Affiliation line 1
Affiliation line 2
Author line 1
Author line 2

MyProjectName : Your Title
Messir Analysis Document
- v 0.0 -

(*Report type: Specification*)

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Chapter 2

General Description

2.1 Domain Stakeholders

2.2 System's Actors

The objective of this section is not to provide the full requirement elicitation document in this section but to reuse a part of this document to provide a informal introduction to the Messir specification of the system under development. The use case model is made of a use case diagrams modelling abstractly and informally the actors and their use cases together with a set of use cases descriptions. In addition, those diagrams and description tables are adapted to the Messir specification since actor and messages names together with parameters are partly adapted to be consistent with the specification identifiers (see [1] for more details).

2.3 Use Cases Model

This section contains the use cases elicited during the requirements elicitation phase. The use cases are textually described as suggested by the Messir method and inspired by the standard Cokburn template [2].

2.3.1 Use Cases

2.3.1.1 usergoal-ugSecurelyUseSystem

the actAdministrators goal is to follow an identification procedure to be allowed to add or delete the necessary crisis coordinators that will be granted the responsibility to handle alerts and crisis.

Use-Case Description	
Name	ugSecurelyUseSystem
Scope	system
Level	usergoal
Primary actor(s)	
1	`actAuthenticated[active]`
2	`actAuthenticated[active]`
3	`actAuthenticated[active]`
Goal(s) description	
the actAdministrators goal is to follow an identification procedure to be allowed to add or delete the necessary crisis coordinators that will be granted the responsibility to handle alerts and crisis.	
Reuse	
1	`oeLogIn [1..1]`
2	`oeLogOut [1..1]`
Protocol condition(s)	
1	the iCrash system has been deployed
Pre-condition(s)	
1	none
Main post-condition(s)	
1	The actAuthenticated is known by the system not to be logged.
Additional Information	
none	

Figure 2.1 the actAdministrators goal is to follow an identification procedure to be allowed to add or delete the necessary crisis coordinators that will be granted the responsibility to handle alerts and crisis.

