IOP Ass 5b

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REST Base path: https://wwwlab.cs.univie.ac.at/~bartlp20/rest/index.php

Contents

1 HATEOAS Experience

https://wwwlab.cs.univie.ac.at/~bartlp20/rest/index.php/hateaos/customers
I recommend to pick user 495, because this customer has a special case in that he has two planes, one with protocols and one without, to showcase the included HATEOAS logic. All other customers should of course work as well.

2 GET Endpoints

2.1 Teams with less than X employees

2.1.1 Resource Path

https://wwwlab.cs.univie.ac.at/ bartlp20/rest/index.php/teams/{numEmployees}

2.1.2 Purpose

Returns all teams in 1_data.xml with less than or equal x amount of employees.

2.1.3 SOAP operation signature

getTeamsByEmployees

2.1.4 Example Call

```
curl --request GET \
  --url 'https://wwwlab.cs.univie.ac.at/~bartlp20/rest/index.php/teams/3'
```

2.1.5 Return data


```
{
       "Team": [
              {
                     "@attributes": {
                            "teamid": "609",
                            "employees": "3"
                     },
                     "ISO_Code": "IT",
                     "HourlyRate": "199.61",
                     "Units": {
...
```


2.1.6 Covered Requirements

Operation	R1	R2	R3	R4	R5	R6	R7
getTeamsByEmployees		X					X

2.2 Teams by Countries X

2.2.1 Resource Path

https://wwwlab.cs.univie.ac.at/ bartlp20/rest/index.php/teams/bycountries

2.2.2 Purpose

Returns all teams in 1_data.xml which are based in countries provided by array X.

2.2.3 SOAP operation signature

getTeamsByCountries

2.2.4 Example Call

```
curl --request GET \
  --url 'https://wwwlab.cs.univie.ac.at/~bartlp20/rest/index.php/teams/
     bycountries' \
  --header 'Content-Type: application/json' \
  --data '{
        "countries": [
               {"country": "IT"},
               {"country": "IS"}
        ]
}'
```

2.2.5 Return data

```
{
       "Team": [
              {
                     "@attributes": {
                            "teamid": "609",
                            "employees": "3"
                     },
                     "ISO_Code": "IT",
                     "HourlyRate": "199.61",
                     "Units": {
...
```

2.2.6 Covered Requirements

Operation	R1	R2	R3	R4	R5	R6	R7
getTeamsByCountries	X				5.1		X

2.3 Team with smallest Id

2.3.1 Resource Path

https://wwwlab.cs.univie.ac.at/ bartlp20/rest/index.php/teams/smallest

2.3.2 Purpose

Returns the team with the smallest teamId in 1_data.xml.

2.3.3 SOAP operation signatur

getSmallestTeamID

2.3.4 Example Call

```
curl --request GET \
  --url 'https://wwwlab.cs.univie.ac.at/~bartlp20/rest/index.php/teams/
     smallest'
```

2.3.5 Return data

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2.3.6 Covered Requirements

Operation	R1	R2	R3	R4	R5	R6	R7
getSmallestTeamID							

2.4 Get Customer by Zip

2.4.1 Resource Path

https://wwwlab.cs.univie.ac.at/ bartlp20/rest/index.php/customers/byzip/zip

2.4.2 Purpose

Returns all customers in 2_data.xml whose address has a zip of less than x. Example zip is 10000.

2.4.3 SOAP operation signatur

getCustomersByZip

2.4.4 Example Call

```
curl --request GET \
  --url 'https://wwwlab.cs.univie.ac.at/~bartlp20/rest/index.php/customers/
     byzip/10000'
```

2.4.5 Return data

```
{
        "Customer": [
                {
                        "Firstname": "Stine",
                        "Lastname": "Schumacher",
                        "Address": {
                                "@attributes": {
                                        "zip": "2728",
                                        "city": "Davidton"
                                },
...
```

2.4.6 Covered Requirements

Operation	R1	R2	R3	R4	R5	R6	R7
getCustomersByZip		X				X	

2.5 Get Streets by Zip

2.5.1 Resource Path

https://wwwlab.cs.univie.ac.at/ bartlp20/rest/index.php/streets/byzip/zip

2.5.2 Purpose

Returns all streets in 3_data.xml which are based city whose zip code is less than x. Example zip is 10000.

