

Rest - Andreas Maurer

What is Rest?

Representational State Transfer is a system of transferring data as a representable format like JSON or XML. In Java the springboot framework is commonly used to achieve this kind of connection.

Implementation

For the implementation we need our Application, which just runs the Spring Boot thread.

```

package rest.election;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.http.MediaType;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RestController;

import rest.model.*;

@RestController
public class ElectionController {
    @Autowired
    private ElectionService service;

    @RequestMapping("/")
    public String warehouseMain() {
        return
            "This is the warehouse application! (DEZSYS_WAREHOUSE_REST) <br/>
<br/>" +
            "<a href='http://localhost:8080/election/json'>Link to
election/json</a><br/>" +
            "<a href='http://localhost:8080/election/xml'>Link to
election/xml</a><br/>";
    }

    @RequestMapping(value="/election/xml", produces =
MediaType.APPLICATION_XML_VALUE)
    public ElectionData electionDataXml() {
        return service.getElectionData();
    }

    @RequestMapping(value="/election/json", produces =
MediaType.APPLICATION_JSON_VALUE)
    public ElectionData electionDataJson() {
        return service.getElectionData();
    }
}

```

Hier mapped man die Daten zu JSON or XML mit Spring boot vom Service.

Service

```
package rest.election;

import org.springframework.stereotype.Service;
import rest.model.*;

@Service
public class ElectionService {
    public ElectionData getElectionData() {
        return new ElectionSimulation().getData();
    }

    public String getGreetings(String text) {
        return "Greetings from " + text;
    }
}
```

Simulation

Here you set the ElectionData with meaningful data. In this case the elections were filled with random generated data.

```

package rest.election;

import rest.model.*;

public class ElectionSimulation {
    public ElectionData getData() {
        int[] votes = new int[3];
        String[] parties = { "FPOE", "OEV", "SPOE" };

        CountingDataParty[] countingDataParty = new CountingDataParty[3];
        for (int i = 0; i < countingDataParty.length; ++i)
            countingDataParty[i] = new CountingDataParty(parties[i],
String.valueOf(votes[i] = getRandom()));

        PreferenceVoteData[][] preferenceVoteData = new PreferenceVoteData[3][5];
        int tmp;
        for (int i = 0; i < preferenceVoteData.length; ++i) {
            for (int j = 0; j < preferenceVoteData[i].length; ++j) {
                preferenceVoteData[i][j] =
                    new PreferenceVoteData(
                        String.valueOf(getRandom(9999)),
                        parties[i] + "Person" + (j+1),
                        String.valueOf(tmp = getRandom(votes[i]))
                    );
                votes[i] = tmp;
            }
        }

        return
            new ElectionData(
                "33123",
                "Linz Bahnhof",
                "Bahnhofsstrasse 27/9",
                "Linz",
                "Austria",
                countingDataParty,
                preferenceVoteData
            );
    }
}

```