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| --- | --- | --- |
|  | Web Service Specification | |
| 8/22/2013 | Graduate Capstone |  |

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# 1 Introduction

This document is created to provide technical information required in making web service calls from the client applications. The scope of the document includes specification of the web service and descriptions.

## 1.1 Indented Audience

This documented is intended for individuals of a technical background including but not limited to developers, testers, product teams or administrators.

## 1.2 References

* <http://www.healthit.gov/sites/default/files/nhin-web-services-registry-production-specification-v2.0-1.pdf>
* <http://www.fdsn.org/webservices/FDSN-WS-Specifications-1.0.pdf>
* <http://heimshelp.deewr.gov.au/sites/heimshelp/Support/Documents/CHESSNTechnicalSpecifications.pdf>
* <http://www-sk.let.uu.nl/u/d2r-6b.pdf>
* <http://www.civilservice.gov.uk/wp-content/uploads/2012/04/ePIMS_Benchmarking_Web_Service_Specification.pdf>

## 1.3 Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Date | Reason For Change | Version |
| Andy Bottom | 05/28/2013 | Started the formatting and organizing of the document. | 0.1 |
| Andy Bottom | 08/19/2013 | Updated the web services | 0.2 |
| Andy Bottom | 08/21/2013 | Finished the Technical documentation of the web services | 1.0 |

# 2 Technical Documentation

The following section contains a technical explanation and overview of the web services application.

## 2.1 Architecture Overview

The Web Services are used in the system in order to provide data and actions to the client application. The largest role that the Web Services acts as is the Data Access Layer for the system. This by doing this, all interaction with the Database is completely removed and only limited to the services.

## 2.2 Technical Requirements

The Web Services are developed in Java and are implemented via utilizing the Spring MVC Framework.

The Web Services follows the RESTful API. This API follows the HTTP 1.1 principals. The accessing of the Web Services relies on protocols such as Transmission Control Protocol/Internet Protocol (TCP/IP) and Hypertext Transfer Protocol (HTTP).

The operations that are utilized in the Web Services are the following explained in the following table and how they are used in the system.

|  |  |
| --- | --- |
| Operation | Description |
| GET | The operation is used for retrieving data from the database. |
| POST | Passes in an object in the request which is then added as a new entry in the desired table. |
| PUT | Performs an update of a preexisting entry in a table. |
| DELETE | Removes an entry from a table in the database. |

## 2.3 HTTP Status Codes

With performing requests over HTTP, occasionally request fail due to an number of factors. When these failures occur, a status code is returned to the client application. Below is a list and description of the most common codes that are encountered when attempting connection with Web Services.

|  |  |
| --- | --- |
| Code | Description |
| 200 | A Successful request and response. |
| 400 | Bad request due to missing data or parameter |
| 401 | Unauthorized authentication or access |
| 500 | Internal Server Error |
| 503 | The Service is temporarily unavailable or under maintenance |

## 2.4 Security

Due to the open nature of the Web Services, security is very important. However, the extra security designs are outside the scope of the current project. However, currently future plans to implement security are created. The plan is to eventually implement \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ as a design method that will secure the web services of the system.

## 2.5 Testing

Testing for the web services are outside the scope of the current project. However, plans to perform automated testing of the web services are in the works. The plan is to use the program SoapUI to create automated tests on each of the modules of the Data Access Layer. By creating these tests, we can ensure that all the data entering the services will pass all validations and formatting. This will create an extra benefit of data quality in the database.

# 3 Web Service Definitions

The following section is an exhaustive list of all the definitions of the web services. Since this is the data access layer of the system, each database has a designated service to each table. In each service, there are mapping for being able to perform all CRUD actions on the database.

## 3.1 Automation

The Automation Object is part of the question which holds a list of command elements.

### 3.1.1 Base Mappings

/Automation

### 3.1.2 GET Mappings

The following methods are used to simple get an Automation or List of Automation Objects.

