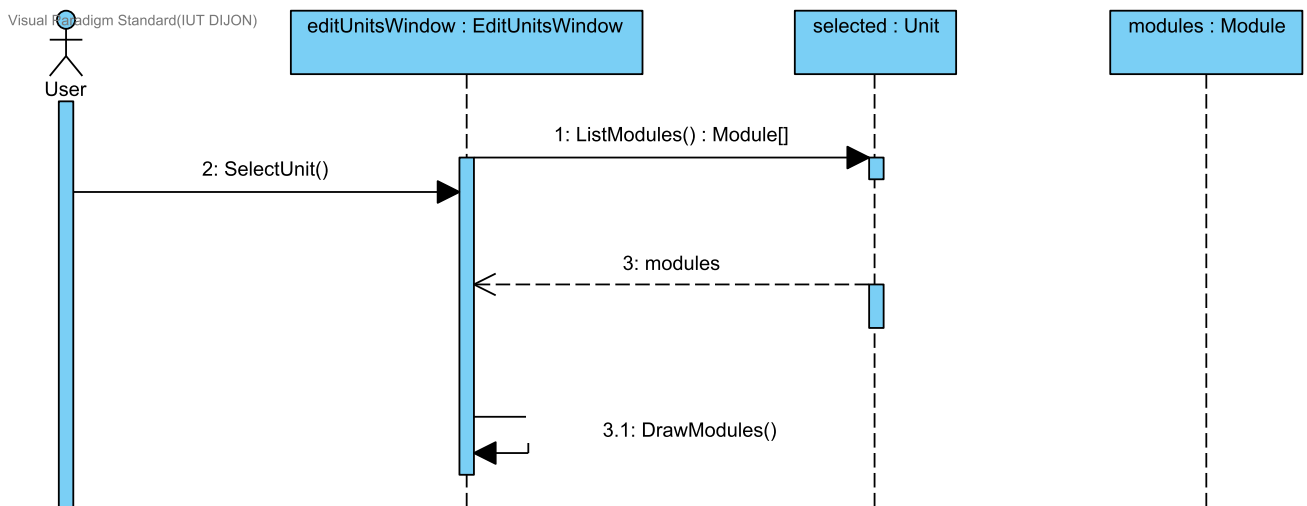
11.5.3. EditUnit Sequence Diagram



11.5.4. RemoveUnit Sequence Diagram



11.5.5. SelectUnit Sequence Diagram



12. EducationnalElement

12.1. Properties

Visibility	public
Abstract	false
Leaf	false
Root	false
Active	false

12.2. Relationships

Relationship	From	To
—unnamed	 EditElementWindow	 EducationnalElement


13. MainWindow

Main window of application which allow to access to differents windows

13.1. Properties

Visibility	public
Abstract	false
Leaf	false
Root	false
Active	false

13.2. Operations Summary

Name	Description
 GoEditUnits	Open second window to see different units and modules which associated to these, add, remove

13.3. Operations

13.3.1. GoEditUnits

Open second window to see different units and modules which associated to these, add, remove

Visibility	public
------------	--------

13.4. Relationships





Relationship	From	To
--->unnamed	 MainWindow	 EditUnitsWindow
—unnamed	 MainWindow	 NoteBook

14. NoteBook

14.1. Properties

Visibility	public
Abstract	false
Leaf	false
Root	false
Active	false

14.2. Relationships

Relationship	From	To
unnamed	 NoteBook	 EditUnitsWindow
unnamed	 MainWindow	 NoteBook