

```
-- ##### CENTRAL RELATED CLASSES #####
```

```
--- C_MODELS
```

```
class_chart CENTRAL_MODEL
```

```
indexing
```

```
  in_cluster: "C_MODELS";
```

```
  author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";
```

```
  created: "2011-12-01";
```

```
  revised: "N/A"
```

```
explanation
```

```
  "The main 'model' of the application. Responsible for managing instances of the sub-models."
```

```
query
```

```
  "May I have the VOTER_SELECTOR sub-model?"
```

```
command
```

```
  "Notify me when a sub-model has been opened.",
```

```
  "Open a new sub-model of this type.",
```

```
  "Close this sub-model."
```

```
end
```

```
class_chart VOTER_CARD_GENERATOR
```

```
indexing
```

```
  in_cluster: "C_MODELS";
```

```
  author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";
```

```
  created: "2011-11-28";
```

```
  revised: "N/A"
```

```
explanation
```

```
  "The model for a voter box generator, responsible for the generation of votercards"
```

```
query
```

```
  "What is the current percentage of voter cards generated?",
```

```
  "What is the current number of groups generated?",
```

```
  "What is the total number of groups to be generated?",
```

```
  "How many of these voters have already had their voter cards generated?",
```

```
  "May I have the filter?"
```

```
command
```

```
  "Notify me about changes in the progress of the current generation.",
```

```
  "Generate voter card(s) based on voter filter and grouping selection",
```

```
  "Abort the current generation process, if one is running."
```

```
constraint
```

"N/A"

end

**class\_chart** VOTER\_BOX\_MANAGER

**indexing**

*in\_cluster*: "C\_MODELS";

*author*: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";

*created*: "2011-12-02";

*revised*: "N/A"

**explanation**

"The model for a voter box manager, responsible for transferring data to voter boxes."

**query**

"What is the console output?",

"What is the voter filter?",

"Does the content on the VoterBox match the current selection?"

**command**

"Fetch data from the db based on the current filter.",

"Insert the data that was fetched onto the remote server.",

"Notify me when the console output changes."

**constraint**

"N/A"

end

**class\_chart** SERVER\_SETUP

**indexing**

*in\_cluster*: "C\_MODELS";

*author*: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";

*created*: "2011-12-13";

*revised*: "N/A"

**explanation**

"A class responsible for persisting server login information provided by the user in the SERVER\_SETUP\_WINDOW."

**command**

"Persist these credentials to the disk!"

end

**class\_chart** VOTER\_FILTER

**indexing**

*in\_cluster*: "C\_MODELS";

*author*: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";

```

    created: "2011-12-01";
    revised: "N/A"
explanation
    "A filter describing a subset of voters."
query
    "What is the selected municipality?",
    "What is the selected polling station?",
    "What is the selected cprnr?",
    "What would this filter look like as a predicate?"
command
    "N/A"
end

--- C_VIEWS

class_chart CENTRAL_VIEW
indexing
    in_cluster: "C_VIEWS";
    author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";
    created: "2011-12-01";
    revised: "N/A"
explanation
    "The main 'model' of the application. Responsible for managing instances of the sub-models."
query
    "May I have the default sub-view (Voter Selection Window)?",
    "Which sub-views are currently open?"
command
    "Notify me when a sub-view has been opened.",
    "Open a new sub-view of this type.",
    "Close the view associated with this model.",
    "Show the default view"
end

class_chart VOTER_SELECTOR_WINDOW
indexing
    in_cluster: "C_VIEWS";
explanation
    "The main 'view' of the application. It has the sole responsibility of creating instances of the sub-views (windows forms)."
query

```

"May I have the model associated with this view?"

#### command

"Replace the list of polling stations with this list.",  
"Replace the voter count label with this.",  
"Make this municipality the selected municipality.",  
"Make this polling station the selected polling station"

#### end

**class\_chart** VOTER\_BOX\_MANAGER\_WINDOW

#### indexing

**in\_cluster:** "C\_VIEWS";

#### explanation

"Window for representing and manipulating a VOTER\_BOX\_MANAGER"

#### query

"May I have the connection credentials input?"

#### command

"Notify me about validation requests.",  
"Notify me about upload requests.",  
"Notify me about connect requests.",  
"Update progress bar."