#### 3.1.2.1 Get by Automation Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Automation/{automationId} |
| URL Parameters | automationId: Integer. Represents the Id of the desired Automation. Should Return |
| Request | None |
| Response | Automation Object |

#### 3.1.2.2 Get by Revision Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Revision/{revisionId} |
| URL Parameters | revisionId: Integer. Represents the Revision ID of which the automations are associated with. |
| Request | None |
| Response | List of Automation Objects |

### 3.1.3 POST Mappings

The following mappings are used to create a new Automation entry into the database.

#### 3.1.3.1 Create

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Create/ |
| URL Parameters | None |
| Request | Automation Object |
| Response | Automation Object with new Automation Id Number |

### 3.1.4 PUT Mappings

The following mappings are used to update an existing Automation entry in the database.

#### 3.1.4.1 Update Automation’s Command Order/Weight

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Update/Weight/ |
| URL Parameters | None |
| Request | Automation Object with all Command Elements Present in the correct order |
| Response | Automation Object with the Command Elements in the correct order. |

### 3.1.5 DELETE Mappings

The following mappings are used to remove Automation entries from the database.

#### 3.1.5.1 Remove by Automation Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Automation/{automationId} |
| URL Parameters | AutomationId: Integer; The Id of the Automation to delete |
| Request | None |
| Response | None |

#### 3.1.5.2 Remove by Automation Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Revision/{revisionId} |
| URL Parameters | revisionId: Integer; The Id of the Revision which all Automations to delete are associated with. |
| Request | None |
| Response | None |

### 3.1.6 Other Mappings

#### 3.1.6.1 Perform Automation Test

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Action/Test/Revision/{revisionId} |
| URL Parameters | revisionId: Integer; The Id of the Revision for which the test automation should be run. |
| Request | None |
| Response | None |

## 3.2 Automation Flow

### 3.2.1 Base Mappings

/AutomationFlow

### 3.2.2 GET Mappings

The following methods are used to simple get an Automation Flow or List of Automation Flow Objects.

#### 3.2.2.1 Get by Automation Flow Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/AutomationFlow/{automationFlowId} |
| URL Parameters | automationFlowId: Integer. Represents the Id of the desired Automation Flow. |
| Request | None |
| Response | Automation Flow Object |

#### 3.2.2.2 Get by Automation Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Automation/{automationId} |
| URL Parameters | automationId: Integer. Represents the Automation ID of which the automation Flows are associated with. |
| Request | None |
| Response | List of Automation Flow Objects |

### 3.2.3 POST Mappings

The following mappings are used to create a new Automation Flow entry into the database.

#### 3.2.3.1 Create

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Create/ |
| URL Parameters | None |
| Request | Automation Flow Object |
| Response | Automation Flow Object with new Automation Flow Id Number |

### 3.2.4 PUT Mappings

None

### 3.2.5 DELETE Mappings

The following mappings are used to remove Automation Flow entries from the database.

#### 3.2.5.1 Remove by Automation Flow Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/AutomationFlow/{automationFlowId} |
| URL Parameters | automationFlowId: Integer; The Id of the Automation Flow to delete |
| Request | None |
| Response | None |

#### 3.2.5.2 Remove by Automation Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Automation/{automationId} |
| URL Parameters | automationId: Integer; The Id of the Automation which all Automation Flows are associated with. |
| Request | None |
| Response | None |

#### 3.2.5.3 Remove by Question Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Question/{questionId} |
| URL Parameters | questionId: Integer; The Id of the Question. |
| Request | None |
| Response | None |

## 3.3 Code

### 3.3.1 Base Mappings

/Code

### 3.3.2 GET Mappings

The following methods are used to simple get a Codes or List of Codes Objects.

#### 3.3.2.1 Get All Codes

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /All/ |
| URL Parameters | None |
| Request | None |
| Response | List of Codes |

#### 3.3.2.2 Get by Code Type ID

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/CodeType/{codeTypeId} |
| URL Parameters | codeTypeId: Integer. Represents the Code Type ID that the code is associated with. |
| Request | None |
| Response | List of Code Objects |

#### 3.3.2.3 Get by Code Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Code/{codeId} |
| URL Parameters | codeId: Integer. Represents the Code ID of the Code |
| Request | None |
| Response | Code Object |

#### 3.3.2.4 Get by Code Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ByCode/Code/{code} |
| URL Parameters | code: String. Represents the Code of the Code Object |
| Request | None |
| Response | List of Code Objects |

### 3.3.3 POST Mappings

The following mappings are used to create a new Code entry into the database.

