

## Specifications:

### Description of the user interfaces

#### Overview

The user should be able to see the latest status of the election. He should also be able to navigate to all subviews.

#### Voting view

In this view the user can specify his "erststimme" and "zweitstimme" at the same time after he entered his personal ID. Afterwards he will be notified whether his vote was submitted successful.

#### Election view

The user can select the year of the election and the chart type he wants to see. The shown data could be the (preliminary) result of the election or different analyses.

### Description of the functional requirements

#### Voting

Every citizen eligible to vote has to be able to submit his "erststimme" and "zweitstimme" exactly once. For every user the system has to check if there is already a vote from this ID and eventually decline it. The user should be warned if his vote is invalid, but he must be able to submit it anyway.

#### Analysis of the current election

The preliminary result of the current election should be visualized per Wahlkreis, federal land and for entire Germany. It is allowed to aggregate the votes per Wahlkreis.

#### Results of former elections

It has to be possible to display the results of former elections as reference data (e.g. distribution of seats, winner per Wahlkreis, ...). It is sufficient to store the results only, so individual votes do not have to be preserved.

### Description of the non-functional requirements

#### Performance

The application has to withstand the load of votes during a parliamentary election. This means that the performance has to be liquid and quick during the process of election.

#### Updates

Furthermore the application has to update the results of the election quickly. The occurrence of errors is not allowed while computing the results.

#### Usability

In addition, the application has to have a high usability. Due to the use by every possible elector in Germany the application has to offer a clear user interface, a good ease of learning and clear and informative error and warning messages.

#### Multi-User mode

For the same reasons the application has to be able to handle multi-user mode.

#### Description of the acceptance criteria

##### Reliability

The application has to perform the required tasks in an acceptable timeframe and without making mistakes. The results, which are computed by the application, have to be accurate.

##### Loading time

The loading time of the application should not exceed admissible timeframe.

##### Voting

The casting of a vote has to be saved and is not allowed to be lost under any circumstances.

##### Recovery

The application has to contain a recovery possibility in the case of failure.