#### end

**class\_chart** VOTER\_CARD\_GENERATOR\_WINDOW

#### indexing

**in\_cluster:** "C\_VIEWS";  
**author:** "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";  
**created:** "2011-11-28";  
**revised:** "N/A"

#### explanation

"Window for representing and manipulating a VOTER\_CARD\_GENERATOR"

#### query

"May I have the associated model"

#### command

"Notify me about generate requests.",  
"Notify me about abort requests.",  
"Notify me about close requests.",  
"Switch to 'Generating Mode'",  
"Switch to 'Inactive Mode'"

#### constraint

```

    "N/A"
end

class_chart SERVER_SETUP_WINDOW
indexing
    in_cluster: "C_VIEWS";
    author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";
    created: "2011-12-13";
    revised: "N/A"
explanation
    "Window for taking input to the SERVER_SETUP."
query
    "N/A"
command
    "Show credential-input boxes.!"
constraint
    "N/A"
end

```

```

--- C_CONTROLLERS

```

```

class_chart CENTRAL_CONTROLLER
indexing
    in_cluster: "C_CONTROLLERS";
    author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";
    created: "2011-12-01";
    revised: "N/A"
explanation
    "The main 'controller' of the application. Responsible for instantiating sub-controllers."
query
    "May I have the default sub-view (Voter Selection Window)?",
    "Which sub-views are currently open?"
command
    "React to a request for a view to be opened; Instantiate an appropriate controller.",
    "Instantiate default sub-controller."
end

```

```

class_chart VOTER_SELECTOR_CONTROLLER
indexing

```

```

in_cluster: "C_CONTROLLERS";
author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";
created: "2011-12-01";
revised: "N/A"

```

**explanation**

"Responsible for reacting to user input from the VOTER\_SELECTOR\_WINDOW and propagating input in an appropriate fashion to the VOTER\_SELECTOR (model)."

**query**

"N/A"

**command**

```

"React to municipality filter selection",
"React to polling station filter selection",
"React to CPR number search"

```

**constraint**

"N/A"

**end**

**class\_chart** VOTER\_CARD\_GENERATOR\_CONTROLLER

**indexing**

```

in_cluster: "C_CONTROLLERS";
author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";
created: "2011-12-01";
revised: "N/A"

```

**explanation**

"Responsible for reacting to user input from the VOTER\_CARD\_GENERATOR\_WINDOW and propagating input in an appropriate fashion to the VOTER\_CARD\_GENERATOR (model)."

**query**

"N/A"

**command**

"React to generation request"

**end**

**class\_chart** VOTER\_BOX\_MANAGER\_CONTROLLER

**indexing**

```

in_cluster: "C_CONTROLLERS";
author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";
created: "2011-12-01";
revised: "2011-12-13"

```

**explanation**

```
"Responsible for reacting to user input from the VOTER_BOX_MANAGER_WINDOW and propagating input in an appropriate fashion to the
VOTER_BOX_MANAGER (model)."
```

**query**

```
"N/A"
```

**command**

```
"React to connect request.",
"React to upload request.",
"React to validation request."
```

**end**

```
class_chart SERVER_SETUP_CONTROLLER
```

**indexing**

```
in_cluster: "C_CONTROLLERS";
author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";
created: "2011-12-13"
```

**explanation**

```
"Responsible for reacting to user input in the SERVER_SETUP_WINDOW."
```

**query**

```
"Notify me when your are connected to a server."
```

**command**

```
"React to connect request.",
"Dispose of your view!"
```

**end**

```
-- ##### POLLING TABLE RELATED CLASSES #####
```

```
class_chart MODEL
```

**indexing**

```
in_cluster: "POLLING_TABLE_PT";
author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";
created: "2011-12-02";
revised: "N/A"
```

**explanation**

```
"The model class in PT. Responsible for connecting to, retriving from, and updating the DB"
```

**query**

```
"What is the current voter?",
"Has the current voter been registered?"
```

**command**

```
"Start transaction",
```

```
"End transaction",  
"Validate CPR",  
"Find a voter with this CPR",  
"Register current voter",  
"Unregister current voter",  
"Write to config file",  
"Read the config file"
```

**constraint**

```
"The can only be one distinct current voter at any given time"
```

**end****class\_chart** POLLING\_MAIN**indexing**

```
in_cluster: "POLLING_TABLE_PT";  
author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";  
created: "2011-12-10";  
revised: "N/A"
```

**explanation**

```
"Responsible for creating the polling table MVC main classes."
```

**query**

```
"N/A"
```

**command**

```
"N/A"
```

**constraint**

```
"N/A"
```

**end****class\_chart** SETUP\_INFO**indexing**

```
in_cluster: "POLLING_TABLE_PT";  
author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";  
created: "2011-12-09";  
revised: "N/A"
```

