



USE CASES AND SCENARIOS ACTIVITY 2.4

Legend

Keywords: Given, When, Then, And, If (to add conditionals), Each time, # (for comments)

Requests/Responses: CNR, GET / UPDATE Requests & Responses

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Scenarios

Scenario 1 Accepting before mobility LA

Sending HEI A		Receiving HEI B: Dashboard-OLA
Given that A represents the Sending HEI And a new LA is created When the LA is signed by Student & Sending Responsible Then A sends a CNR And A waits for a CNR LA Response When A receives a CNR Response from Dashboard-OLA Then A is sure that Dashboard-OLA received the CNR When A receives a GET LA Request from Dashboard-OLA Then A searches for the latest LA (i.e. the one that is signed by Student and Sending Responsible)	→LA CNR ←LA CNR Response ←GET LA Request	Given that Dashboard-OLA represents the Receiving HEI B When Dashboard-OLA receives a CNR from A Then Dashboard-OLA sends a CNR LA Response to A And Dashboard-OLA sends a GET LA Request to A And Dashboard-OLA waits for a response to the GET LA request
And A prepares the LA GET- Response And A sends the LA GET Response (Ex 1) to Dashboard-OLA	→Ex 1 LA GET- Response	When Dashboard-OLA receives the Ex 1 GET LA Response Then Dashboard-OLA creates a new local LA # The local LA is created using the omobility-id and changes-proposal id (i.e. the version id) of Ex 1 And Dashboard-OLA maps the fields of the Ex 1 GET LA Response to its local LA one by one If the Receiving Responsible Person data can be assumed Then Dashboard-OLA uses this data to fill the Responsible Person data in its local LA Else Then Dashboard-OLA copies the data of the Receiving Contact Person to fill the Responsible Person data in its local LA And the local LA is filled And Dashboard-OLA notifies (email) IRO and Receiving Responsible that a there is a new LA waiting to be signed When the Receiving Responsible signs the LA

	!	1
		Then the local LA is updated with the new commitment
	←Ex 2 LA	And Dashboard-OLA sends the Update Request Ex 2 (i.e. acceptance) to A
When A receives the Ex 2 LA update request from Dashboard-OLA	Update	
Then A sends Ex 3 LA Update Response with a success `user-message`	Request	
And A checks the commitment type (i.e. acceptance)		
When A marks it as an acceptance	→Ex 3 LA	i
Then A updates its local LA with the new commitment	Update	
# the version id of the LA should not change	Response	
		When Dashboard-OLA receives <u>Ex 3</u> LA Update Response
		Then Dashboard-OLA is sure that A received the update
When A receives a new GET LA Request		
Then A forms the <u>Ex 4</u> GET LA Response		
# <changes-proposal></changes-proposal> element is now formed in the <first-version></first-version> element,		
along with the 3 commitments		i
		Each time minor changes are made at the LA
Each time minor changes are made at the LA		Then Dashboard-OLA sends a CNR
Then A sends a CNR		# minor changes do not trigger a new round of signatures
# minor changes do not trigger a new round of signatures		
	-	
		1
	1	
		i
	<u> </u>	

Scenario 2 Rejecting before mobility LA

Sending HEI A		Receiving HEI B: Dashboard-OLA
Given that A represents the Sending HEI And a new LA is created When the LA is signed by Student & Sending Responsible		
Then A sends a CNR And A waits for a CNR LA Response	→LA CNR	Given that Dashboard-OLA represents the Receiving HEI B When Dashboard-OLA receives a CNR from A
	←LA CNR Response	Then Dashboard-OLA sends a CNR LA Response to A And Dashboard-OLA sends a GET LA Request to A
When A receives a CNR Response from Dashboard-OLA	←GET LA Request	And Dashboard-OLA waits for a response to the GET LA request
Then A is sure that Dashboard-OLA received the CNR When A receives a GET LA Request from Dashboard-OLA		
Then A searches for the latest LA (i.e. the one that is signed by Student and Sending Responsible) And A prepares the LA GET- Response		
And A sends the LA GET Response (Ex 1) to Dashboard-OLA	→Ex 1 LA	
(<u>=</u>) to 2 and 2 a 2 a	GET-	When Dashboard-OLA receives the Ex 1 GET LA Response
	Response	Then Dashboard-OLA creates a new local LA
		# The local LA is created using the omobility-id and changes-proposal id (i.e. version id) of Ex 1
		And Dashboard-OLA maps the fields of the <u>Ex 1</u> GET LA Response to its local LA one by one
	İ	If the Receiving Responsible Person data can be assumed
		Then Dashboard-OLA uses this data to fill the Responsible Person data in its local
		LA Else
		Then Dashboard-OLA copies the data of the Receiving Contact Person to fill the
		Responsible Person data in its local LA
		And the local LA is filled
		And Dashboard-OLA notifies (email) IRO and Receiving Responsible that a there is a new LA waiting to be signed
		When the Receiving Responsible fills a rejection comment and signs the LA
	←Ex 5 LA	Then the local LA is updated with the new commitment (i.e. rejection)

When A receives the Ex 5 LA Update Request from Dashboard-OLA Then A sends Ex 3 LA Update Response with a success `user-message` And A checks the commitment type (i.e. rejection) When A marks it is an rejection Then A updates its local LA with the new commitment	Update Request →Ex 3 LA Update	And Dashboard-OLA sends the Update Request Ex 5 to A
# the version id of the LA should not change	Response	When Dashboard-OLA receives Ex 3 LA Update Response Then Dashboard-OLA is sure that A received the Update
When A receives a new GET LA Request Then A sends an empty response # The rejected LA is also removed from the index endpoint response.		
# A communicates the new round of signatures with CNR When Student make changes to the LA And the updated LA is signed by Student & Sending Responsible Then A sends a CNR And A waits for a CNR LA Response		
And A waits for a CNN LA Nesponse		

Scenario 3 Accepting during mobility LA

Sending HEI A		Receiving HEI B: Dashboard-OLA
Given that A represents the Sending HEI And the Student changes the local LA # changes to Tables A2, B2, and/or C2 Then A creates a new version of its local LA		
When the LA is signed by Student & Sending Responsible Then A sends a CNR And A waits for a CNR LA Response	→LA CNR ←LA CNR Response ←GET LA Request	Given that Dashboard-OLA represents the Receiving HEI B When Dashboard-OLA receives a CNR from A Then Dashboard-OLA sends a CNR LA Response to A And Dashboard-OLA sends a GET LA Request to A And Dashboard-OLA waits for a response to the GET LA Request
When A receives a CNR Response from Dashboard-OLA Then A is sure that Dashboard-OLA received the CNR When A receives a GET LA Request from Dashboard-OLA Then A searches for the latest LA (i.e. the one that is signed by Student and Sending Responsible) And System A prepares the LA GET Response # the LA should contain the first signed by all version, and the new version with the proposed changes	->Ex 7 LA GET	
And A sends the LA GET Response (Ex 7) to Dashboard-OLA	Response ←Ex 8 LA	When Dashboard-OLA receives the Ex 7 GET LA Response Then Dashboard-OLA creates a new version of its local LA # According to the Ex 7 LA GET Response, Dashboard-OLA creates a new version of the LA with id = '4C159B15BAF222F868493C167125FA324-4' And Dashboard-OLA maps the fields of the Ex 7 GET LA Response to its local LA one by one And the new version of the local LA is saved And Dashboard-OLA notifies (email) IRO and Receiving Responsible that a there is an updated LA waiting to be signed When the Receiving Responsible signs the LA Then the local LA is updated with the new commitment

	Update Request	# The version id remains the same And Dashboard-OLA sends the Update Request Ex 8 (i.e. acceptance) to A
When A receives the Ex 8 LA Update Request from Dashboard-OLA Then A sends Ex 3 LA Update Response with a success `user-message` And A checks the commitment type (i.e. acceptance) When A marks it is an acceptance Then A updates its local LA with the new commitment # the version id of the LA should not change	→Ex 3 LA Update Response	When Dashboard-OLA receives <u>Ex 3</u> LA Update Response Then Dashboard-OLA is sure that A received the Update
When A receives a new GET LA Request Then A forms the Ex 9 GET LA Response # the GET LA Response is now formed with <first-version></first-version> and <latest-approved></latest-approved> elements, along with the 3+3 commitments		