#### 3.3.3.1 Create

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Create/ |
| URL Parameters | None |
| Request | Code Object |
| Response | Code Object with new Code Id Number |

### 3.3.4 PUT Mappings

The following mappings are used to update an existing Code entry in the database.

#### 3.3.4.1 Update Code

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Update/ |
| URL Parameters | None |
| Request | Code Object with the Updated Values |
| Response | Code Object with the Updated Values |

### 3.3.5 DELETE Mappings

#### 3.3.5.1 Remove by Code Id

The following mappings are used to remove Code entries from the database.

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Code/{codeId} |
| URL Parameters | codeId: Integer; The Id of the Code |
| Request | None |
| Response | None |

#### 3.3.5.2 Remove by Code

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ByCode/Code/{code} |
| URL Parameters | code: String; The Code of the Code Object |
| Request | None |
| Response | None |

## 3.4 Code Type

### 3.4.1 Base Mappings

/CodeType

### 3.4.2 GET Mappings

The following methods are used to simple get a Code Type or List of Code Type Objects.

#### 3.4.2.1 Get All Codes

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /All/ |
| URL Parameters | None |
| Request | None |
| Response | List of Code Types |

#### 3.4.2.2 Get by Code Type ID

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/CodeType/{codeTypeId} |
| URL Parameters | codeTypeId: Integer; Represents the Code Type ID; |
| Request | None |
| Response | CodenType |

#### 3.4.2.3 Get by Type

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ByType/CodeType/{type} |
| URL Parameters | type: String; Represents the Type of the Code Type; |
| Request | None |
| Response | Code Type Object |

### 3.4.3 POST Mappings

The following mappings are used to create a new Code Type entry into the database.

#### 3.4.3.1 Create

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Create/ |
| URL Parameters | None |
| Request | Code Type Object |
| Response | Code Type Object with new Code Type Id; |

### 3.4.4 PUT Mappings

The following mappings are used to update an existing Code Type entry in the database.

#### 3.4.4.1 Update

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Update/ |
| URL Parameters | None |
| Request | Code Type Object with the Updated Values |
| Response | Code Type Object with the Updated Values |

### 3.4.5 DELETE Mappings

The following mappings are used to remove Code Type entries from the database.

#### 3.4.5.1 Remove by Code Type Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/CodeType/{codeTypeId} |
| URL Parameters | codeTypeId: Integer; The Id of the Code Type; |
| Request | None |
| Response | None |

## 3.5 Command Element

### 3.5.1 Base Mappings

/CommandElement

### 3.5.2 GET Mappings

The following mappings are used to simple get a Command Element or List of Command Element Objects.

#### 3.5.2.1 Get by Command Element Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/CommandElement/{commandElementId} |
| URL Parameters | commandElementId: Integer; Represents the Id of the Command Element |
| Request | None |
| Response | Command Element |

#### 3.5.2.2 Get by Automation Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Automation/{automationId} |
| URL Parameters | automationId: Integer; Represents the Automation ID; |
| Request | None |
| Response | List of Command Elements |

### 3.5.3 POST Mappings

The following mappings are used to create a new Command Element entry into the database.

#### 3.5.3.1 Create

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Create/{automationId} |
| URL Parameters | automationId: Integer; Represents the Id of the Automation that the Command Element will be associated with; |
| Request | Command Element Object |
| Response | Command Element Object with new Command Element Id; |

### 3.5.4 PUT Mappings

#### 3.5.4.1 Update

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Update/ |
| URL Parameters | None |
| Request | Command Element Object with the Updated Values |
| Response | Command Element Object with the Updated Values |

### 3.5.5 DELETE Mappings

The following mappings are used to remove Command Element entries from the database.