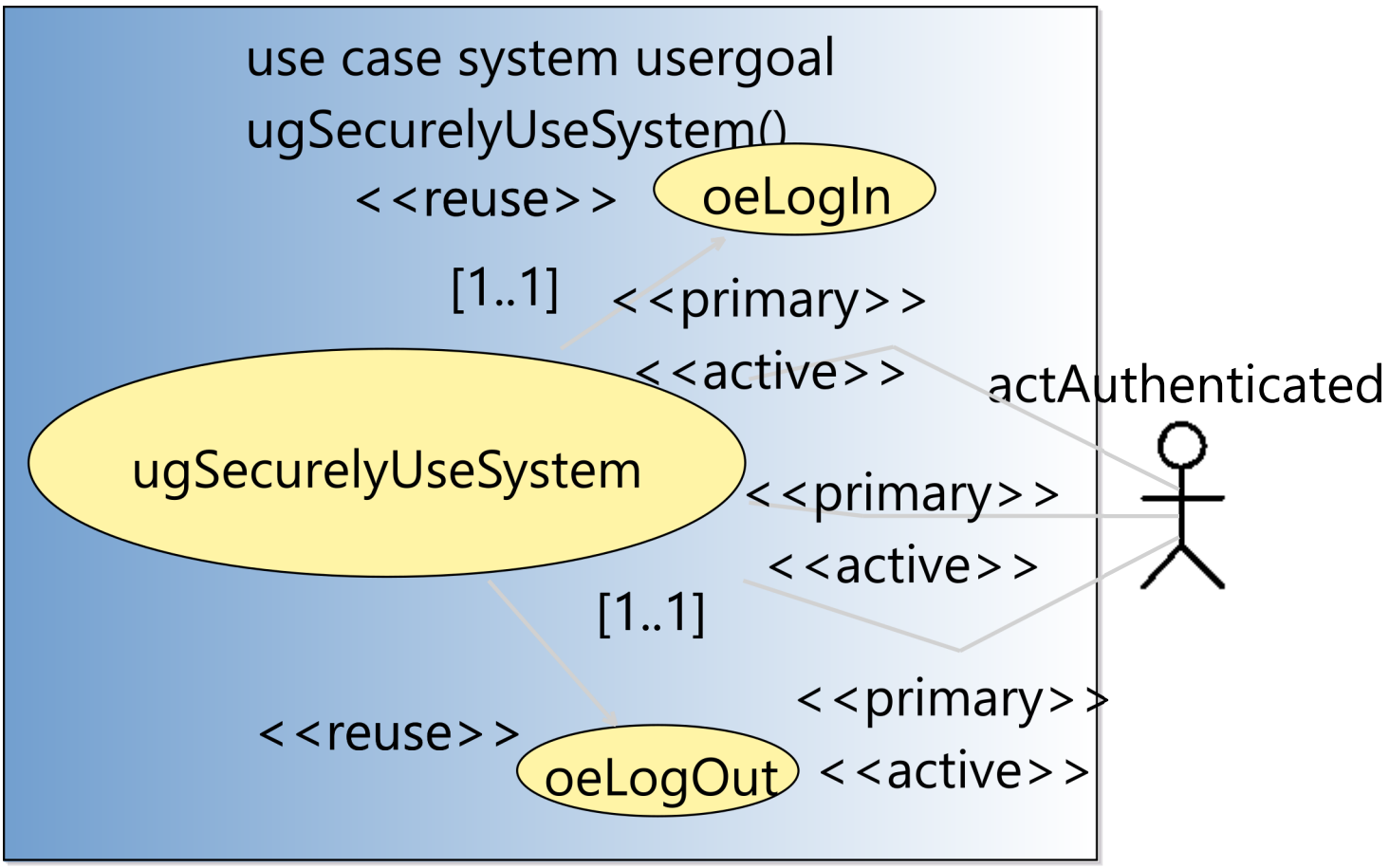

Figure 2.1: lu.uni.lassy.excalibur.myproject Use Case Diagram: uc-ugSecurelyUseSystem

2.3.1.2 subfunction-oeSetCrisisHandler

Goal is to declare himself as been the handler of a crisis having the specified id

Use-Case Description	
Name	oeSetCrisisHandler
Scope	system
Level	subfunction
Parameters	
AdtCrisisID: dtCrisisID 1	
Primary actor(s)	
1	`actCoordinator[active]`
Secondary actor(s)	
1	`actCoordinator[passive]`
Goal(s) description	
Goal is to declare himself as been the handler of a crisis having the specified id	
Protocol condition(s)	
1	none
Pre-condition(s)	
1	Inquiry comes from logged-in coordinator.
Main post-condition(s)	
1	Declared as handler of crisis
Additional Information	
none	

Figure 2.2 goal is to declare himself as been the handler of a crisis having the specified id

2.3.1.3 subfunction-oeSollicitateCrisisHandling

the actActivators goal is to decrease the number of unhandled crisis

Use-Case Description	
Name	oeSollicitateCrisisHandling
Scope	system
Level	subfunction
Primary actor(s)	
1	`actActivator[proactive]`
Secondary actor(s)	
1	`actCoordinator[passive, multiple]`
2	`actAdministrator[passive]`
Goal(s) description	
the actActivators goal is to decrease the number of unhandled crisis	
Protocol condition(s)	
1	1. the iCrash system has been deployed. 2. there exist some crisis still pending and for which no solicitation has been sent to the administrator and the coordinators for more than a predefined maximum delay.

continues in next page . . .

. . . Use-Case Description table continuation

Pre-condition(s)	
1	none
Main post-condition(s)	
1	1.a simple text message ieMessage(There are alerts not treated since more than the defined delay. Please REACT !) is sent to the system administrator and to all the coordinators of the environment for each crisis that is known to be not handled and for which no solicitation has been sent to the administrator and the coordinators for more than a predefined maximum delay.) 2 the reminder period for the concerned crisis is initialized
Additional Information	
none	