Scenario 4 Rejecting during mobility LA

Sending HEI A		Receiving HEI B: Dashboard-OLA
Given that A represents the Sending HEI And the Student changes the local LA # changes to Tables A2, B2, and/or C2 Then A creates a new version of its local LA When the LA is signed by Student & Sending Responsible Then A sends a CNR And A waits for a CNR LA Response When A receives a GET LA Request from Dashboard-OLA Then A searches for the latest LA (i.e. the one that is signed by Student and Sending Responsible) And System A prepares the LA GET Response # the LA should contain the first signed by all version, and the new version with the proposed changes	→LA CNR ←LA CNR Response ←GET LA Request	Given that Dashboard-OLA represents the Receiving HEI B When Dashboard-OLA receives a CNR from A Then Dashboard-OLA sends a CNR LA Response to A And Dashboard-OLA sends a GET LA Request to A And Dashboard-OLA waits for a response to the GET LA request
When A receives the Ex 10 LA Update Request from Dashboard-OLA Then A sends Ex 3 LA Update Response with a success `user-message`	→Ex 7 LA GET Response	When Dashboard-OLA receives the Ex 7 GET LA Response Then Dashboard-OLA creates a new version of its local LA # According to the Ex 7 LA GET Response, Dashboard-OLA creates a new version of the LA with id = '4C159B15BAF222F868493C167125FA324-4' And Dashboard-OLA maps the fields of the Ex 7 GET LA Response to its local LA one by one And the new version of the local LA is saved And Dashboard-OLA notifies (email) IRO and Receiving Responsible that a there is an updated LA waiting to be signed When the Receiving Responsible fills a rejection reason and signs the LA Then the local LA is updated with the new commitment

And A checks the commitment type (i.e. rejection) When A marks it is as a rejection Then A updates its local LA with the new commitment # the version id of the LA should not change	←Ex 10 LA Update Request →Ex 3 LA Update Response	# The version id remains the same And Dashboard-OLA sends the Update Request Ex 10 (i.e. rejection) to A When Dashboard-OLA receives Ex 3 LA Update Response Then Dashboard-OLA is sure that A received the update
When A receives a new GET LA Request Then A forms the Ex 4 GET LA Response # the LA should contain only the components that have been signed by all.		

Scenario 5 Accepting before mobility LA

Sending HEI B: Dashboard-OLA		Receiving HEI A
Given that Dashboard-OLA represents the Sending HEI B And a new LA is created When the LA is signed by Student & Sending Responsible Then Dashboard-OLA sends a CNR to A And Dashboard-OLA waits for a CNR LA Response	→LA CNR ← LA CNR Response ←GET LA	Given that System A represents the Receiving HEI A When A receives a CNR from Dashboard-OLA Then A sends a CNR LA Response to Dashboard-OLA And A sends a GET LA Request to Dashboard-OLA And A waits for a response to the GET LA Request
Then Dashboard-OLA is sure that A received the CNR When Dashboard-OLA receives a GET LA Request from A Then Dashboard-OLA searches for the latest LA # i.e. the one that is signed by Student and Sending Responsible And Dashboard-OLA prepares the LA GET Response And Dashboard-OLA sends the LA GET Response (Ex 11) to A	→Ex 11 LA GET Response	When A receives the Ex 11 GET LA Response #The Receiving Responsible somehow is assumed by A And the Receiving Responsible signs the LA # the version id of the LA should not change
When Dashboard-OLA receives the Ex 12 LA Update Request from A Then Dashboard-OLA sends Ex 13 LA Update Response with a success `user- message` And Dashboard-OLA checks the commitment type (i.e. acceptance) When Dashboard-OLA marks it as an acceptance Then Dashboard-OLA updates its local LA with the new commitment # the version id of the LA should not change And Dashboard-OLA notifies (email) Student, IRO and Receiving Responsible that the LA has been signed by Receiving	←Ex 12 LA Update Request →Ex 13 LA Update Response	And A sends the LA Update Request (<u>Ex 12</u>) (i.e. acceptance) to Dashboard-OLA When A receives <u>Ex 13</u> LA Update Response Then A is sure that Dashboard-OLA received the update

Scenario 6 Rejecting before mobility LA

Sending HEI B: Dashboard-OLA		Receiving HEI A
Given that Dashboard-OLA represents the Sending HEI B And a new LA is created		
When the LA is signed by Student & Sending Responsible		
Then Dashboard-OLA sends a CNR to A	→LA CNR	Given that System A represents the Receiving HEI A
And Dashboard-OLA waits for a CNR LA Response		When A receives a CNR from Dashboard-OLA
	←LA CNR	Then A sends a CNR LA Response to Dashboard-OLA
	Response	And A sends a GET LA Request to Dashboard-OLA
	←GET LA	And A waits for a Response to the GET LA Request
When Dashboard-OLA receives a CNR Response from A	Request	
Then Dashboard-OLA is sure that A received the CNR		
When Dashboard-OLA receives a GET LA Request from A		
Then A searches for the latest LA		
# i.e. the one that is signed by Student and Sending Responsible		
And Dashboard-OLA prepares the LA GET Response		
And Dashboard-OLA sends the LA GET Response (Ex 11) to A	→Ex 11 LA	
	GET	When A receives the Ex 11 GET LA Response
	Response	#The Receiving Responsible somehow is assumed by A
		And the Receiving Responsible signs the LA # the version id of the LA should not change
		Then A sends the LA Update Request Ex 15 (i.e. rejection) to A
	←Ex 15 LA	(
When Dashboard-OLA receives the Ex 15 LA update request from A	Update	
Then Dashboard-OLA sends <u>Ex 13</u> LA Update Response with a success `usermessage`	Request	
And Dashboard-OLA checks the commitment type (i.e. rejection)	→Ex 13 LA	
When Dashboard-OLA marks it as a rejection	Update	
Then Dashboard-OLA updates its local LA with the new commitment	Response	
# the version id of the LA should not change		
And Dashboard-OLA notifies (email) Student, IRO and Receiving Responsible about the rejection		
When the Student makes changes and signs the LA		

Then Dashboard-OLA creates a new version of the LA And Dashboard-OLA notifies (email) IRO and Receiving Responsible that a LA is waiting to be signed When the Sending Responsible signs the LA Then Dashboard-OLA creates a new version of the LA And Dashboard-OLA sends a CNR to A And Dashboard-OLA waits for a CNR LA Response	→LA CNR ←LA CNR Response ←GET LA Request	When A receives a CNR from Dashboard-OLA Then A sends a CNR LA Response to Dashboard-OLA And A sends a GET LA Request to Dashboard-OLA And A waits for a response to the GET LA Request
# Dashboard-OLA communicates the new round of signatures with CNR When Student make changes to the LA And the updated LA is signed by Student & Sending Responsible Then Dashboard-OLA sends a CNR And Dashboard-OLA waits for a CNR LA Response		