#### 3.5.5.1 Remove by Command Element Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/CommandElement/{commandElementId} |
| URL Parameters | commandElementId: Integer; The Id of the Command Element |
| Request | None |
| Response | None |

## 3.6 Command Form Element Relation

### 3.6.1 Base Mappings

/CommandFormElementRelation

### 3.6.2 GET Mappings

The following mappings are used to simple get a Command Form Element Relation or List of Command Form Element Relation Objects.

#### 3.6.2.1 Get by Command Element Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/CommandElement/{commandElementId} |
| URL Parameters | commandElementId: Integer; Represents the Id of the Command Element |
| Request | None |
| Response | List of Command Form Element Relation |

#### 3.6.2.2 Get by Form Element Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/FormElement/{formElementId} |
| URL Parameters | formElementId: Integer; Represents the Form Element; |
| Request | None |
| Response | List of Command Form Element Relation |

### 3.6.3 POST Mappings

The following mappings are used to create a new Command Form Element Relation entry into the database.

#### 3.6.3.1 Create

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Create/ |
| URL Parameters | None |
| Request | CommandFormElementRelation Object |
| Response | CommandFormElementRelation Object with new Command Form Element Relation Id; |

### 3.6.4 PUT Mappings

None;

### 3.6.5 DELETE Mappings

The following mappings are used to remove Command Form Element Relation entries from the database.

#### 3.6.5.1 Remove by Command Form Element Relation Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/CommandFormElementRelation/{ commandFormElementRelationId } |
| URL Parameters | commandFormElementRelationId: Integer; The Id of the Command Form Element Relation |
| Request | None |
| Response | None |

#### 3.6.5.2 Remove by Command Element Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/CommandElement/{commandElementId} |
| URL Parameters | commandElementId: Integer; The Id of the Command Element |
| Request | None |
| Response | None |

#### 3.6.5.3 Remove by Form Element Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/FormElement/{formElementId} |
| URL Parameters | formElementId: Integer; The Id of the Form Element |
| Request | None |
| Response | None |

## 3.7 Command Identifier

### 3.7.1 Base Mappings

/CommandIdentifier

### 3.7.2 GET Mappings

The following mappings are used to simple get a Command Identifier or List of Command Identifier Objects.

#### 3.7.2.1 Get by Command Identifier Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/CommandIdentifier/{commandIdentifierId} |
| URL Parameters | commandIdentifierId: Integer; Represents the Id of the Command Identifier |
| Request | None |
| Response | Command Identifier |

#### 3.7.2.2 Get by Command Element Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/CommandElement/{commandElementId} |
| URL Parameters | commandElementId: Integer; Represents the Command Element; |
| Request | None |
| Response | List of Command Identifiers |

### 3.7.3 POST Mappings

The following mappings are used to create a new Command Identifier entry into the database.

#### 3.7.3.1 Create

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Create/{commandElementId} |
| URL Parameters | commandElementId: Integer; Represents the Id of the Command Element that the Command Identifier will be associated with; |
| Request | Command Identifier Object |
| Response | Command Identifier Object with new Command Identifier Id; |

### 3.7.4 PUT Mappings

The following mappings are used to update an existing Command Identifier entry in the database.

#### 3.7.4.1 Update

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Update/ |
| URL Parameters | None; |
| Request | Command Identifier Object |
| Response | Command Identifier Object; |

### 3.7.5 DELETE Mappings

The following mappings are used to remove Command Identifiers entries from the database.

#### 3.7.5.1 Remove by Command Identifier Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/CommandIdentifier/{commandIdentifierId} |
| URL Parameters | commandIdentifierId: Integer; The Id of the Command Identifier; |
| Request | None |
| Response | None |

#### 3.7.5.2 Remove by Command Element Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/CommandElement/{commandElementId} |
| URL Parameters | commandElementId: Integer; The Id of the Command Element |
| Request | None |
| Response | None |

## 3.8 Company

### 3.8.1 Base Mappings

/Company

### 3.8.2 GET Mappings

The following mappings are used to simple get a Company or List of Company Objects.

