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MyProjectName : Your Title
Messir Analysis Document
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Chapter 1

Introduction

1.1 Overview

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newEntry

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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   subfunction-oeHelloWorld

Figure 2.1 shows the oeHelloWorld subfunction use-case and its primary actor actYou
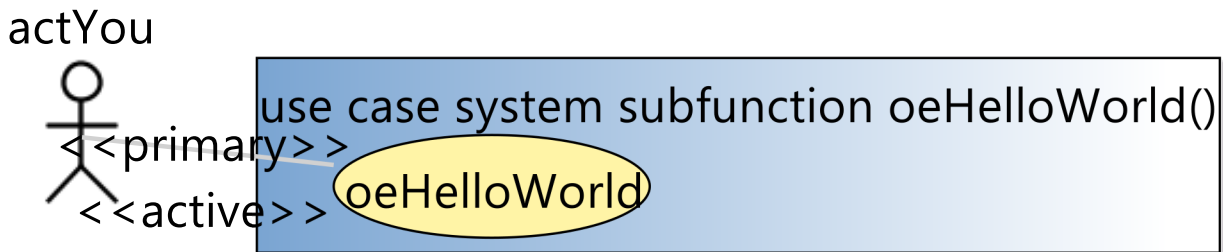
Figure 2.1:

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

We provide for the given views the description of the actors together with their associated input and output interface descriptions.

3.2.1   `actYou` Actor

Actor
actYou   Is representation any person that would like to receive an hello world message from the system

Chapter 4

Concept Model

4.1 PrimaryTypes-Datatypes

4.1.1 Local view 01

Figure 4.1 shows the dtAMessage primary datatype

Figure 4.1: Concept Model - PrimaryTypes-Datatypes local view 01. .

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

The table below is providing comments on the graphical views given for the datatype types of the primary types.

DATATYPES
dtAMessage
Is representation the hello world message type.
attribute   **value: ptString**

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 $\mathfrak{Messir}$ 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 Subfunction Level Use Cases

- lu.uni.lassy.excalibur.myhelloworld.usecases.oeHelloWorld

A.2 Undocumented Use Case Instances

A.2.1 Undocumented Subfunction Level Use Case Instances

- usecases.ucioeHelloWorld.ucioeHelloWorld

A.2.2 Undocumented Use Case Instance Views

- uci-ucioeHelloWorld

A.3 Undocumented Primary Types

A.3.1 Undocumented Primary Classe Types

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

A.4 Undocumented Operation Specifications

- lu.uni.lassy.excalibur.myhelloworld.environment.actYou.outactYou.oeHelloWorld

Appendix B

Messir Specification Files Listing

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

```
1 //
2 //DON'T TOUCH THIS FILE !!!
3 //
4 package uuid26a05e0b216d45ac86a1267bf5ab2c07 {
5   Concept Model {}
6 }
```

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

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

```
1 package lu.uni.lassy.excalibur.myhelloworld.environment.operations.actYou.outactYou.oeHelloWorld {
2
3 import lu.uni.lassy.messir.libraries.primitives
4 import lu.uni.lassy.messir.libraries.math
5 import lu.uni.lassy.messir.libraries.string
6 import lu.uni.lassy.messir.libraries.calendar
7 import lu.uni.lassy.excalibur.myhelloworld.environment
8   Operation Model {
9
10    operation: lu.uni.lassy.excalibur.myhelloworld.environment.actYou.outactYou.oeHelloWorld():
        ptBoolean{
11    // include below the specification information (pre,post or ocl or prolog)
12
13 preP {
14   let AvpStarted: ptBoolean in
15   self.rnActor.rnSystem.vpStarted = AvpStarted
16   and AvpStarted = true
17 }
18 preF { true }
19 postF {
20   let TheactYou:actYou in
21   let AptString:ptString in
22   /* Post Functional:*/
23   /* PostF01 */
24   AptString = 'Hello World !'
25   and TheactYou.InterfaceIN = self.rnActor.InterfaceIN
26 and TheactYou.InterfaceIN^ieHelloWorld(AptString)
27 }
28 postP { true }
29
30   }
31  }
32 }
```

Listing B.2: Messir Spec. file environment-actYou-oeHelloWorld.msr.