Scenario 7 Accepting during mobility LA

Sending HEI B: Dashboard-OLA		Receiving HEI A
Given that Dashboard-OLA represents the Sending HEI B And the Student changes the local LA # changes to Tables A2, B2, and/or C2 When the Student signs the LA Then Dashboard-OLA creates a new version of its local LA And Dashboard-OLA notifies the IRO / Responsible Person that there is a new LA waiting to be signed When the Responsible Person signs the LA Then Dashboard-OLA creates a new version of its local LA And Dashboard-OLA sends a CNR to A And Dashboard-OLA waits for a CNR LA Response When Dashboard-OLA receives a CNR Response from A Then Dashboard-OLA is sure that A received the CNR When Dashboard-OLA receives a GET LA Request from A Then Dashboard-OLA searches for the latest LA #i.e. the latest one that is signed by Student and Sending Responsible And Dashboard-OLA sends the LA GET Response (Ex 17) to A	→LA CNR ←LA CNR Response ←GET LA Request →Ex 17 LA GET Response	Given that System A represents the Receiving HEI When A receives a CNR from Dashboard-OLA Then A sends a CNR LA Response to Dashboard-OLA And A sends a GET LA Request to Dashboard-OLA And A waits for a response to the GET LA Request
	←Ex 18 LA Update Request	When A receives the Ex 17 GET LA Response #The Receiving Responsible somehow is assumed by A And the Receiving Responsible signs the LA # the version id of the LA should not change And A sends the update request Ex 18 (i.e. acceptance) to Dashboard-OLA

When Dashboard-OLA receives the Ex 18 LA update request from A Then Dashboard-OLA sends Ex 3 LA Update Response with a success `usermessage` And Dashboard-OLA checks the commitment type (i.e. acceptance) When Dashboard-OLA marks it as an acceptance Then Dashboard-OLA updates its local LA with the new commitment # the version id of the LA should not change and the GET LA Response should now be formed with the new

Scenario 8 Rejecting during mobility LA

Sending HEI B: Dashboard-OLA		Receiving HEI A
Given that Dashboard-OLA represents the Sending HEI B And the Student changes the local LA # changes to Tables A2, B2, and/or C2 When the Student signs the LA Then Dashboard-OLA creates a new version of its local LA And Dashboard-OLA notifies IRO and the Responsible Person that a there is a new LA waiting to be signed When the Responsible Person signs the LA Then Dashboard-OLA creates a new version of its local LA And Dashboard-OLA sends a CNR to A And Dashboard-OLA waits for a CNR LA Response When Dashboard-OLA receives a CNR Response from A Then Dashboard-OLA is sure that A received the CNR	→LA CNR ←LA CNR Response ←GET LA Request	Given that System A represents the Receiving HEI When A receives a CNR from Dashboard-OLA Then A sends a CNR LA Response to Dashboard-OLA And A sends a GET LA Request to Dashboard-OLA And A waits for a response to the GET LA request
When Dashboard-OLA receives a GET LA Request from A Then A searches for the latest LA # i.e. the one that is signed by Student and Sending Responsible And Dashboard-OLA prepares the LA GET Response And Dashboard-OLA sends the LA GET Response (Ex 17) to A	→Ex 17 LA GET Response	When A receives the Ex 17 GET LA Response #The Receiving Responsible somehow is assumed by A
When Dashboard-OLA receives the Ex 20 LA update request from A Then Dashboard-OLA sends Ex 3 LA Update Response with a success `usermessage` And Dashboard-OLA checks the commitment type (i.e. rejection) When Dashboard-OLA marks it as a rejection Then Dashboard-OLA updates its local LA with the new commitment	←Ex 20 LA Update Request →Ex 3 LA Update Response	# the Receiving Responsible signs the LA # the version id of the LA should not change Then A sends the LA Update Request Ex 20 (i.e. rejection) to Dashboard-OLA When A receives Ex 3 LA Update Response Then A is sure that Dashboard-OLA received the Update

# the version id of the LA should not change And Dashboard-OLA notifies (email) Student, IRO and Receiving Responsible about the rejection	

Examples

Ex 1 LA GET Response

```
\langle la \rangle
   <omobility-id>c442c289-5541-4cae-9edb-8ad83e133
   <sending-hei>
       <hei-id>example a.edu</hei-id>
       <ounit-name>Department of Mathematics
       <ounit-id>1234
       <contact-person>
           <given-names>Adams</given-names>
           <family-name>Baker</family-name>
           <email>adams@example a.edu
       </contact-person>
   </sending-hei>
   <receiving-hei>
       <hei-id>example b.edu</hei-id>
       <ounit-name>Department of Mathematics
       <ounit-id>5653486D98511E16E0530B501E0A4594/ounit-id>
       <contact-person>
           <given-names>Clark
           <family-name>Davis</family-name>
           <email>clark.davis@example b.edu
       </contact-person>
   </receiving-hei>
   <receiving-academic-year-id>2020/2021/receiving-academic-year-id>
   <student>
       <given-names>Nalty</given-names>
       <family-name>Patel</family-name>
       <qlobal-id>urn:schac:personalUniqueCode:int:esi:example a.edu:85525839/qlobal-id>
       <birth-date>1997-05-05
       <citizenship>GR</citizenship>
       <gender>2</gender>
       <email>nalty@example a.edu
   </student>
   <start-year-month>2021-02</start-year-month>
   <end-year-month>2021-07</end-year-month>
   <eqf-level-studied-at-departure>6</eqf-level-studied-at-departure>
```

```
<isced-f-code>0541</isced-f-code>
<isced-clarification>just a clarification of the isced</isced-clarification>
<student-language-skill>
   <language>en</language>
   <cefr-level>B2</cefr-level>
</student-language-skill>
<changes-proposal id="4C159B15BAF222F868493C167125FA324-1">
    <components-studied> <!-- Table A -->
        <component>
            <los-code>123-ABC</los-code>
            <title>Advanced Logics for Computer Scientists</title>
            <term-id>
                <term-number>2</term-number>
                <total-terms>2</total-terms>
            </term-id>
            <credit>
                <scheme>ects</scheme>
                <value>3</value>
            </credit>
        </component>
        <component>
            <los-code>456-EFG</los-code>
            <title>Big Data Mining and Processing</title>
            <term-id>
                <term-number>2</term-number>
                <total-terms>2</total-terms>
            </term-id>
            <credit>
                <scheme>ects</scheme>
                <value>4</value>
           </credit>
        </component>
    </components-studied>
    <components-recognized> <!-- Table B -->
        <component>
            <los-code>843-XYZ</los-code>
            <title>Advanced Logic</title>
            <term-id>
                <term-number>2</term-number>
                <total-terms>2</total-terms>
            </term-id>
            <credit>
                <scheme>ects</scheme>
                <value>3</value>
            </credit>
```

```
</component>
           <component>
               <los-code>542-KML</los-code>
               <title>Big Data</title>
               <term-id>
                  <term-number>2</term-number>
                  <total-terms>2</total-terms>
               </term-id>
               <credit>
                  <scheme>ects</scheme>
                  <value>5</value>
               </credit>
           </component>
       </components-recognized>
       <virtual-components> <!-- Table C -->
           <component>
               <los-code>789HIJ</los-code>
               <title>Introduction to Matlab (lab)</title>
               <credit>
                  <scheme>ects</scheme>
                  <value>1</value>
               </credit>
               <short-description>A short description about the matlab laboratory course/short-description>
           </component>
       </ri></virtual-components>
       <!-- Commitments -->
       <student-signature>
           <timestamp>2020-12-19T10:43:16+02:00</timestamp>
           <signer-app>System A</signer-app>
       </student-signature>
       <sending-hei-signature>
           <signer-name>Frank White</signer-name>
           <signer-position>Professor</signer-position>
           <signer-email>frank@system.a.edy</signer-email>
           <timestamp>2020-12-20T12:16:15+02:00</timestamp>
           <signer-app>System A</signer-app>
       </sending-hei-signature>
   </changes-proposal>
   <learning-outcomes-url>https://www.math.system.a.edu/learning outcomes url/learning-outcomes-url>
   </la>
```

Ex 2 LA Update Request (acceptance)

Ex 3 LA Update Response (success)

```
<omobility-las-update-response>
     <success-user-message>The update request was received with success.
</omobility-las-update-response>
```