#### 3.8.2.1 Get All

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /All |
| URL Parameters | None; |
| Request | None; |
| Response | List of Company Objects |

#### 3.8.2.2 Get by Company ID

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Company/{companyId} |
| URL Parameters | companyId: Integer; Represents the Company; |
| Request | None; |
| Response | Company Object |

### 3.8.3 POST Mappings

The following mappings are used to create a new Company entry into the database.

#### 3.8.3.1 Create

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Create/ |
| URL Parameters | None; |
| Request | Company Object |
| Response | Company Object with new Company Id |

### 3.8.4 PUT Mappings

The following mappings are used to update an existing Company entry in the database.

#### 3.8.4.1 Update

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Update/ |
| URL Parameters | None; |
| Request | Company Object |
| Response | Company Object; |

### 3.8.5 DELETE Mappings

The following mappings are used to remove Company entries from the database.

#### 3.8.5.1 Remove by Company ID

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Company/{companyId} |
| URL Parameters | companyId: Integer; The Id of the Company; |
| Request | None |
| Response | None |

## 3.9 Form

### 3.9.1 Base Mappings

/Form

### 3.9.2 GET Mappings

The following mappings are used to simple get a Form or List of Form Objects.

#### 3.9.2.1 Get by Form Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Form/{formId} |
| URL Parameters | formId: Integer; Represents the Id of the Form; |
| Request | None; |
| Response | Form Objects; |

#### 3.9.2.2 Get by Revision ID

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Revision/{revisionId} |
| URL Parameters | revisionId: Integer; Represents the Id of the Revision; |
| Request | None; |
| Response | List of Form Objects; |

### 3.9.3 POST Mappings

There are no creation mappings for inserting a Form. The Forms are automatically created upon a creation of a Question Object.

### 3.9.4 PUT Mappings

The following mappings are used to update an existing Form entry in the database.

#### 3.9.4.1 Update

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Update/Weight/ |
| URL Parameters | None; |
| Request | Form Object with List of Form Elements in a correct order/weight |
| Response | Form Object with List of Form Elements in the new order/weight |

### 3.9.5 DELETE Mappings

There are no mappings for deleting Form Objects. All removals are occurring automatically by the system.

## 3.10 Form Element Attribute

### 3.10.1 Base Mappings

/FormElementAttribute

### 3.10.2 GET Mappings

The following mappings are used to simple get a Form Element Attribute or List of Form Element Attribute Objects.

#### 3.10.2.1 Get by Form Element Attribute Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/FormElementAttribute/{formElementAttributeId} |
| URL Parameters | formElementAttributeId: Integer; Represents the Id of the Form Element Attribute Object; |
| Request | None; |
| Response | Form Element Attribute Object; |

#### 3.10.2.2 Get by Form Element Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/FormElement/{formElementId} |
| URL Parameters | formElementId: Integer; Represents the Id of the Form Element; |
| Request | None; |
| Response | List of Form Element Attribute Objects |

### 3.10.3 POST Mappings

The following mappings are used to create a new Form Element Attribute entry into the database.

#### 3.10.3.1 Create

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Create/{formElementId} |
| URL Parameters | formElementId: Integer; Represents the Id of the Form Element Object that the Form Element Attribute will be associated with; |
| Request | Form Element Attribute Object; |
| Response | Form Element Attribute Object with new Form Element Attribute Id |

### 3.10.4 PUT Mappings

The following mappings are used to update an existing Form Element Attribute entry in the database.

#### 3.10.4.1 Update

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Update/ |
| URL Parameters | None; |
| Request | Form Element Attribute Object; |
| Response | Form Element Attribute Object; |

### 3.10.5 DELETE Mappings

The following mappings are used to remove Form Element Attribute entries from the database.

#### 3.10.5.1 Remove by Form Element Attribute ID

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/FormElementAttribute/{formElementAttributeId} |
| URL Parameters | formElementAttributeId: Integer; The Id of the Form Element Attribute Object; |
| Request | None |
| Response | None |

## 3.11 Form Element

### 3.11.1 Base Mappings

/FormElement

### 3.11.2 GET Mappings

The following mappings are used to simple get a Form Element or List of Form Element Objects.

