## Exercise 1

### Task 1.1

#### Partition of the area of election

* **Federal State**: The Federal Republic of Germany is divided into its federal states.
  + Name
* **Constituency**: Every federal state is divided into constituencies.
  + Number, Name
* **Wahlbezirk**: Every constituency is again divided in to wards for voting by casting a ballot or ballot letter. The subdivision is based on number of those entitled to vote.
  + Number
* **Briefwahlbezirk**: Voting by letter is done in a Briefwahlbezirk, which is part of a constituency.
  + Number

#### Citizens

* **Citizens**: Every man or woman is entitled to vote unless this right is voided by court order.
  + Title, first name, last name, date of birth, sex, address etc.
* **Register**: Every constituency has register of those citizens registered there and thus the right to vote there.

#### Voting

* **Vote**: When casting a vote, the citizen chooses a candidate for his constituency (Erststimme) and a party for the state (Zweitstimme). Every citizen can vote exactly one time per election.
  + **Stimmzettel**: Voting in person is done at a Wahllokal by ballot.
  + **Wahlschein**: When voting by letter or in a different Wahlbezirk this is done by ballot letter.

#### Candidates

* **Parties**
  + Name, Shorthand
* **Candidates**: Candidates can be members of one or more parties.
  + Name, age, party affiliation
* **Direct candidates**: Per party exactly one candidate can be nominated per constituency. This candidate may not be member in any other party. Candidates without party affiliations are possible.
* **State candidates**: Every party running in a state presents a list of candidates with a defined order.

### Task 1.2

### Benefits

* **Multi-user access:** Ability to use the system by a various number of users at the same time.
* **Back up & Recovery**: Ability to restart after a failure without losing data.
* **Data-integrity:** Ability to ensure defined constraints.
* **Performance**: Ability to perform real-time data analysis in a rapid manner.
* **Security**: Ability to use different rule sets for accessing data for different user groups.

### Drawbacks

* none

### Task 1.3