Ex 4 GET LA Response (the first version)

```
<email>adams@example a.edu
   </contact-person>
</sending-hei>
<receiving-hei>
   <hei-id>example b.edu</hei-id>
   <ounit-name>Department of Mathematics
   <ounit-id>5653486D98511E16E0530B501E0A4594/ounit-id>
   <contact-person>
       <given-names>Clark
       <family-name>Davis</family-name>
       <email>clark.davis@example b.edu
   </contact-person>
</receiving-hei>
<receiving-academic-year-id>2020/2021</receiving-academic-year-id>
<student>
   <given-names>Nalty</given-names>
   <family-name>Patel</family-name>
   <qlobal-id>urn:schac:personalUniqueCode:int:esi:example a.edu:85525839/qlobal-id>
   <birth-date>1997-05-05
   <citizenship>GR</citizenship>
   <gender>2</gender>
   <email>nalty@example a.edu
</student>
<start-year-month>2021-02</start-year-month>
<end-year-month>2021-07
<eqf-level-studied-at-departure>
<isced-f-code>0541</isced-f-code>
<isced-clarification>just a clarification of the isced</isced-clarification>
<student-language-skill>
   <language>en</language>
   <cefr-level>B2</cefr-level>
</student-language-skill>
<first-version>
   <components-studied> <!-- Table A -->
       <component>
           <los-code>123-ABC</los-code>
           <title>Advanced Logics for Computer Scientists</title>
           <term-id>
              <term-number>2</term-number>
              <total-terms>2</total-terms>
           </term-id>
```

```
<credit>
            <scheme>ects</scheme>
            <value>3</value>
        </credit>
    </component>
    <component>
        <los-code>456-EFG</los-code>
        <title>Big Data Mining and Processing</title>
        <term-id>
           <term-number>2</term-number>
           <total-terms>2</total-terms>
        </term-id>
        <credit>
           <scheme>ects</scheme>
           <value>4</value>
        </credit>
    </component>
</components-studied>
<components-recognized> <!-- Table B -->
    <component>
        <los-code>843-XYZ</los-code>
        <title>Advanced Logic</title>
        <term-id>
            <term-number>2</term-number>
           <total-terms>2</total-terms>
        </term-id>
        <credit>
           <scheme>ects</scheme>
           <value>3</value>
        </credit>
    </component>
    <component>
        <los-code>542-KML</los-code>
        <title>Big Data</title>
        <term-id>
           <term-number>2</term-number>
           <total-terms>2</total-terms>
        </term-id>
        <credit>
           <scheme>ects</scheme>
           <value>5
       </credit>
    </component>
</components-recognized>
<virtual-components> <!-- Table C -->
    <component>
        <los-code>789HIJ</los-code>
```

```
<title>Introduction to Matlab (lab)</title>
               <credit>
                   <scheme>ects</scheme>
                   <value>1</value>
               </credit>
               <short-description>A short description about the matlab laboratory course/short-description>
           </component>
       </ri>
        <!-- Commitments -->
       <student-signature>
           <timestamp>2020-12-19T10:43:16+02:00</timestamp>
           <signer-app>System A</signer-app>
       </student-signature>
       <sending-hei-signature>
           <signer-name>Frank White</signer-name>
           <signer-position>Professor</signer-position>
           <signer-email>frank@system.a.edy</signer-email>
           <timestamp>2020-12-20T12:16:15+02:00</timestamp>
           <signer-app>System A</signer-app>
       </sending-hei-signature>
       <receiving-hei-signature>
           <signer-name>Ochoa Patel</signer-name>
           <signer-position>Lecturer</signer-position>
           <signer-email>patel@example b.edu</signer-email>
           <timestamp>2020-12-25T10:16:10+01:00</timestamp>
           <signer-app>Dashboard-OLA</signer-app>
       </receiving-hei-signature>
   </first-version>
   <learning-outcomes-url>https://www.math.system.a.edu/learning outcomes url/learning-outcomes-url>
   orisions-url>https://www.math.system.b.edu/provisions url/provisions-url>
</la>
```

Ex 5 LA Update Request (rejection)

Ex 6 LA GET Response (rejected by Receiving)

```
<!-- The current LA result is a proposal to be tested during implementation. -->
\langle la \rangle
   <omobility-id>c442c289-5541-4cae-9edb-8ad83e133/omobility-id>
   <sending-hei>
       <hei-id>example a.edu</hei-id>
       <ounit-name>Department of Mathematics
       <ounit-id>1234
       <contact-person>
           <given-names>Adams
           <family-name>Baker</family-name>
           <email>adams@example a.edu
       </contact-person>
   </sending-hei>
   <receiving-hei>
       <hei-id>example b.edu</hei-id>
       <ounit-name>Department of Mathematics
       <ounit-id>5653486D98511E16E0530B501E0A4594
       <contact-person>
           <given-names>Clark
           <family-name>Davis</family-name>
           <email>clark.davis@example b.edu
       </contact-person>
   </receiving-hei>
   <receiving-academic-year-id>2020/2021/receiving-academic-year-id>
   <student>
       <given-names>Nalty</given-names>
       <family-name>Patel</family-name>
       <global-id>urn:schac:personalUniqueCode:int:esi:example a.edu:85525839/global-id>
```