2.5.3 SOAP operation signature

getStreetsByZip

2.5.4 Example Call

```
curl --request GET \
  --url 'https://wwwlab.cs.univie.ac.at/~bartlp20/rest/index.php/streets/
     byzip/10000'
```

2.5.5 Return data


```
{
       "Street": [
              "Mitchell Gateway",
              "Julie Parkways",
              "Alexander Road",
              "Michael Corner",
              "Jeremy Island",
              "Beard Roads",
              "Norton Haven",
              "Hall Centers",
              "Kevin Rest",
              "Shannon Square",
              "Shannon Square"
       ]
}
```

2.5.6 Covered Requirements

Operation	R1	R2	R3	R4	R5	R6	R7
getStreetsByZip		X				X	

2.6 Get Bars by Amount of Minifridges or Color

2.6.1 Resource Path

https://wwwlab.cs.univie.ac.at/ bartlp20/rest/index.php/bars/byminifridgesorcolor/

2.6.2 Purpose

Returns all registrations of planes which match the input criteria of array x. Array x consists of dict fridgesInterval and array colors. Every plane with at least one bar that has the amount of fridges between fridgesInterval min/max or matches one color in the colors array are included in the returned data.

2.6.3 SOAP operation signature

getBarMinifridgeAndColor

2.6.4 Example Call

```
curl --request GET \
  --url 'https://wwwlab.cs.univie.ac.at/~bartlp20/rest/index.php/bars/
     byminifridgesorcolor/' \
  --header 'Content-Type: application/json' \
  --data '{
        "colors": [
               "white",
               "maroon"
        ],
        "fridgesInterval": {
               "minFridges": 8,
               "maxFridges": 10
        }
}'
```

2.6.5 Return data

```
{
       "Registration": [
              "CKN7593",
              "TEX8779",
              "WPA4428",
```

```
"MPF3551",
"YWK5335",
"FMW2950",
"BVK3060",
"ZIM6990",
"FAJ8688",
```

2.6.6 Covered Requirements

Operation	R1	R2	R3	R4	R5	R6	R7
getBarMinifridgeAndColor					5.3		X

2.7 Get planes by color

2.7.1 Resource Path

https://wwwlab.cs.univie.ac.at/ bartlp20/rest/index.php/planes/bycolor/

2.7.2 Purpose

Returns all planes which match one of the colors supplied by array x. Searches in 4_data.xml

2.7.3 SOAP operation signature

getPlanesByColor

2.7.4 Example Call

```
curl --request GET \
  --url 'https://wwwlab.cs.univie.ac.at/~bartlp20/rest/index.php/planes/
     bycolor/' \
  --header 'Content-Type: application/json' \
  --data '{
        "colors": [
               "white",
               "maroon"
        ]
}'
```

2.7.5 Return data

```
<?xml version="1.0"?>
<Planes>
       <Plane registration="TEX8779">
              <Color>white</Color>
              <Livery>eurowhite</Livery>
              <Bars>
                     <Bar unitid="8882156c-f456-40e3-a564-2c55e1d28b68"
                        teamid="767">
                         <Minifridges>
                                <Amount>5</Amount>
                         </Minifridges>
...
```

2.7.6 Covered Requirements

Operation	R1	R2	R3	R4	R5	R6	R7
getPlanesByColor	X				5.1		X

2.8 Get planes by livery

2.8.1 Resource Path

https://wwwlab.cs.univie.ac.at/ bartlp20/rest/index.php/planes/bylivery/

2.8.2 Purpose

Returns all planes which match one of the liveries supplied by array x. Searches in 4_data.xml

2.8.3 SOAP operation signature

getPlanesByLivery

2.8.4 Example Call

```
curl --request GET \
  --url 'https://wwwlab.cs.univie.ac.at/~bartlp20/rest/index.php/planes/
     bylivery/' \
  --header 'Content-Type: application/json' \
  --data '{
        "liveries": [
               "eurowhite",
               "jellybean"
        ]
}'
```

2.8.5 Return data

```
{
       "Plane": [
              {
                     "@attributes": {
                            "registration": "DAJ7178"
                     },
                     "Color": "maroon",
                     "Livery": "eurowhite",
                     "Bars": {}
              },
...
```

2.8.6 Covered Requirements

Operation	R1	R2	R3	R4	R5	R6	R7
getPlanesByLivery	X				5.1	X	

2.9 Get Protocol by Date

2.9.1 Resource Path

https://wwwlab.cs.univie.ac.at/ bartlp20/rest/index.php/protocol/bydate/{date}

2.9.2 Purpose

Returns protocols of given date x in 2_data.xml. Example date ist '2017-06-12'.