Figure 2.3 the actActivators goal is to decrease the number of unhandled crisis

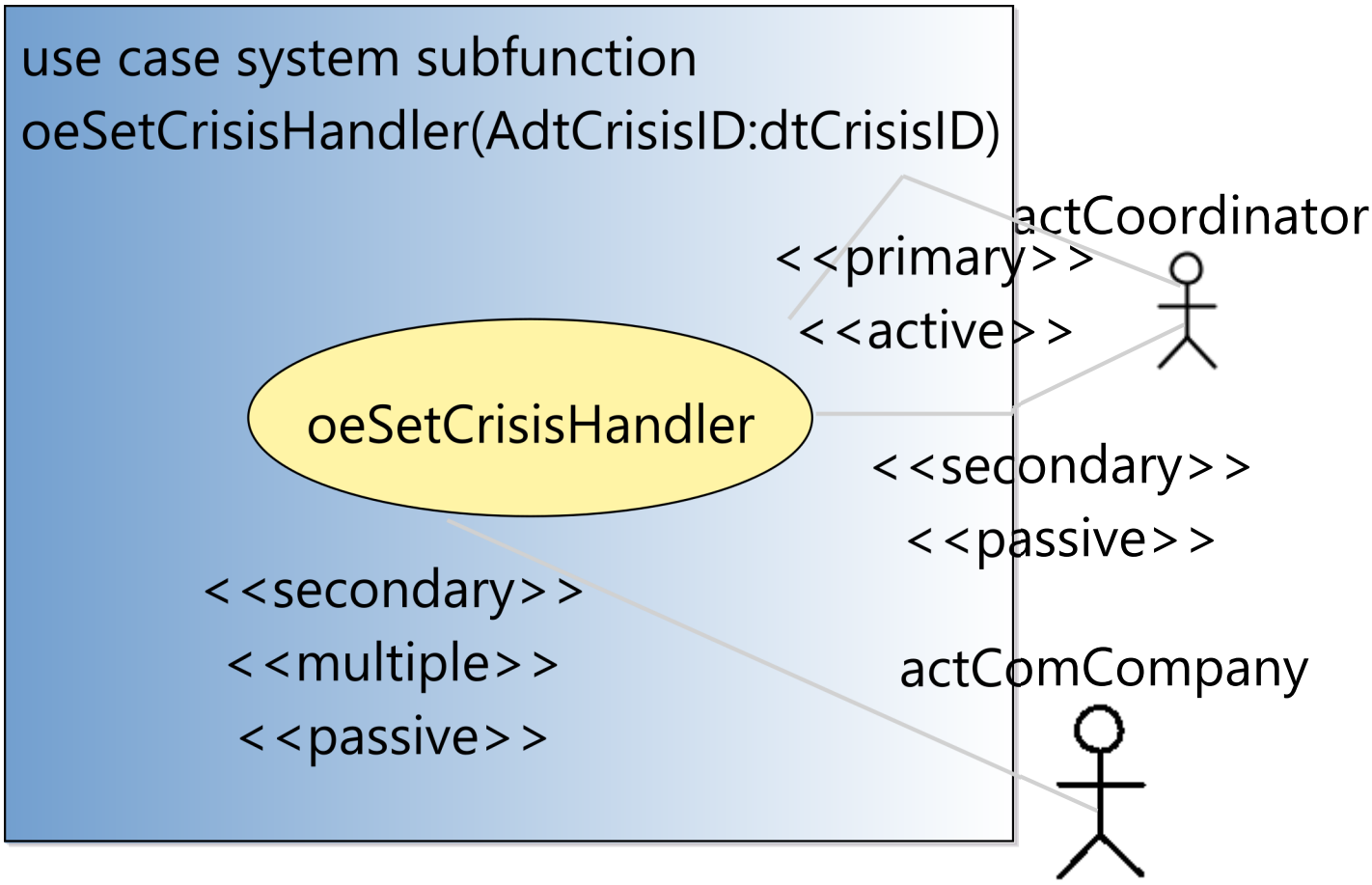
use case system subfunction
oeSetCrisisHandler(AdtCrisisID:dtCrisisID)
actCoordinator
<<primary>>
<<active>>
oeSetCrisisHandler
<<secondary>>
<<passive>>
<<secondary>>
<<multiple>>
<<passive>>
actComCompany

Figure 2.2:

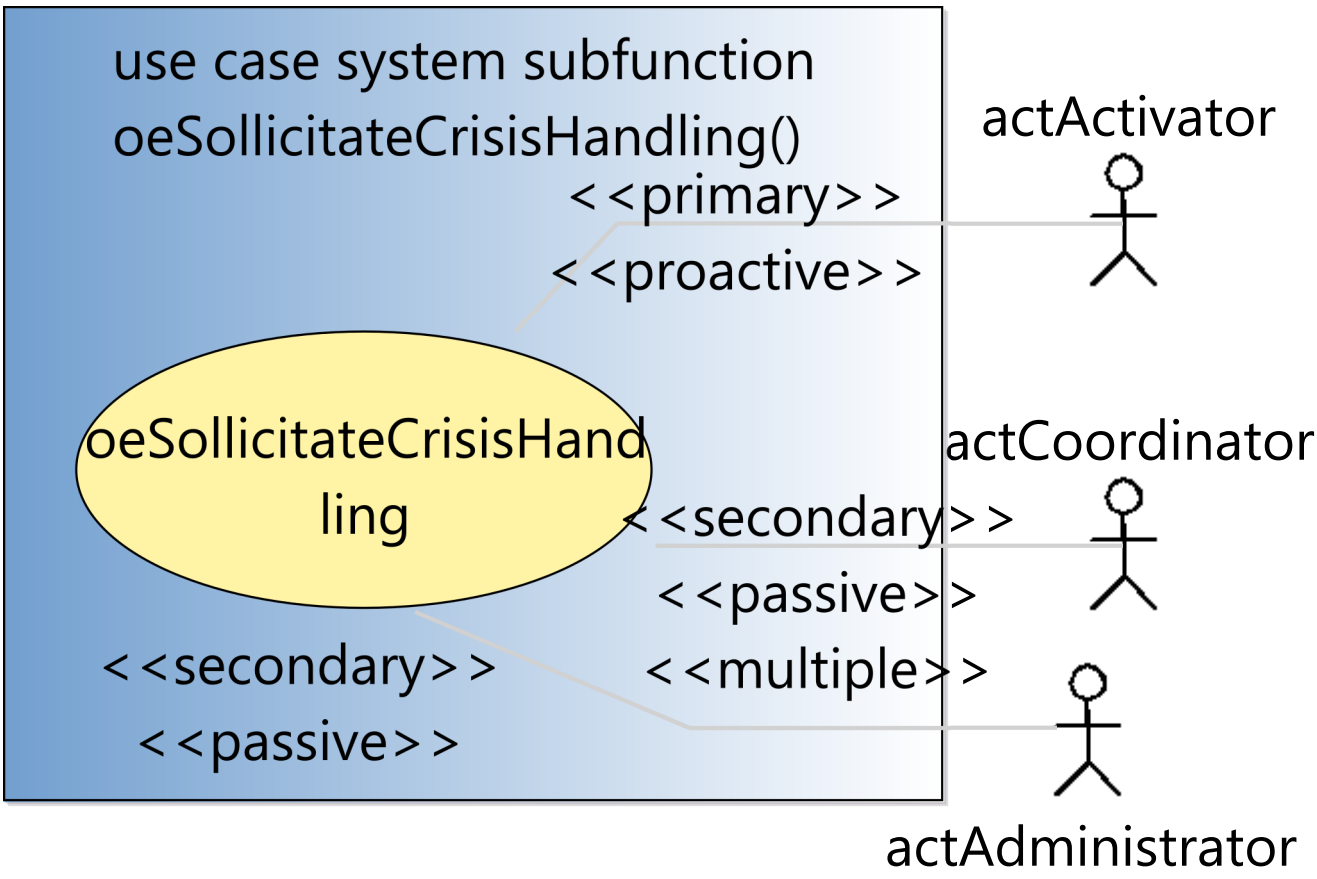
use case system subfunction
oeSollicitateCrisisHandling()
<<primary>>
<<proactive>>
oeSollicitateCrisisHand
ling
<<secondary>>
<<passive>>
<<secondary>>
<<passive>>
<<multiple>>
actActivator
actCoordinator
actAdministrator

Figure 2.3:

2.3.2 Use Case Instance(s)

There are no elements in this category in the system analysed.

Chapter 3

Environment Model

3.1 Environment model view(s)

There are no view(s) for the Messir environment model.

3.2 Actors and Interfaces Descriptions

There are no elements in this category in the system analysed.

Chapter 4

Concept Model

4.1 Concept Model view(s)

There are no view(s) for the Messir concept model.

4.2 Concept Model Types Descriptions

This section provides the textual descriptions of all the types defined in the concept model and that can be part of the graphical views provided.

4.2.1 Primary types - Class types descriptions

There are no elements in this category in the system analysed.

4.2.2 Primary types - Datatypes types descriptions

There are no elements in this category in the system analysed.

4.2.3 Primary types - Association types descriptions

There are no association types for the primary types.

4.2.4 Primary types - Aggregation types descriptions

There are no aggregation types for the primary types.

4.2.4.1 Primary types - Composition types descriptions

There are no composition types for the primary types.