#### 3.11.2.1 Get by Form Element Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/FormElement/{formElementId} |
| URL Parameters | formElementId: Integer; Represents the Id of the Form Element Object; |
| Request | None; |
| Response | Form Element Object; |

#### 3.11.2.2 Get by Form Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Form/{formId} |
| URL Parameters | formId: Integer; Represents the Id of the Form; |
| Request | None; |
| Response | List of Form Element Objects; |

### 3.11.3 POST Mappings

The following mappings are used to create a new Form Element entry into the database.

#### 3.11.3.1 Create

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Create/{formId} |
| URL Parameters | formId: Integer; Represents the Id of the Form Object that the Form Element will be associated with; |
| Request | Form Element Object; |
| Response | Form Element Object with new Form Element Id; |

### 3.11.4 PUT Mappings

The following mappings are used to update an existing Form Element entry in the database.

#### 3.11.4.1 Update

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Update/ |
| URL Parameters | None; |
| Request | Form Element Object; |
| Response | Form Element Object; |

### 3.11.5 DELETE Mappings

The following mappings are used to remove Form Element entries from the database.

#### 3.11.5.1 Remove by Form Element ID

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/FormElement/{formElementId} |
| URL Parameters | formElementId: Integer; The Id of the Form Element Object; |
| Request | None; |
| Response | None; |

## 3.12 Form Element Option

### 3.12.1 Base Mappings

/FormElementOption

### 3.12.2 GET Mappings

The following mappings are used to simple get a Form Element Option or List of Form Element Options Objects.

#### 3.12.2.1 Get by Form Element Option Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/FormElementOption/{formElementOptionId} |
| URL Parameters | formElementOptionId: Integer; Represents the Id of the Form Element Option Object; |
| Request | None; |
| Response | Form Element Option Object; |

#### 3.12.2.2 Get by Form Element Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/FormElement/{formElementId} |
| URL Parameters | formElementId: Integer; Represents the Id of the Form Element; |
| Request | None; |
| Response | List of Form Element Option Objects |

### 3.12.3 POST Mappings

The following mappings are used to create a new Form Element Option entry into the database.

#### 3.12.3.1 Create

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Create/{formElementId} |
| URL Parameters | formElementId: Integer; Represents the Id of the Form Element Object that the Form Element Option will be associated with; |
| Request | Form Element Option Object; |
| Response | Form Element Option Object with new Form Element Option Id; |

### 3.12.4 PUT Mappings

The following mappings are used to update an existing Form Element Option entry in the database.

#### 3.12.4.1 Update

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Update/ |
| URL Parameters | None; |
| Request | Form Element Option Object; |
| Response | Form Element Option Object; |

### 3.12.5 DELETE Mappings

The following mappings are used to remove Form Element Option entries from the database.

#### 3.12.5.1 Remove by Form Element Option ID

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/FormElementOption/{formElementOptionId} |
| URL Parameters | formElementOptionId: Integer; The Id of the Form Element Option Object; |
| Request | None |
| Response | None |

## 3.13 Form Flow

### 3.13.1 Base Mappings

/FormFlow

### 3.13.2 GET Mappings

The following mappings are used to simple get a Form Flow or List of Form Flow Objects.

#### 3.13.2.1 Get by Form Flow Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/FormFlow/{formFlowId} |
| URL Parameters | formFlow: Integer; Represents the Id of the Form Flow Object; |
| Request | None |
| Response | Form Flow Object; |

#### 3.13.2.2 Get by Form Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Form/{formId} |
| URL Parameters | formId: Integer; Represents the Id of the Form; |
| Request | None |
| Response | List of Form Flow Objects |

### 3.13.3 POST Mappings

The following mappings are used to create a new Form Flow entry into the database.

#### 3.13.3.1 Create

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Create/ |
| URL Parameters | None; |
| Request | Form Flow Object; |
| Response | Form Flow Object with new Form Flow Id; |

### 3.13.4 PUT Mappings

None;

### 3.13.5 DELETE Mappings

The following mappings are used to remove Form Flow entries from the database.