2.9.3 SOAP operation signature

getProtocolByDate

2.9.4 Example Call

```
curl --request GET \
  --url 'https://wwwlab.cs.univie.ac.at/~bartlp20/rest/index.php/planes/
     bylivery/' \
  --header 'Content-Type: application/json' \
  --data '{
        "liveries": [
               "eurowhite",
               "jellybean"
        ]
}'
```

2.9.5 Return data

```
<?xml version="1.0"?>
<Protocols>
       <Protocol protocolid="UFGUPCARTE">
              <Testdate>2017-06-12</Testdate>
              <results>
                     <test>wings</test>
                     <vibrations loc="cockpit">
                            <scale>low</scale>
                            <critical>false</critical>
                     </vibrations>
...
```

2.9.6 Covered Requirements

Operation	R1	R2	R3	R4	R5	R6	R7
getProtocolByDate				X			X

2.10 Get Testdate Of Protocol

2.10.1 Resource Path

https://wwwlab.cs.univie.ac.at/ bartlp20/rest/index.php/testdate/byprotocol/protocolId

2.10.2 Purpose

Returns test date of protocol with protocolId = x.

2.10.3 SOAP operation signature

getTestdateOfProtocol

2.10.4 Example Call

```
curl --request GET \
  --url 'https://wwwlab.cs.univie.ac.at/~bartlp20/rest/index.php/testdate/
     byprotocol/KPTDTWVNUZ'
```

2.10.5 Return data

"2017-02-19"

2.10.6 Covered Requirements

Operation	R1	R2	R3	R4	R5	R6	R7
getTestdateOfProtocol			X			X	

3 POST Endpoints

3.1 Post a new bar to plane

3.1.1 Resource Path

https://wwwlab.cs.univie.ac.at/ bartlp20/rest/index.php/planes/bars/postnewbar

3.1.2 Purpose

Creates a new bar resource for plane

3.1.3 SOAP operation signatur

getBarsOfPlane

3.1.4 Example Call

```
curl --request POST \
  --url 'https://wwwlab.cs.univie.ac.at/~bartlp20/rest/index.php/planes/bars
     /postnewbar' \
  --header 'Content-Type: application/json' \
  --data '{
        "registration": "OLH2122",
        "teamid": "50",
        "Bar": {
               "Minifridges": {
                      "Amount": 5
               },
               "Glasses": {
                      "Type": "flute",
                      "Amount": 10
               }
        }
}'
```

3.1.5 Return data

200 if successful, 404 if error

3.1.6 Covered Requirements

Operation	R1	R2	R3	R4	R5	R6	R7
getBarsOfPlane			X			X	

4 PUT Endpoints

4.1 Update the Address Of Customer owning Plane

4.1.1 Resource Path

https://wwwlab.cs.univie.ac.at/ bartlp20/rest/index.php/planes/update

4.1.2 Purpose

Updates the address of the customer who owns the plane specified by the registration in the body.

4.1.3 SOAP operation signature

getCustomerOfPlane

4.1.4 Example Call

```
curl --request PUT \
  --url 'https://wwwlab.cs.univie.ac.at/~bartlp20/rest/index.php/planes/
     update' \
  --header 'Content-Type: application/json' \
  --data '{
        "registration": "OLH2122",
        "Address": {
               "@attributes": {
                      "zip": "21360",
                      "city": "South Erintown"
               },
               "Street": "Spencer Shoals",
               "Housenumber": "450"
        }
}'
```

4.1.5 Return data

Code 204 on success, 404 on error

4.1.6 Covered Requirements

Operation	R1	R2	R3	R4	R5	R6	R7
getCustomerOfPlane			X			X	

5 PATCH Endpoints

5.1 Patch Flowrate of Toilets

5.1.1 Resource Path

https://wwwlab.cs.univie.ac.at/ bartlp20/rest/index.php/planes/toiletunits/betweenflowrate

5.1.2 Purpose

This patch searches and changed the flowrate ofall toilet units within an interval supplied by the request body. Furtermore checks if a specific registration was in the affected toilets, if not will add a new toilet with given specs.