4.2.5 Secondary types - Class types descriptions

There are no elements in this category in the system analysed.

4.2.6 Secondary types - Datatypes types descriptions

There are no elements in this category in the system analysed.

4.2.7 Secondary types - Association types descriptions

There are no association types for the secondary types.

4.2.8 Secondary types - Aggregation types descriptions

There are no aggregation types for the secondary types.

4.2.9 Secondary types - Composition types descriptions

There are no composition types for the secondary types.

Chapter 5

Operation Model

This section contains the operation schemes of each operation defined in either an actor, its output interface, in a primary or secondary type (class, datatype or enumeration types). The Messir OCL code listing is joined to the comment table.

5.1 Environment - Out Interface Operation Schemes

There are no elements in this category in the system analysed.

5.2 Environment - Actor Operation Schemes

There are no elements in this category in the system analysed.

5.3 Primary Types - Operation Schemes for Classes

There are no elements in this category in the system analysed.

5.4 Primary Types - Operation Schemes for Datatypes

There are no elements in this category in the system analysed.

5.5 Primary Types - Operation Schemes for Enumerations

There are no elements in this category in the system analysed.

5.6 Secondary Types - Operation Schemes for Classes

There are no elements in this category in the system analysed.

5.7 Secondary Types - Operation Schemes for Datatypes

There are no elements in this category in the system analysed.

5.8 Secondary Types - Operation Schemes for Enumerations

There are no elements in this category in the system analysed.

Chapter 6

Test Model(s)

There are no elements in this category in the system analysed.

Chapter 7

Additional Constraints

Appendix A

Undocumented Messir Specification Elements

A.1 Undocumented Use Cases

A.1.1 Undocumented User-Goal Level Use Cases

- lu.uni.lassy.excalibur.myproject.usecases.ugSecurelyUserSystem

A.1.2 Undocumented Subfunction Level Use Cases

- lu.uni.lassy.excalibur.myproject.usecases.oeLogIn
- lu.uni.lassy.excalibur.myproject.usecases.oeLogOut

A.2 Undocumented Use Case Instances

A.2.1 Undocumented Subfunction Level Use Case Instances

- usecases.ucioeSetCrisisHandler.ucioeSetCrisisHandler

A.3 Undocumented Actors

- lu.uni.lassy.excalibur.myproject.environment.actActivator
- lu.uni.lassy.excalibur.myproject.environment.actAdministrator
- lu.uni.lassy.excalibur.myproject.environment.actAuthenticated
- lu.uni.lassy.excalibur.myproject.environment.actComCompany
- lu.uni.lassy.excalibur.myproject.environment.actCoordinator

A.4 Undocumented Primary Types

A.4.1 Undocumented Primary Classe Types

- lu.uni.lassy.excalibur.myproject.concepts.primarytypes.classes.ctState

A.4.2 Undocumented Primary Datatype Types

- lu.uni.lassy.excalibur.myproject.concepts.primarytypes.datatypes.dtCrisisID

Appendix B

Messir Specification Files Listing

B.1 File ./src-gen/messir-spec/.views.msr

```
//
//DON'T TOUCH THIS FILE !!!
//
package uuida8771819043e49c1af2c15cd1d1e9b9f {
 Concept Model {}
}
```

Listing B.1: Messir Spec. file .views.msr.

B.2 File ./src-gen/messir-spec/environment/environment.msr

```
/*
* @author Nikita
* @date Fri Feb 10 14:29:46 MSK 2017
*/

package lu.uni.lassy.excalibur.myproject.environment {

import lu.uni.lassy.messir.libraries.calendar
import lu.uni.lassy.messir.libraries.math
import lu.uni.lassy.messir.libraries.primitives
import lu.uni.lassy.messir.libraries.string

Environment Model {

actor actComCompany role rnactComCompany cardinality[0 .. *] {
   input interface inactComCompany {
   }
   output interface outactComCompany {
   }
  }
 actor actCoordinator role rnactCoordinator cardinality[0 .. *] {
   input interface inactCoordinator {
   }
   output interface outactCoordinator {
   }
  }
 actor actActivator role rnactActivator cardinality[0 .. *] {
   input interface inactActivator {
   }
   output interface outactActivator {
   }
  }
 actor actAdministrator role rnactAdministrator cardinality[0 .. *] {
   input interface inactAdministrator {
   }
   output interface outactAdministrator {
```

```
37    }
38   }
39  actor actAuthenticated role rnactAuthenticated cardinality[0 .. *] {
40    input interface inactAuthenticated {
41    }
42    output interface outactAuthenticated {
43    }
44   }
45  }
46 }
```

Listing B.2: Messir Spec. file environment.msr.

