Affiliation line 1
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MyProjectName : Your Title
Messir Analysis Document
- v 0.0 -

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Chapter 1

Introduction

1.1 Overview

1.2 Purpose and recipients of the document

1.3 Application Domain

1.4 Definitions, acronyms and abbreviations

1.5 Document structure

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 [?] 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 [?].

2.3.1 Use Cases

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

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 Summary Level Use Cases

- lu.uni.lassy.excalibur.myproject.usecases.suDeployAndRun
- lu.uni.lassy.excalibur.myproject.usecases.suManageLibrarians

A.1.2 Undocumented Subfunction Level Use Cases

- lu.uni.lassy.excalibur.myproject.usecases.sfAddLibrarian
- lu.uni.lassy.excalibur.myproject.usecases.sfDeleteLibrarian
- lu.uni.lassy.excalibur.myproject.usecases.sfEditLibrarian
- lu.uni.lassy.excalibur.myproject.usecases.sfLogin
- lu.uni.lassy.excalibur.myproject.usecases.sfLogout

A.1.3 Undocumented Use Case Views

- uc-suDeployAndRun
- uc-suManageLibrarians

A.2 Undocumented Use Case Instances

A.2.1 Undocumented Summary Level Use Case Instances

- usecases.ucisuDeployAndRun.ucisuDeployAndRun

A.2.2 Undocumented Use Case Instance Views

- uci-ucisuDeployAndRun

A.3 Undocumented Actors

- lu.uni.lassy.excalibur.myproject.environment.actDatabaseManagementSystem
- lu.uni.lassy.excalibur.myproject.environment.actLibrarianManagementSystem
- lu.uni.lassy.excalibur.myproject.environment.actSysadmin

A.4 Undocumented Primary Types

A.4.1 Undocumented Primary Classe Types

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

Appendix B

Messir Specification Files Listing

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

```
//
//DON'T TOUCH THIS FILE !!!
//
package uuid695728acbf2b4e2da067e942a8b71a42 {
 Concept Model {}
}
```

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

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

```
/*
* @author lobfil
* @date Tue Nov 07 21:17:53 CET 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 actSysadmin role rnactSysadmin cardinality[0 .. *] {
   input interface inactSysadmin {
   }
   output interface outactSysadmin {
   }
  }
 actor actLibrarianManagementSystem role rnactLibrarianManagementSystem cardinality[0 .. *] {
   input interface inactLibrarianManagementSystem {
   }
   output interface outactLibrarianManagementSystem {
   }
  }
 actor actDatabaseManagementSystem role rnactDatabaseManagementSystem cardinality[0 .. *] {
   input interface inactDatabaseManagementSystem {
   }
   output interface outactDatabaseManagementSystem {
   }
  }
 }
}
```

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

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

```
/*
* @author lobfil
* @date Tue Nov 07 21:17:53 CET 2017
*/

package lu.uni.lassy.excalibur.myproject.concepts.primarytypes.associations {

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 {

 Primary Types {

 }
}
}
```

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

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

```
/*
* @author lobfil
* @date Tue Nov 07 21:17:53 CET 2017
*/

package lu.uni.lassy.excalibur.myproject.concepts.primarytypes.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

import lu.uni.lassy.messir.libraries.primitives

Concept Model {

 Primary Types {

  state class ctState {
   attribute vpStarted: ptBoolean

   operation init(AvpStarted:ptBoolean): ptBoolean
  }

 }
}
}
```

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

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

```
/*
* @author lobfil
* @date Tue Nov 07 21:17:53 CET 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  }
18 }
19 }
```

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 lobfil
3 * @date Tue Nov 07 21:17:53 CET 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 lobfil
3 * @date Tue Nov 07 21:17:53 CET 2017
4 */
5
6 package lu.uni.lassy.excalibur.myproject.concepts.secondarytypes.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 Concept Model {
14
15  Secondary Types {
16
17  }
18 }
```

```
19 }
```

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

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