Ex 7 LA GET Response (with <changes-proposal />)

```
<1a>
   <omobility-id>c442c289-5541-4cae-9edb-8ad83e133
   <sending-hei>
      <hei-id>example a.edu</hei-id>
      <ounit-name>Department of Mathematics
      <ounit-id>1234
      <contact-person>
          <given-names>Adams</given-names>
          <family-name>Baker</family-name>
          <email>adams@example a.edu
      </contact-person>
   </sending-hei>
   <receiving-hei>
      <hei-id>example b.edu</hei-id>
      <ounit-name>Department of Mathematics
      <ounit-id>5653486D98511E16E0530B501E0A4594/ounit-id>
      <contact-person>
          <given-names>Clark
          <family-name>Davis</family-name>
          <email>clark.davis@example b.edu
      </contact-person>
   </receiving-hei>
```

```
<receiving-academic-year-id>2020/2021/receiving-academic-year-id>
<student>
   <given-names>Nalty
   <family-name>Patel</family-name>
   <qlobal-id>urn:schac:personalUniqueCode:int:esi:example a.edu:85525839/qlobal-id>
   <birth-date>1997-05-05
   <citizenship>GR</citizenship>
   <gender>2</gender>
   <email>nalty@example a.edu
</student>
<start-year-month>2021-02</start-year-month>
<end-year-month>2021-07
<eqf-level-studied-at-departure>6</eqf-level-studied-at-departure>
<isced-f-code>0541</isced-f-code>
<isced-clarification>just a clarification of the isced</isced-clarification>
<student-language-skill>
   <language>en</language>
   <cefr-level>B2</cefr-level>
</student-language-skill>
<first-version>
   <components-studied> <!-- Table A -->
       <component>
           <los-code>123-ABC</los-code>
           <title>Advanced Logics for Computer Scientists</title>
           <term-id>
               <term-number>2</term-number>
               <total-terms>2</total-terms>
           </term-id>
           <credit>
               <scheme>ects</scheme>
               <value>3</value>
           </credit>
       </component>
       <component>
           <los-code>456-EFG</los-code>
           <title>Big Data Mining and Processing</title>
           <term-id>
               <term-number>2</term-number>
               <total-terms>2</total-terms>
           </term-id>
           <credit>
               <scheme>ects</scheme>
```

```
<value>4</value>
        </credit>
    </component>
</components-studied>
<components-recognized> <!-- Table B -->
    <component>
        <los-code>843-XYZ</los-code>
        <title>Advanced Logic</title>
        <term-id>
           <term-number>2</term-number>
           <total-terms>2</total-terms>
        </term-id>
        <credit>
            <scheme>ects</scheme>
            <value>3</value>
        </credit>
    </component>
    <component>
        <los-code>542-KML</los-code>
        <title>Big Data</title>
        <term-id>
           <term-number>2</term-number>
           <total-terms>2</total-terms>
        </term-id>
        <credit>
           <scheme>ects</scheme>
           <value>5</value>
        </credit>
    </component>
</components-recognized>
<virtual-components> <!-- Table C -->
    <component>
        <los-code>789HIJ</los-code>
        <title>Introduction to Matlab (lab)</title>
        <credit>
           <scheme>ects</scheme>
            <value>1</value>
        </credit>
        <short-description>A short description about the matlab laboratory course/short-description>
    </component>
</ri>
<!-- Commitments -->
<student-signature>
    <timestamp>2020-12-19T10:43:16+02:00</timestamp>
    <signer-app>System A</signer-app>
</student-signature>
```

```
<sending-hei-signature>
        <signer-name>Frank White</signer-name>
        <signer-position>Professor</signer-position>
        <signer-email>frank@system.a.edy</signer-email>
        <timestamp>2020-12-20T12:16:15+02:00</timestamp>
        <signer-app>System A</signer-app>
    </sending-hei-signature>
    <receiving-hei-signature>
        <signer-name>Ochoa Patel</signer-name>
        <signer-position>Lecturer</signer-position>
        <signer-email>patel@example b.edu</signer-email>
        <timestamp>2020-12-25T10:16:10+01:00</timestamp>
        <signer-app>Dashboard-OLA</signer-app>
    </receiving-hei-signature>
</first-version>
<changes-proposal id="4C159B15BAF222F868493C167125FA324-4">
    <components-studied> <!-- Table A2 -->
        <component status="deleted" reason-code="language-mismatch">
            <los-code>123-ABC</los-code>
            <title>Advanced Logics for Computer Scientists</title>
            <term-id>
               <term-number>2</term-number>
                <total-terms>2</total-terms>
            </term-id>
            <credit>
                <scheme>ects</scheme>
                <value>3</value>
            </credit>
        </component>
        <component status="inserted" reason-text="a custom reason">
            <los-code>574-MNX</los-code>
            <title>Calculus 201</title>
            <term-id>
                <term-number>2</term-number>
                <total-terms>2</total-terms>
            </term-id>
            <credit>
               <scheme>ects</scheme>
               <value>5</value>
            </credit>
        </component>
    </components-studied>
```

```
<components-recognized> <!-- Table B2 -->
        <component status="deleted" reason-code="language-mismatch">
            <los-code>843-XYZ</los-code>
            <title>Advanced Logic</title>
            <term-id>
               <term-number>2</term-number>
               <total-terms>2</total-terms>
            </term-id>
            <credit>
               <scheme>ects</scheme>
               <value>3</value>
           </credit>
        </component>
        <component status="inserted" reason-text="a custom reason">
            <los-code>032-CAL</los-code>
            <title>Calculus</title>
            <term-id>
               <term-number>2</term-number>
               <total-terms>2</total-terms>
           </term-id>
           <credit>
               <scheme>ects</scheme>
               <value>5
           </credit>
        </component>
    </components-recognized>
   <student> <!-- changes at student data could also be made -->
        <birth-date>1998-01-01
    </student>
    <!-- Commitments -->
   <student-signature>
       <timestamp>2021-01-05T19:32:16+02:00</timestamp>
        <signer-app>System A</signer-app>
   </student-signature>
    <sending-hei-signature>
        <signer-name>Frank White</signer-name>
        <signer-position>Professor</signer-position>
        <signer-email>frank@system.a.edy</signer-email>
        <timestamp>2021-01-07T11:50:15+02:00</timestamp>
        <signer-app>System A</signer-app>
    </sending-hei-signature>
</changes-proposal>
<learning-outcomes-url>https://www.math.system.a.edu/learning outcomes url/learning-outcomes-url>
```

Ex 8 LA Update Request (acceptance during mobility)

Ex 9 LA GET Response (with <approved-changes />)

```
<ounit-id>5653486D98511E16E0530B501E0A4594
    <contact-person>
       <given-names>Clark</given-names>
       <family-name>Davis</family-name>
       <email>clark.davis@example b.edu
    </contact-person>
</receiving-hei>
<receiving-academic-year-id>2020/2021/receiving-academic-year-id>
<student>
   <given-names>Nalty</given-names>
   <family-name>Patel</family-name>
    <global-id>urn:schac:personalUniqueCode:int:esi:example a.edu:85525839/global-id>
    <birth-date>1998-01-01!-- Student's updated birthdate -->
    <citizenship>GR</citizenship>
    <gender>2</gender>
    <email>nalty@example a.edu
</student>
<start-year-month>2021-02</start-year-month>
<end-year-month>2021-07
<eqf-level-studied-at-departure>6</eqf-level-studied-at-departure>
<isced-f-code>0541</isced-f-code>
<isced-clarification>just a clarification of the isced</isced-clarification>
<student-language-skill>
   <language>en</language>
    <cefr-level>B2</cefr-level>
</student-language-skill>
<first-version>
   <components-studied> <!-- Table A -->
       <component>
           <los-code>123-ABC</los-code>
           <title>Advanced Logics for Computer Scientists</title>
           <term-id>
               <term-number>2</term-number>
               <total-terms>2</total-terms>
           </term-id>
           <credit>
               <scheme>ects</scheme>
               <value>3</value>
           </credit>
       </component>
       <component>
           <los-code>456-EFG</los-code>
```

```
<title>Big Data Mining and Processing</title>
        <term-id>
            <term-number>2</term-number>
            <total-terms>2</total-terms>
        </term-id>
        <credit>
            <scheme>ects</scheme>
            <value>4</value>
        </credit>
    </component>
</components-studied>
<components-recognized> <!-- Table B -->
    <component>
        <los-code>843-XYZ</los-code>
        <title>Advanced Logic</title>
        <term-id>
            <term-number>2</term-number>
            <total-terms>2</total-terms>
        </term-id>
        <credit>
            <scheme>ects</scheme>
            <value>3</value>
        </credit>
    </component>
    <component>
        <los-code>542-KML</los-code>
        <title>Big Data</title>
        <term-id>
            <term-number>2</term-number>
            <total-terms>2</total-terms>
        </term-id>
        <credit>
            <scheme>ects</scheme>
            <value>5</value>
        </credit>
    </component>
</components-recognized>
<virtual-components> <!-- Table C -->
    <component>
        <los-code>789HIJ</los-code>
        <title>Introduction to Matlab (lab)</title>
        <credit>
            <scheme>ects</scheme>
            <value>1
        </credit>
        <short-description>A short description about the matlab laboratory course/short-description>
    </component>
```

```
</ri></virtual-components>
    <!-- Commitments -->
    <student-signature>
        <timestamp>2020-12-19T10:43:16+02:00</timestamp>
        <signer-app>System A</signer-app>
    </student-signature>
    <sending-hei-signature>
        <signer-name>Frank White</signer-name>
        <signer-position>Professor</signer-position>
        <signer-email>frank@system.a.edy</signer-email>
        <timestamp>2020-12-20T12:16:15+02:00</timestamp>
        <signer-app>System A</signer-app>
    </sending-hei-signature>
    <receiving-hei-signature>
        <signer-name>Ochoa Patel</signer-name>
        <signer-position>Lecturer</signer-position>
        <signer-email>patel@example b.edu</signer-email>
        <timestamp>2020-12-25T10:16:10+01:00</timestamp>
        <signer-app>Dashboard-OLA
   </receiving-hei-signature>
</first-version>
<approved-changes>
    <components-studied> <!-- Table A2 -->
        <component status="deleted" reason-code="language-mismatch">
            <los-code>123-ABC</los-code>
            <title>Advanced Logics for Computer Scientists</title>
            <term-id>
                <term-number>2</term-number>
               <total-terms>2</total-terms>
            </term-id>
            <credit>
               <scheme>ects</scheme>
                <value>3</value>
            </credit>
        </component>
        <component status="inserted" reason-text="a custom reason">
            <los-code>574-MNX</los-code>
            <title>Calculus 201</title>
            <term-id>
                <term-number>2</term-number>
               <total-terms>2</total-terms>
            </term-id>
```

```
<credit>
            <scheme>ects</scheme>
            <value>5</value>
        </credit>
    </component>
</components-studied>
<components-recognized> <!-- Table B2 -->
    <component status="deleted" reason-code="language-mismatch">
        <los-code>843-XYZ</los-code>
        <title>Advanced Logic</title>
        <term-id>
           <term-number>2</term-number>
            <total-terms>2</total-terms>
        </term-id>
        <credit>
            <scheme>ects</scheme>
            <value>3</value>
        </credit>
    </component>
    <component status="inserted" reason-text="a custom reason">
        <los-code>032-CAL</los-code>
        <title>Calculus</title>
        <term-id>
           <term-number>2</term-number>
           <total-terms>2</total-terms>
        </term-id>
        <credit>
           <scheme>ects</scheme>
           <value>5</value>
        </credit>
    </component>
</components-recognized>
<student> <!-- changes at student data could also be made -->
    <birth-date>1998-01-01
</student>
<!-- Commitments -->
<student-signature>
    <timestamp>2021-01-05T19:32:16+02:00</timestamp>
    <signer-app>System A</signer-app>
</student-signature>
<sending-hei-signature>
    <signer-name>Frank White</signer-name>
    <signer-position>Professor</signer-position>
    <signer-email>frank@system.a.edy</signer-email>
```