B.3   File ./src-gen/messir-spec/environment/environment.msr

```
1 /*
2 * @author Masha
3 * @date Wed Oct 05 14:47:56 MSK 2016
4 */
5
6 package lu.uni.lassy.excalibur.myhelloworld.environment {
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 Environment Model {
14
15    actor actYou role rnactYou cardinality [1..*] {
16
17     input interface inactYou {
18      operation ieHelloWorld() : ptBoolean
19
20     }
21     output interface outactYou {
22      operation oeHelloWorld() : ptBoolean
23     }
24    }
25
26 }
27 }
```

Listing B.3: Messir Spec. file environment.msr.

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

```
1 /*
2 * @author Masha
3 * @date Wed Oct 05 14:47:56 MSK 2016
4 */
5
6 package lu.uni.lassy.excalibur.myhelloworld.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.4: Messir Spec. file primarytypes-associations.msr.

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

```
1 /*
2 * @author Masha
3 * @date Wed Oct 05 14:47:56 MSK 2016
4 */
5
```

```
 6 package lu.uni.lassy.excalibur.myhelloworld.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.5: Messir Spec. file primarytypes-classes.msr.

B.6   File ./src-gen/messir-spec/concepts/primarytypes-datatypes/primarytypes-datatypes.msr

```
 1 /*
 2 * @author Masha
 3 * @date Wed Oct 05 14:47:56 MSK 2016
 4 */
 5
 6 package lu.uni.lassy.excalibur.myhelloworld.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   datatype dtAMessage {
17    attribute value : ptString
18   }
19
20  }
21 }
22 }
```

Listing B.6: Messir Spec. file primarytypes-datatypes.msr.

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

```
 1 /*
 2 * @author Masha
 3 * @date Wed Oct 05 14:47:56 MSK 2016
 4 */
 5
 6 package lu.uni.lassy.excalibur.myhelloworld.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.7: Messir Spec. file secondarytypes-associations.msr.

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

```
1 /*
2 * @author Masha
3 * @date Wed Oct 05 14:47:56 MSK 2016
4 */
5
6 package lu.uni.lassy.excalibur.myhelloworld.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.8: Messir Spec. file secondarytypes-classes.msr.

B.9   File   ./src-gen/messir-spec/concepts/secondarytypes-datatypes/secondarytypes-datatypes.msr

```
1 /*
2 * @author Masha
3 * @date Wed Oct 05 14:47:56 MSK 2016
4 */
5
6 package lu.uni.lassy.excalibur.myhelloworld.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.9: Messir Spec. file secondarytypes-datatypes.msr.

B.10   File ./src-gen/messir-spec/tests/tests.msr

```
1 /*
2 * @author Masha
3 * @date Wed Oct 05 14:47:56 MSK 2016
4 */
5
6 package lu.uni.lassy.excalibur.myhelloworld.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.10: Messir Spec. file tests.msr.

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

```
1 package usecases.ucioeHelloWorld {
2  import lu.uni.lassy.excalibur.myhelloworld.usecases
3  import lu.uni.lassy.excalibur.myhelloworld.environment
4  Use Case Model {
5
6   use case instance ucioeHelloWorld : subfunction oeHelloWorld{
7    actors {
8     g06 : actYou
9
10   }
11    ieHelloWorld("Hello You") returned to g06
12   }
13  }
14 }
```

Listing B.11: Messir Spec. file usecaseinstance-oeHelloWorld-ucioeHelloWorld.msr.

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

```
1 /*
2 * @author Masha
3 * @date Wed Oct 05 14:47:56 MSK 2016
4 */
5
6 package lu.uni.lassy.excalibur.myhelloworld.usecases {
7
8 import lu.uni.lassy.excalibur.myhelloworld.environment
9 import lu.uni.lassy.messir.libraries.calendar
10 import lu.uni.lassy.messir.libraries.math
11 import lu.uni.lassy.messir.libraries.primitives
12 import lu.uni.lassy.messir.libraries.string
13
14  Use Case Model {
15
16  use case system subfunction oeHelloWorld() {
17   actor actYou[primary,active]
18   returned messages {
19    ieHelloWorld () returned to actYou
20   }
21  }
22
23  }
24
```

```
25 }
```

Listing B.12: Messir Spec. file usecases.msr.

Glossary

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)