```
1 /*
2 * @author lobfil
3 * @date Tue Nov 07 21:17:53 CET 2017
4 */
5
6 package lu.uni.lassy.excalibur.myproject.concepts.secondarytypes.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  Secondary Types {
16
17  }
18
19 }
20 }
```

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

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

```
1 /*
2 * @author lobfil
3 * @date Tue Nov 07 21:17:53 CET 2017
4 */
5
6 package lu.uni.lassy.excalibur.myproject.tests {
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  Test Model {
14
15  }
16
17 }
```

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

B.10 File ./src-gen/messir-spec/usecases/usecaseinstance-sfAddLibrarian-ucisfAddLibrarian.msr

```
1 package usecases.ucisfAddLibrarian {
2  import lu.uni.lassy.excalibur.myproject.usecases
3
4  Use Case Model {
5  }
6 }
```

Listing B.10: Messir Spec. file usecaseinstance-sfAddLibrarian-ucisfAddLibrarian.msr.

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

```
1 package usecases.ucisfDeleteLibrarian {
2  import lu.uni.lassy.excalibur.myproject.usecases
3
4  Use Case Model {
5  }
6 }
```

Listing B.11: Messir Spec. file usecaseinstance-sfDeleteLibrarian-ucisfDeleteLibrarian.msr.

B.12 File ./src-gen/messir-spec/usecases/usecaseinstance-sfEditLibrarian-ucisfEditLibrarian.msr

```
1 package usecases.ucisfEditLibrarian {
2  import lu.uni.lassy.excalibur.myproject.usecases
3
4  Use Case Model {
5
6  }
7 }
```

Listing B.12: Messir Spec. file usecaseinstance-sfEditLibrarian-ucisfEditLibrarian.msr.

B.13 File ./src-gen/messir-spec/usecases/usecaseinstance-suDeployAndRun-ucisuDeployAndRun.msr

```
1 package usecases.ucisuDeployAndRun {
2  import lu.uni.lassy.excalibur.myproject.usecases
3
4  Use Case Model {
5
6   use case instance ucisuDeployAndRun : suDeployAndRun{
7    actors {
8     filippoLobisch : lu.uni.lassy.excalibur.myproject.environment.actSysadmin
9    }
10
11   use case steps{
12    filippoLobisch executed instanceof subfunction sfLogin("filippoLobisch", "password") {}
13    filippoLobisch executed instanceof subfunction sfLogout() {}
14    filippoLobisch executed instanceof subfunction sfAddLibrarian("100900100", "John Smith", "
          10/10/1990") {}
15    filippoLobisch executed instanceof subfunction sfEditLibrarian("Successfully edited librarian.")
           {}
16    filippoLobisch executed instanceof subfunction sfDeleteLibrarian("Successfully deleted librarian
          .") {}
17
18   }
19
20  }
21
22  }
23 }
```

Listing B.13: Messir Spec. file usecaseinstance-suDeployAndRun-ucisuDeployAndRun.msr.

B.14 File ./src-gen/messir-spec/usecases/usecaseinstance-suManageLibrarians-ucisuManageLibrarians.msr

```
1 package usecases.ucisuManageLibrarians {
2  import lu.uni.lassy.excalibur.myproject.usecases
```

```
3
4 Use Case Model {
5
6 }
7 }
```

Listing B.14: Messir Spec. file usecaseinstance-suManageLibrarians-ucisuManageLibrarians.msr.

B.15 File ./src-gen/messir-spec/usecases/usecaseinstance-ugLibrarians-uciugLibrarians.msr

```
1 package usecases.uciugLibrarians {
2  import lu.uni.lassy.excalibur.myproject.usecases
3
4 Use Case Model {
5
6 }
7 }
```

Listing B.15: Messir Spec. file usecaseinstance-ugLibrarians-uciugLibrarians.msr.

B.16 File ./src-gen/messir-spec/usecases/usecases.msr