Ex 10 LA Update Request (rejection during mobility)

Ex 11 LA GET Response

```
<1a>
   <omobility-id>c442c289-5541-4cae-9edb-8ad83e133
   <sending-hei>
       <hei-id>example b.edu</hei-id>
       <ounit-name>Department of Mathematics
       <ounit-id>5653486D98511E16E0530B501E0A4594
      <contact-person>
          <given-names>Clark</given-names>
          <family-name>Davis</family-name>
          <email>clark.davis@example b.edu
       </contact-person>
   </sending-hei>
   <receiving-hei>
       <hei-id>example a.edu</hei-id>
       <ounit-name>Department of Mathematics
       <ounit-id>1234
      <contact-person>
          <given-names>Adams
          <family-name>Baker</family-name>
          <email>adams@example a.edu</email>
      </contact-person>
   </receiving-hei>
   <receiving-academic-year-id>2020/2021</receiving-academic-year-id>
   <student>
      <given-names>Nalty
      <family-name>Patel</family-name>
      <global-id>urn:schac:personalUniqueCode:int:esi:example b.edu:85525839/global-id>
       <birth-date>1997-05-05
      <citizenship>GR</citizenship>
      <gender>2</gender>
      <email>nalty@example b.edu
   </student>
   <start-year-month>2021-02</start-year-month>
   <end-year-month>2021-07
   <eqf-level-studied-at-departure>
   <isced-f-code>0541</isced-f-code>
   <isced-clarification>just a clarification of the isced</isced-clarification>
```

```
<student-language-skill>
   <language>en</language>
    <cefr-level>B2</cefr-level>
</student-language-skill>
<changes-proposal id="4C159B15BAF222F868493C167125FA324-1">
   <components-studied> <!-- Table A -->
        <component>
            <los-code>123-ABC</los-code>
            <title>Advanced Logics for Computer Scientists</title>
            <term-id>
                <term-number>2</term-number>
                <total-terms>2</total-terms>
            </term-id>
            <credit>
                <scheme>ects</scheme>
                <value>3</value>
            </credit>
        </component>
        <component>
            <los-code>456-EFG</los-code>
            <title>Big Data Mining and Processing</title>
            <term-id>
                <term-number>2</term-number>
                <total-terms>2</total-terms>
            </term-id>
            <credit>
                <scheme>ects</scheme>
                <value>4</value>
           </credit>
        </component>
    </components-studied>
    <components-recognized> <!-- Table B -->
        <component>
            <los-code>843-XYZ</los-code>
            <title>Advanced Logic</title>
                <term-number>2</term-number>
                <total-terms>2</total-terms>
            </term-id>
            <credit>
                <scheme>ects</scheme>
                <value>3</value>
            </credit>
        </component>
        <component>
            <los-code>542-KML</los-code>
            <title>Big Data</title>
```

```
<term-id>
                   <term-number>2</term-number>
                   <total-terms>2</total-terms>
               </term-id>
               <credit>
                   <scheme>ects</scheme>
                   <value>5</value>
               </credit>
           </component>
       </components-recognized>
       <virtual-components> <!-- Table C -->
           <component>
               <los-code>789HIJ</los-code>
               <title>Introduction to Matlab (lab)</title>
               <credit>
                   <scheme>ects</scheme>
                   <value>1</value>
               </credit>
               <short-description>A short description about the matlab laboratory course/short-description>
           </component>
       </ri>
        <!-- Commitments -->
       <student-signature>
           <timestamp>2020-12-19T10:43:16+02:00</timestamp>
           <signer-app>Dashboard-OLA
       </student-signature>
       <sending-hei-signature>
           <signer-name>Frank White</signer-name>
           <signer-position>Professor</signer-position>
           <signer-email>frank@system.b.edy</signer-email>
           <timestamp>2020-12-20T12:16:15+02:00</timestamp>
           <signer-app>Dashboard-OLA</signer-app>
       </sending-hei-signature>
   </changes-proposal>
   <learning-outcomes-url>https://www.math.system.b.edu/learning outcomes url/learning-outcomes-url>
   <previsions-url>https://www.math.system.a.edu/provisions url/provisions-url>
</la>
```

Ex 12 LA Update Request (acceptance)

Ex 13 LA Update Response (success)

```
<omobility-las-update-response>
     <success-user-message>The update request was received with success.</success-user-message>
</omobility-las-update-response>
```

Ex 14 GET LA Response (the first version)

```
<receiving-hei>
   <hei-id>example a.edu</hei-id>
   <ounit-name>Department of Mathematics
   <ounit-id>1234
   <contact-person>
       <given-names>Adams
       <family-name>Baker</family-name>
       <email>adams@example a.edu
   </contact-person>
</receiving-hei>
<receiving-academic-year-id>2020/2021</receiving-academic-year-id>
<student>
   <given-names>Nalty</given-names>
   <family-name>Patel</family-name>
   <global-id>urn:schac:personalUniqueCode:int:esi:example b.edu:85525839/global-id>
   <birth-date>1997-05-05
   <citizenship>GR</citizenship>
   <gender>2</gender>
   <email>nalty@example b.edu
</student>
<start-year-month>2021-02</start-year-month>
<end-year-month>2021-07/end-year-month>
<eqf-level-studied-at-departure>6</eqf-level-studied-at-departure>
<isced-f-code>0541</isced-f-code>
<isced-clarification>just a clarification of the isced</isced-clarification>
<student-language-skill>
   <language>en</language>
   <cefr-level>B2</cefr-level>
</student-language-skill>
<first-version>
   <components-studied> <!-- Table A -->
       <component>
           <los-code>123-ABC</los-code>
           <title>Advanced Logics for Computer Scientists</title>
           <term-id>
               <term-number>2</term-number>
               <total-terms>2</total-terms>
           </term-id>
           <credit>
               <scheme>ects</scheme>
               <value>3</value>
```

```
</credit>
    </component>
    <component>
        <los-code>456-EFG</los-code>
        <title>Big Data Mining and Processing</title>
        <term-id>
            <term-number>2</term-number>
            <total-terms>2</total-terms>
        </term-id>
        <credit>
            <scheme>ects</scheme>
            <value>4</value>
        </credit>
    </component>
</components-studied>
<components-recognized> <!-- Table B -->
    <component>
        <los-code>843-XYZ</los-code>
        <title>Advanced Logic</title>
        <term-id>
            <term-number>2</term-number>
            <total-terms>2</total-terms>
        </term-id>
        <credit>
            <scheme>ects</scheme>
            <value>3</value>
        </credit>
    </component>
    <component>
        <los-code>542-KML</los-code>
        <title>Big Data</title>
        <term-id>
            <term-number>2</term-number>
            <total-terms>2</total-terms>
        </term-id>
        <credit>
            <scheme>ects</scheme>
            <value>5</value>
        </credit>
    </component>
</components-recognized>
<virtual-components> <!-- Table C -->
    <component>
        <los-code>789HIJ</los-code>
        <title>Introduction to Matlab (lab)</title>
        <credit>
            <scheme>ects</scheme>
```

```
<value>1</value>
               </credit>
               <short-description>A short description about the matlab laboratory course
           </component>
       </ri>
       <!-- Commitments -->
       <student-signature>
           <timestamp>2020-12-19T10:43:16+02:00</timestamp>
           <signer-app>Dashboard-OLA</signer-app>
       </student-signature>
       <sending-hei-signature>
           <signer-name>Frank White</signer-name>
           <signer-position>Professor</signer-position>
           <signer-email>frank@system.b.edy</signer-email>
           <timestamp>2020-12-20T12:16:15+02:00</timestamp>
           <signer-app>Dashboard-OLA</signer-app>
       </sending-hei-signature>
       <receiving-hei-signature>
           <signer-name>Ochoa Patel
           <signer-position>Lecturer</signer-position>
           <signer-email>patel@example a.edu</signer-email>
           <timestamp>2020-12-25T10:16:10+01:00</timestamp>
           <signer-app>System A</signer-app>
       </receiving-hei-signature>
   </first-version>
   <learning-outcomes-url>https://www.math.system.b.edu/learning outcomes url/learning-outcomes-url>
   <previsions-url>https://www.math.system.a.edu/provisions url/provisions-url>
</la>
```