#### 3.13.5.1 Remove by Form Flow ID

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/FormFlow/{formFlowId} |
| URL Parameters | formFlowId: Integer; The Id of the Form Flow Object; |
| Request | None |
| Response | None |

#### 3.13.5.2 Remove by Form ID

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Form/{formId} |
| URL Parameters | formId: Integer; The Id of the Form Object; |
| Request | None |
| Response | None |

## 3.13 Question

### 3.13.1 Base Mappings

/Question

### 3.13.2 GET Mappings

The following mappings are used to simple get a Question or List of Question Objects.

#### 3.13.2.1 Get by Question Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Question/{questionId} |
| URL Parameters | questionId: Integer; Represents the Id of the Question Object; |
| Request | None; |
| Response | Question Object; |

#### 3.13.2.2 Get by Form Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Form/{formId} |
| URL Parameters | formId: Integer; Represents the Id of the Form; |
| Request | None; |
| Response | List of Question Objects; |

#### 3.13.2.3 Get by Automation Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Automation/{automationId} |
| URL Parameters | automationId: Integer; Represents the Id of the Automation; |
| Request | None; |
| Response | List of Question Objects; |

### 3.13.3 POST Mappings

The following mappings are used to create a new Question entry into the database.

#### 3.13.3.1 Create

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Create/ |
| URL Parameters | None; |
| Request | Question Object; |
| Response | Question Object with new Question Id; |

### 3.13.4 PUT Mappings

The following mappings are used to update an existing Question entry in the database.

#### 3.13.4.1 Update

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Update/ |
| URL Parameters | None; |
| Request | Question Object; |
| Response | Question Object; |

### 3.13.5 DELETE Mappings

The following mappings are used to remove Question entries from the database.

#### 3.13.5.1 Remove by Question ID

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Question/{questionId} |
| URL Parameters | questionId: Integer; The Id of the Question Object; |
| Request | None |
| Response | None |

#### 3.13.5.2 Remove by Form ID

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Form/{formId} |
| URL Parameters | formId: Integer; The Id of the Form Object; |
| Request | None |
| Response | None |

#### 3.13.5.3 Remove by Automation ID

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Automation/{automationId} |
| URL Parameters | automationId: Integer; The Id of the Automation Object; |
| Request | None |
| Response | None |

## 3.14 Revision

### 3.14.1 Base Mappings

/Revision

### 3.14.2 GET Mappings

The following mappings are used to simple get a Revision or List of Revision Objects.

#### 3.14.2.1 Get by Revision Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Revision/{revisionId} |
| URL Parameters | revisionId: Integer; Represents the Id of the Revision; |
| Request | None; |
| Response | Revision Objects; |

#### 3.14.2.3 Get by Survey Id

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Survey/{surveyId} |
| URL Parameters | surveyId: Integer; Represents the Id of the Survey; |
| Request | None; |
| Response | List of Revision Objects |

### 3.14.3 POST Mappings

The following mappings are used to create a new Revision entry into the database.

#### 3.14.3.1 Create

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Create/ |
| URL Parameters | None; |
| Request | Revision Object; |
| Response | Revision Object with new Revision Id; |

### 3.14.4 PUT Mappings

The following mappings are used to update an existing Revision entry in the database.

#### 3.14.4.1 Update

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /Update/ |
| URL Parameters | None; |
| Request | Revision Object; |
| Response | Revision Object; |

### 3.14.5 DELETE Mappings

The following mappings are used to remove Revision entries from the database.

#### 3.14.5.1 Remove by Revision ID

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Question/{revisionId} |
| URL Parameters | revisionId: Integer; The Id of the Revision Object; |
| Request | None |
| Response | None |

#### 3.14.5.2 Remove by Survey ID

|  |  |
| --- | --- |
| Category | Value |
| Mapping | /ById/Form/{surveyId} |
| URL Parameters | surveyId: Integer; The Id of the Survey Object; |
| Request | None |
| Response | None |