```
1 /*
2 * @author lobfil
3 * @date Tue Nov 07 21:17:53 CET 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 summary suManageLibrarians() {
16  actor lu.uni.lassy.excalibur.myproject.environment.actSysadmin[primary, active]
17  actor lu.uni.lassy.excalibur.myproject.environment.actDatabaseManagementSystem[secondary, active]
18  actor lu.uni.lassy.excalibur.myproject.environment.actLibrarianManagementSystem[secondary, active]
19
20  reuse lu.uni.lassy.excalibur.myproject.usecases.sfAddLibrarian[0..*]
21  reuse lu.uni.lassy.excalibur.myproject.usecases.sfEditLibrarian[0..*]
22  reuse lu.uni.lassy.excalibur.myproject.usecases.sfDeleteLibrarian[0..*]
23
24  step a: lu.uni.lassy.excalibur.myproject.environment.actSysadmin executes sfAddLibrarian
25  step b: lu.uni.lassy.excalibur.myproject.environment.actSysadmin executes sfEditLibrarian
26  step c: lu.uni.lassy.excalibur.myproject.environment.actSysadmin executes sfDeleteLibrarian
27
28  }
29
30 use case system summary suDeployAndRun() {
31  actor lu.uni.lassy.excalibur.myproject.environment.actSysadmin[primary, active]
32
33  reuse lu.uni.lassy.excalibur.myproject.usecases.suManageLibrarians[1..*]
34  reuse lu.uni.lassy.excalibur.myproject.usecases.sfLogin[0..1]
35  reuse lu.uni.lassy.excalibur.myproject.usecases.sfLogout[0..1]
36
37  step a: lu.uni.lassy.excalibur.myproject.environment.actSysadmin executes sfLogin
38  step b: lu.uni.lassy.excalibur.myproject.environment.actSysadmin executes sfLogout
39  step c: lu.uni.lassy.excalibur.myproject.environment.actSysadmin executes suManageLibrarians
40
41  }
42
43 use case system subfunction sfAddLibrarian() {
44   actor lu.uni.lassy.excalibur.myproject.environment.actSysadmin[primary, passive]
```

```
45    actor lu.uni.lassy.excalibur.myproject.environment.actDatabaseManagementSystem[secondary, passive
          ]
46    actor lu.uni.lassy.excalibur.myproject.environment.actLibrarianManagementSystem[secondary,
          passive]
47
48    returned messages{
49     ieAddLibrarian returned to lu.uni.lassy.excalibur.myproject.environment.actSysadmin
50    }
51   }
52
53  use case system subfunction sfDeleteLibrarian() {
54    actor lu.uni.lassy.excalibur.myproject.environment.actSysadmin[primary, active]
55    actor lu.uni.lassy.excalibur.myproject.environment.actDatabaseManagementSystem[secondary, passive
          ]
56    actor lu.uni.lassy.excalibur.myproject.environment.actLibrarianManagementSystem[secondary,
          passive]
57
58    returned messages{
59     ieDeleteLibrarian returned to lu.uni.lassy.excalibur.myproject.environment.actSysadmin
60    }
61
62   }
63  use case system subfunction sfEditLibrarian() {
64    actor lu.uni.lassy.excalibur.myproject.environment.actSysadmin[primary, active]
65    actor lu.uni.lassy.excalibur.myproject.environment.actDatabaseManagementSystem[secondary, passive
          ]
66    actor lu.uni.lassy.excalibur.myproject.environment.actLibrarianManagementSystem[secondary,
          passive]
67
68    returned messages{
69     ieEditLibrarian returned to lu.uni.lassy.excalibur.myproject.environment.actSysadmin
70    }
71   }
72
73  use case system subfunction sfLogin() {
74    actor lu.uni.lassy.excalibur.myproject.environment.actSysadmin[primary, active]
75    returned messages{
76     ieLogin returned to lu.uni.lassy.excalibur.myproject.environment.actSysadmin
77    }
78   }
79  use case system subfunction sfLogout() {
80    actor lu.uni.lassy.excalibur.myproject.environment.actSysadmin[primary, active]
81    returned messages{
82     ieLogout returned to lu.uni.lassy.excalibur.myproject.environment.actSysadmin
83   }
84
85  }
86
87 }
88 }
```

Listing B.16: Messir Spec. file usecases.msr.