Ex 15 LA Update Request (rejection)

Ex 16 LA GET Response (rejected by Receiving)

```
<!-- The current LA result is a proposal to be tested during implementation. -->
\langle la \rangle
   <omobility-id>c442c289-5541-4cae-9edb-8ad83e133/omobility-id>
   <sending-hei>
       <hei-id>example b.edu</hei-id>
       <ounit-name>Department of Mathematics
       <ounit-id>5653486D98511E16E0530B501E0A4594/ounit-id>
       <contact-person>
           <given-names>Clark</given-names>
           <family-name>Davis</family-name>
           <email>clark.davis@example b.edu
       </contact-person>
   </sending-hei>
   <receiving-hei>
       <hei-id>example a.edu</hei-id>
       <ounit-name>Department of Mathematics
       <ounit-id>1234
       <contact-person>
           <given-names>Adams
           <family-name>Baker</family-name>
           <email>adams@example a.edu
       </contact-person>
   </receiving-hei>
   <receiving-academic-year-id>2020/2021/receiving-academic-year-id>
   <student>
       <given-names>Nalty</given-names>
       <family-name>Patel</family-name>
       <qlobal-id>urn:schac:personalUniqueCode:int:esi:example b.edu:85525839/qlobal-id>
       <birth-date>1997-05-05
       <citizenship>GR</citizenship>
       <gender>2</gender>
```

Ex 17 LA GET Response (with <changes-proposal />)

```
<1a>
   <omobility-id>c442c289-5541-4cae-9edb-8ad83e133/omobility-id>
   <sending-hei>
       <hei-id>example b.edu</hei-id>
       <ounit-name>Department of Mathematics
       <ounit-id>5653486D98511E16E0530B501E0A4594
       <contact-person>
          <given-names>Clark</given-names>
          <family-name>Davis</family-name>
          <email>clark.davis@example b.edu
       </contact-person>
   </sending-hei>
   <receiving-hei>
       <hei-id>example a.edu</hei-id>
       <ounit-name>Department of Mathematics
       <ounit-id>1234
       <contact-person>
          <given-names>Adams
          <family-name>Baker</family-name>
          <email>adams@example a.edu</email>
       </contact-person>
   </receiving-hei>
   <receiving-academic-year-id>2020/2021/receiving-academic-year-id>
```

```
<student>
   <given-names>Nalty</given-names>
   <family-name>Patel</family-name>
   <qlobal-id>urn:schac:personalUniqueCode:int:esi:example b.edu:85525839/qlobal-id>
   <birth-date>1997-05-05
   <citizenship>GR</citizenship>
   <gender>2</gender>
   <email>nalty@example b.edu
</student>
<start-year-month>2021-02</start-year-month>
<end-year-month>2021-07
<eqf-level-studied-at-departure>6</eqf-level-studied-at-departure>
<isced-f-code>0541</isced-f-code>
<isced-clarification>just a clarification of the isced</isced-clarification>
<student-language-skill>
   <language>en</language>
   <cefr-level>B2</cefr-level>
</student-language-skill>
<first-version>
   <components-studied> <!-- Table A -->
       <component>
           <los-code>123-ABC</los-code>
           <title>Advanced Logics for Computer Scientists</title>
           <term-id>
               <term-number>2</term-number>
               <total-terms>2</total-terms>
           </term-id>
           <credit>
               <scheme>ects</scheme>
               <value>3</value>
           </credit>
       </component>
       <component>
           <los-code>456-EFG</los-code>
           <title>Big Data Mining and Processing</title>
           <term-id>
               <term-number>2</term-number>
               <total-terms>2</total-terms>
           </term-id>
           <credit>
               <scheme>ects</scheme>
               <value>4</value>
           </credit>
       </component>
```

```
</components-studied>
<components-recognized> <!-- Table B -->
    <component>
        <los-code>843-XYZ</los-code>
        <title>Advanced Logic</title>
        <term-id>
            <term-number>2</term-number>
            <total-terms>2</total-terms>
        </term-id>
        <credit>
            <scheme>ects</scheme>
            <value>3</value>
        </credit>
    </component>
    <component>
        <los-code>542-KML</los-code>
        <title>Big Data</title>
        <term-id>
            <term-number>2</term-number>
            <total-terms>2</total-terms>
        </term-id>
        <credit>
            <scheme>ects</scheme>
            <value>5</value>
        </credit>
    </component>
</components-recognized>
<virtual-components> <!-- Table C -->
    <component>
        <los-code>789HIJ</los-code>
        <title>Introduction to Matlab (lab)</title>
        <credit>
            <scheme>ects</scheme>
            <value>1</value>
        </credit>
        <short-description>A short description about the matlab laboratory course/short-description>
    </component>
</ri></virtual-components>
<!-- Commitments -->
<student-signature>
    <timestamp>2020-12-19T10:43:16+02:00</timestamp>
    <signer-app>Dashboard-OLA</signer-app>
</student-signature>
<sending-hei-signature>
    <signer-name>Frank White</signer-name>
```

```
<signer-position>Professor</signer-position>
        <signer-email>frank@system.b.edy</signer-email>
        <timestamp>2020-12-20T12:16:15+02:00</timestamp>
        <signer-app>Dashboard-OLA</signer-app>
   </sending-hei-signature>
    <receiving-hei-signature>
        <signer-name>Ochoa Patel</signer-name>
        <signer-position>Lecturer</signer-position>
        <signer-email>patel@example a.edu</signer-email>
        <timestamp>2020-12-25T10:16:10+01:00</timestamp>
        <signer-app>System A</signer-app>
    </receiving-hei-signature>
</first-version>
<changes-proposal id="4C159B15BAF222F868493C167125FA324-4">
    <components-studied> <!-- Table A2 -->
        <component status="deleted" reason-code="language-mismatch">
            <los-code>123-ABC</los-code>
            <title>Advanced Logics for Computer Scientists</title>
            <term-id>
               <term-number>2</term-number>
                <total-terms>2</total-terms>
            </term-id>
            <credit>
               <scheme>ects</scheme>
               <value>3</value>
            </credit>
        </component>
        <component status="inserted" reason-text="a custom reason">
            <los-code>574-MNX</los-code>
            <title>Calculus 201</title>
            <term-id>
                <term-number>2</term-number>
                <total-terms>2</total-terms>
            </term-id>
            <credit>
                <scheme>ects</scheme>
               <value>5
            </credit>
        </component>
    </components-studied>
    <components-recognized> <!-- Table B2 -->
        <component status="deleted" reason-code="language-mismatch">
            <los-code>843-XYZ</los-code>
```

```
<title>Advanced Logic</title>
                <term-id>
                   <term-number>2</term-number>
                   <total-terms>2</total-terms>
                </term-id>
                <credit>
                   <scheme>ects</scheme>
                   <value>3</value>
               </credit>
            </component>
            <component status="inserted" reason-text="a custom reason">
                <los-code>032-CAL</los-code>
               <title>Calculus</title>
                <term-id>
                   <term-number>2</term-number>
                   <total-terms>2</total-terms>
                </term-id>
                <credit>
                   <scheme>ects</scheme>
                   <value>5
               </credit>
            </component>
        </components-recognized>
       <student> <!-- changes at student data could also be made -->
            <birth-date>1998-01-01
       </student>
        <!-- Commitments -->
       <student-signature>
           <timestamp>2021-01-05T19:32:16+02:00</timestamp>
           <signer-app>Dashboard-OLA</signer-app>
       </student-signature>
        <sending-hei-signature>
            <signer-name>Frank White</signer-name>
            <signer-position>Professor</signer-position>
            <signer-email>frank@system.b.edy</signer-email>
            <timestamp>2021-01-07T11:50:15+02:00</timestamp>
            <signer-app>Dashboard-OLA</signer-app>
       </sending-hei-signature>
    </changes-proposal>
    <learning-outcomes-url>https://www.math.system.b.edu/learning outcomes url/learning-outcomes-url>
    <previsions-url>https://www.math.system.a.edu/provisions url/provisions-url>
</la>
```