B.3 File ./src-gen/messir-spec/concepts/primarytypes-associations/primarytypes-associations.msr

```
1 /*
2 * @author Nikita
3 * @date Fri Feb 10 14:29:46 MSK 2017
4 */
5
6 package lu.uni.lassy.excalibur.myproject.concepts.primarytypes.associations {
7
8 import lu.uni.lassy.messir.libraries.calendar
9 import lu.uni.lassy.messir.libraries.math
10 import lu.uni.lassy.messir.libraries.primitives
11 import lu.uni.lassy.messir.libraries.string
12
13 Concept Model {
14
15  Primary Types {
16
17  }
18 }
19 }
```

Listing B.3: Messir Spec. file primarytypes-associations.msr.

B.4 File ./src-gen/messir-spec/concepts/primarytypes-classes/primarytypes-classes.msr

```
1 /*
2 * @author Nikita
3 * @date Fri Feb 10 14:29:46 MSK 2017
4 */
5
6 package lu.uni.lassy.excalibur.myproject.concepts.primarytypes.classes {
7
8 import lu.uni.lassy.messir.libraries.calendar
9 import lu.uni.lassy.messir.libraries.math
10 import lu.uni.lassy.messir.libraries.primitives
11 import lu.uni.lassy.messir.libraries.string
12
13 import lu.uni.lassy.messir.libraries.primitives
14
15 Concept Model {
16
17  Primary Types {
18
19   state class ctState {
20    attribute vpStarted: ptBoolean
21
22    operation init(AvpStarted:ptBoolean): ptBoolean
23   }
24
25  }
```

```
26 }
27 }
```

Listing B.4: Messir Spec. file primarytypes-classes.msr.

B.5 File ./src-gen/messir-spec/concepts/primarytypes-datatypes/primarytypes-datatypes.msr

```
1 /*
2 * @author Nikita
3 * @date Fri Feb 10 14:29:46 MSK 2017
4 */
5
6 package lu.uni.lassy.excalibur.myproject.concepts.primarytypes.datatypes {
7
8 import lu.uni.lassy.messir.libraries.calendar
9 import lu.uni.lassy.messir.libraries.math
10 import lu.uni.lassy.messir.libraries.primitives
11 import lu.uni.lassy.messir.libraries.string
12
13 Concept Model {
14
15  Primary Types {
16
17  datatype dtCrisisID {
18   //attribute dtCrisisID: ptInteger
19    }
20   }
21 }
22 }
```

Listing B.5: Messir Spec. file primarytypes-datatypes.msr.

B.6 File ./src-gen/messir-spec/concepts/secondarytypes-associations/secondarytypes-associations.msr

```
1 /*
2 * @author Nikita
3 * @date Fri Feb 10 14:29:46 MSK 2017
4 */
5
6 package lu.uni.lassy.excalibur.myproject.concepts.secondarytypes.associations {
7
8 import lu.uni.lassy.messir.libraries.calendar
9 import lu.uni.lassy.messir.libraries.math
10 import lu.uni.lassy.messir.libraries.primitives
11 import lu.uni.lassy.messir.libraries.string
12
13 Concept Model {
14
15  Secondary Types {
16
17  }
18 }
19 }
```

Listing B.6: Messir Spec. file secondarytypes-associations.msr.

B.7 File ./src-gen/messir-spec/concepts/secondarytypes-classes/secondarytypes-classes.msr

```
1 /*
2 * @author Nikita
```

```
 * @date Fri Feb 10 14:29:46 MSK 2017
 */

package lu.uni.lassy.excalibur.myproject.concepts.secondarytypes.classes {

import lu.uni.lassy.messir.libraries.calendar
import lu.uni.lassy.messir.libraries.math
import lu.uni.lassy.messir.libraries.primitives
import lu.uni.lassy.messir.libraries.string

Concept Model {

 Secondary Types {

 }
}
}
```

Listing B.7: Messir Spec. file secondarytypes-classes.msr.