5.1.3 SOAP operation signature

getToiletsBetweenFlowrates

5.1.4 Example Call

```
curl --request PATCH \
  --url 'https://wwwlab.cs.univie.ac.at/~bartlp20/rest/index.php/planes/
     toiletunits/betweenflowrate' \
  --header 'Content-Type: application/json' \
  --data '{
        "registration": "DAJ7178",
        "newFlowrate": 50,
        "flowrates": {
               "minRate": 2.0,
               "maxRate": 2.2
        }
}'
```

5.1.5 Return data

```
{
       "Unit": [
              {
                     "operation": "modified",
                     "registration": "AMQ2317",
                     "unitid": "35ec9671-2a96-46b7-8b0e-67c479683cce"
              },
              {
```

```
                "operation": "modified",
                "registration": "ARX5204",
                "unitid": "f1aaf0df-98e8-43b8-aaaf-7877f102fc0b"
            },
            {
                "operation": "modified",
                "registration": "DDR5762",
                "unitid": "8a846cfd-e070-45f8-a948-e989a5287bfe"
            },
            {
                "operation": "modified",
                "registration": "LQV1108",
                "unitid": "25378482-369c-4c71-8e3e-dd1a5d370db3"
            },
            {
                "operation": "modified",
                "registration": "HSV8858",
                "unitid": "6715cd21-08f2-4140-aa6c-c380376ea5c6"
            },
            {
                "operation": "created",
                "registration": "DAJ7178",
                "unitid": "0d59b5f6-bea6-4b7c-b630-04ae5c85e4df"
            }
        ]
}
```


5.1.6 Covered Requirements

Operation	R1	R2	R3	R4	R5	R6	R7
getToiletsBetweenFlowrates		X			5.2		X

5.2 Patch Beverage

5.2.1 Resource Path

https://wwwlab.cs.univie.ac.at/ bartlp20/rest/index.php/planes/bars/patchmeadrink

5.2.2 Purpose

Was on accident, doesn't cover a xpath from 5a. Changes beverage in bar or adds if not existent.

5.2.3 SOAP operation signature

None, is new

5.2.4 Example Call

```
curl --request PATCH \
  --url 'https://wwwlab.cs.univie.ac.at/~bartlp20/rest/index.php/planes/bars
     /patchmeadrink' \
  --header 'Content-Type: application/json' \
  --data '{
        "unitid": "69e605d0-08cd-4a6f-bc0f-e22192dcc856",
        "Beverage": [
               {
                      "Drink": "Spirits",
                      "Cost": 500
               },
               {
                      "Drink": "Beer",
                      "Cost": 100
               }]
}'
```

5.2.5 Return data

200 if success, 404 if error

5.2.6 Covered Requirements

None

6 DELETE Endpoints

6.1 Delete customer by Id

6.1.1 Resource Path

https://wwwlab.cs.univie.ac.at/ bartlp20/rest/index.php/customers/delete/customerId

6.1.2 Purpose

Deletes a customer by Id

6.1.3 SOAP operation signature

getCustomerByID

6.1.4 Example Call

```
curl --request DELETE \
  --url 'https://wwwlab.cs.univie.ac.at/~bartlp20/rest/index.php/customers/
     delete/19'
```

6.1.5 Return data

Code 204 on success, 404 on error

6.1.6 Covered Requirements

Operation	R1	R2	R3	R4	R5	R6	R7
getCustomerByID		X				X	

Requirement summary

Operation	R1	R2	R3	R4	R5	R6	R7
getTeamsByEmployees		X					X
getTeamsByCountries	X				5.1		X
getSmallestTeamID							
getCustomerByID		X				X	
getCustomersByZip		X				X	
getStreetsByZip		X				X	
getBarsOfPlane			X			X	
getBarMinifridgeAndColor					5.3		X
getPlanesByColor	X				5.1		X
getPlanesByLivery	X				5.1	X	
getProtocolByDate				X			X
getToiletsBetweenFlowrates		X			5.2		X
getCustomerOfPlane			X			X	
getTestdateOfProtocol			X			X	