Ex 18 LA Update Request (acceptance during mobility)

Ex 19 LA GET Response (with <approved-changes />)

```
\langle la \rangle
   <omobility-id>c442c289-5541-4cae-9edb-8ad83e133
   <sending-hei>
       <hei-id>example b.edu</hei-id>
       <ounit-name>Department of Mathematics
       <ounit-id>5653486D98511E16E0530B501E0A4594
       <contact-person>
          <given-names>Clark</given-names>
          <family-name>Davis</family-name>
          <email>clark.davis@example b.edu
       </contact-person>
   </sending-hei>
   <receiving-hei>
       <hei-id>example a.edu</hei-id>
       <ounit-name>Department of Mathematics
       <ounit-id>1234
       <contact-person>
          <given-names>Adams
          <family-name>Baker</family-name>
```

```
<email>adams@example a.edu
   </contact-person>
</receiving-hei>
<receiving-academic-year-id>2020/2021/receiving-academic-year-id>
<student>
   <given-names>Nalty
   <family-name>Patel</family-name>
   <global-id>urn:schac:personalUniqueCode:int:esi:example b.edu:85525839/global-id>
   <birth-date>1997-05-05
   <citizenship>GR</citizenship>
   <gender>2</gender>
   <email>nalty@example b.edu</email>
</student>
<start-year-month>2021-02</start-year-month>
<end-year-month>2021-07</end-year-month>
<eqf-level-studied-at-departure>6</eqf-level-studied-at-departure>
<isced-f-code>0541</isced-f-code>
<isced-clarification>just a clarification of the isced</isced-clarification>
<student-language-skill>
   <language>en</language>
   <cefr-level>B2</cefr-level>
</student-language-skill>
<first-version>
   <components-studied> <!-- Table A -->
        <component>
           <los-code>123-ABC</los-code>
           <title>Advanced Logics for Computer Scientists</title>
           <term-id>
               <term-number>2</term-number>
               <total-terms>2</total-terms>
           </term-id>
           <credit>
               <scheme>ects</scheme>
               <value>3</value>
           </credit>
        </component>
        <component>
           <los-code>456-EFG</los-code>
           <title>Big Data Mining and Processing</title>
               <term-number>2</term-number>
               <total-terms>2</total-terms>
```

```
</term-id>
        <credit>
            <scheme>ects</scheme>
            <value>4</value>
        </credit>
    </component>
</components-studied>
<components-recognized> <!-- Table B -->
    <component>
        <los-code>843-XYZ</los-code>
        <title>Advanced Logic</title>
        <term-id>
           <term-number>2</term-number>
           <total-terms>2</total-terms>
        </term-id>
        <credit>
            <scheme>ects</scheme>
           <value>3</value>
        </credit>
    </component>
    <component>
        <los-code>542-KML</los-code>
        <title>Big Data</title>
        <term-id>
           <term-number>2</term-number>
           <total-terms>2</total-terms>
        </term-id>
        <credit>
           <scheme>ects</scheme>
           <value>5</value>
        </credit>
    </component>
</components-recognized>
<virtual-components> <!-- Table C -->
    <component>
        <los-code>789HIJ</los-code>
        <title>Introduction to Matlab (lab)</title>
        <credit>
           <scheme>ects</scheme>
           <value>1</value>
        </credit>
        <short-description>A short description about the matlab laboratory course
    </component>
</ri></virtual-components>
<!-- Commitments -->
<student-signature>
```

```
<timestamp>2020-12-19T10:43:16+02:00</timestamp>
        <signer-app>Dashboard-OLA
    </student-signature>
   <sending-hei-signature>
        <signer-name>Frank White</signer-name>
        <signer-position>Professor</signer-position>
        <signer-email>frank@system.b.edy</signer-email>
        <timestamp>2020-12-20T12:16:15+02:00</timestamp>
        <signer-app>Dashboard-OLA</signer-app>
   </sending-hei-signature>
   <receiving-hei-signature>
        <signer-name>Ochoa Patel</signer-name>
        <signer-position>Lecturer</signer-position>
        <signer-email>patel@example a.edu</signer-email>
        <timestamp>2020-12-25T10:16:10+01:00</timestamp>
        <signer-app>System A</signer-app>
   </receiving-hei-signature>
</first-version>
<approved-changes>
    <components-studied> <!-- Table A2 -->
        <component status="deleted" reason-code="language-mismatch">
            <los-code>123-ABC</los-code>
            <title>Advanced Logics for Computer Scientists</title>
            <term-id>
               <term-number>2</term-number>
               <total-terms>2</total-terms>
            </term-id>
            <credit>
               <scheme>ects</scheme>
               <value>3</value>
           </credit>
        </component>
        <component status="inserted" reason-text="a custom reason">
            <los-code>574-MNX</los-code>
           <title>Calculus 201</title>
           <term-id>
               <term-number>2</term-number>
               <total-terms>2</total-terms>
            </term-id>
            <credit>
               <scheme>ects</scheme>
               <value>5</value>
           </credit>
```

```
</component>
</components-studied>
<components-recognized> <!-- Table B2 -->
    <component status="deleted" reason-code="language-mismatch">
       <los-code>843-XYZ</los-code>
       <title>Advanced Logic</title>
       <term-id>
           <term-number>2</term-number>
           <total-terms>2</total-terms>
       </term-id>
       <credit>
           <scheme>ects</scheme>
           <value>3</value>
       </credit>
    </component>
    <component status="inserted" reason-text="a custom reason">
       <los-code>032-CAL</los-code>
       <title>Calculus</title>
       <term-id>
           <term-number>2</term-number>
           <total-terms>2</total-terms>
       </term-id>
       <credit>
           <scheme>ects</scheme>
           <value>5
       </credit>
    </component>
</components-recognized>
<student> <!-- changes at student data could also be made -->
    <birth-date>1998-01-01
</student>
<!-- Commitments -->
<student-signature>
   <timestamp>2021-01-05T19:32:16+02:00</timestamp>
    <signer-app>Dashboard-OLA
</student-signature>
<sending-hei-signature>
    <signer-name>Frank White</signer-name>
    <signer-position>Professor</signer-position>
    <signer-email>frank@system.b.edy</signer-email>
    <timestamp>2021-01-07T11:50:15+02:00</timestamp>
    <signer-app>Dashboard-OLA
</sending-hei-signature>
```

Ex 20 LA Update Request (rejection during mobility)