B.8 File ./src-gen/messir-spec/concepts/secondarytypes-datatypes/secondarytypes-datatypes.msr

```
/*
 * @author Nikita
 * @date Fri Feb 10 14:29:46 MSK 2017
 */

package lu.uni.lassy.excalibur.myproject.concepts.secondarytypes.datatypes {

import lu.uni.lassy.messir.libraries.calendar
import lu.uni.lassy.messir.libraries.math
import lu.uni.lassy.messir.libraries.primitives
import lu.uni.lassy.messir.libraries.string

Concept Model {

 Secondary Types {

 }

}
}
```

Listing B.8: Messir Spec. file secondarytypes-datatypes.msr.

B.9 File ./src-gen/messir-spec/tests/tests.msr

```
/*
 * @author Nikita
 * @date Fri Feb 10 14:29:46 MSK 2017
 */

package lu.uni.lassy.excalibur.myproject.tests {

import lu.uni.lassy.messir.libraries.calendar
import lu.uni.lassy.messir.libraries.math
import lu.uni.lassy.messir.libraries.primitives
import lu.uni.lassy.messir.libraries.string

 Test Model {

 }

}
```

Listing B.9: Messir Spec. file tests.msr.

B.10 File ./src-gen/messir-spec/usecases/usecaseinstance-oeSetCrisisHandler-ucioeSetCrisisHandler.msr

```
1 package usecases.ucioeSetCrisisHandler {
2  import lu.uni.lassy.excalibur.myproject.usecases
3
4  Use Case Model {
5
6   use case instance ucioeSetCrisisHandler : subfunction oeSetCrisisHandler{
7    actors {
8
9    }
10   }
11  }
12 }
```

Listing B.10: Messir Spec. file usecaseinstance-oeSetCrisisHandler-ucioeSetCrisisHandler.msr.

B.11 File ./src-gen/messir-spec/usecases/usecases.msr

```
1 /*
2 * @author Nikita
3 * @date Fri Feb 10 14:29:46 MSK 2017
4 */
5
6 package lu.uni.lassy.excalibur.myproject.usecases {
7
8 import lu.uni.lassy.messir.libraries.calendar
9 import lu.uni.lassy.messir.libraries.math
10 import lu.uni.lassy.messir.libraries.primitives
11 import lu.uni.lassy.messir.libraries.string
12
13  Use Case Model {
14
15  use case system subfunction oeSetCrisisHandler(AdtCrisisID:lu.uni.lassy.excalibur.myproject.
        concepts.primarytypes.datatypes.dtCrisisID) {
16    actor lu.uni.lassy.excalibur.myproject.environment.actCoordinator[primary, active]
17    actor lu.uni.lassy.excalibur.myproject.environment.actCoordinator[secondary, passive]
18    actor lu.uni.lassy.excalibur.myproject.environment.actComCompany[multiple, passive]
19   }
20  use case system subfunction oeSollicitateCrisisHandling() {
21    actor lu.uni.lassy.excalibur.myproject.environment.actActivator[primary, proactive]
22    actor lu.uni.lassy.excalibur.myproject.environment.actCoordinator[secondary, passive, multiple]
23    actor lu.uni.lassy.excalibur.myproject.environment.actAdministrator[secondary, passive]
24   }
25
26  use case system subfunction oeLogIn() {
27    actor lu.uni.lassy.excalibur.myproject.environment.actActivator[primary, proactive]
28   }
29
30  use case system subfunction oeLogOut() {
31    actor lu.uni.lassy.excalibur.myproject.environment.actActivator[primary, proactive]
32   }
33  use case system usergoal ugSecurelyUseSystem() {
34   actor lu.uni.lassy.excalibur.myproject.environment.actAuthenticated[primary, active]
35   actor lu.uni.lassy.excalibur.myproject.environment.actAuthenticated[primary, active]
36   actor lu.uni.lassy.excalibur.myproject.environment.actAuthenticated[primary, active]
37
38   reuse oeLogIn[1..1]
39   reuse oeLogOut[1..1]
40   }
41  use case system usergoal ugSecurelyUserSystem() {
42   }
43  }
44
45 }
```

Listing B.11: Messir Spec. file usecases.msr.

Bibliography

[1] Guelfi, N.: Messir: A Scientific Method for the Software Engineer. to be published (2017)

[2] Armour, F., Miller, G.: Advanced Use Case Modeling: Software Systems. Addison-Wesley (2001)

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[2] Armour, F., Miller, G.: Advanced Use Case Modeling: Software Systems. Addison-Wesley (2001)