**explanation**

```
"Contains setup related information for polling table"
```

**query**

```
"What is the polling table number?",  
"What is the voter box address?",
```

**command**



```
"Update polling table number",
"Update voter box address"
constraint
    "N/A"
end

class_chart SCANNER_WINDOW
indexing
    in_cluster: "PT_VIEW";
    author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";
    created: "2011-11-28";
    revised: "N/A"
explanation
    "This is where the election official scans or types in the voter card or cpr number."
query
    "N/A"
command
    "Find the voter matching the cpr"
constraint
    "The scanner window cannot be used while a voter window is open. Preventing two voters to register at the same time."
end

class_chart NORMAL_VOTER_WINDOW
indexing
    in_cluster: "PT_VIEW";
    author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";
    created: "2011-11-28";
    revised: "N/A"
explanation
    "A visual representation of the current voter at the polling table where the user can register the voter"
query
    "N/A"
command
    "Show a specific voter",
    "Register a voter",
    "Cancel the process"
constraint
    "N/A"
end
```

```
class_chart WARNING_VOTER_WINDOW
```

```
indexing
```

```
  in_cluster: "PT_VIEW";  
  author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";  
  created: "2011-11-28";  
  revised: "N/A"
```

```
explanation
```

```
  "A visual representation of the current voter at the polling table that shows a warning if the voter is already registered."
```

```
query
```

```
  "N/A"
```

```
command
```

```
  "Show a specific voter",  
  "Show an error message",  
  "Cancel the process"
```

```
constraint
```

```
  "N/A"
```

```
end
```

```
class_chart UNREGISTER_VOTER_WINDOW
```

```
indexing
```

```
  in_cluster: "PT_VIEW";  
  author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";  
  created: "2011-11-28";  
  revised: "N/A"
```

```
explanation
```

```
  "A visual representation of the current voter at the polling table that lets the user unregister a voter."
```

```
query
```

```
  "N/A"
```

```
command
```

```
  "Show a specific voter",  
  "Unregister the voter",  
  "Cancel the process"
```

```
constraint
```

```
  "N/A"
```

```
end
```

```
class_chart SETUP_WINDOW
```

```
indexing
```

```
in_cluster: "PT_VIEW";  
author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";  
created: "2011-11-28";  
revised: "N/A"
```

**explanation**

"Window where the election official enters setup information"

**query**

"N/A"

**command**

"N/A"

**constraint**

"Must only be shown at startup"

**end**

**class\_chart** POLLING\_TABLE\_VIEW

**indexing**

```
in_cluster: "PT_VIEW";  
author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";  
created: "2011-11-28";  
revised: "N/A"
```

**explanation**

"Responsible for holding and creating GUI elements"

**query**

"N/A"

**command**

```
"Show a specific voter",  
"Open a warning window",  
"Open a normal window",  
"Open an unreg window",  
"Open the log window",  
"Update the setup window",  
"Close warning window",  
"Show a message"
```

**constraint**

"N/A"

**end**

**class\_chart** CONTROLLER

**indexing**

```

in_cluster: "POLLING_TABLE_PT";
author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";
created: "2011-12-02";
revised: "N/A"

```

**explanation**

"Responsible for reacting to input from the GUI elements in the PT\_VIEW"

**query**

"N/A"

**command**

"N/A"

**constraint**

"N/A"

**end**

**class\_chart** LOG\_CONTROLLER

**indexing**

```

in_cluster: "LOG";
author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";
created: "2011-12-13"

```

**explanation**

"Responsible for reacting to the user's clicks and periodically updating the underlying model."

**query**

"N/A"

**command**

```

"React to refresh request.",
"React to update request."

```

**end**

**class\_chart** LOG\_MODEL

**indexing**

```

in_cluster: "LOG";
author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";
created: "2011-12-13";
revised: "N/A"

```

**explanation**

"Responsible for storing and updating log data."

**query**

```

"What are your current logs?",
"What is the current number of persons who have voted?",

```

```
"What is the total number of eligible voters?"

command
  "Update your current filter to this!",
  "Update your data!"
constraint
  "N/A"
end

class_chart LOG_VIEW
indexing
  in_cluster: "LOG";
  author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";
  created: "2011-12-13";
  revised: "N/A"
explanation
  "Responsible for showing the data to the user and allowing him to interact with it."
query
  "N/A"
command
  "Show all logs!"
constraint
  "N/A"
end

class_chart LOG_FILTER
indexing
  in_cluster: "LOG";
  author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";
  created: "2011-12-13";
  revised: "N/A"
explanation
  "A utility class to allows sending all data about the users log selection."
query
  "What is the selected table number?",
  "What is the selected CPR number?",
  "What is the selected activity?",
  "What is the selected from time?",
  "What is the selected to time?"
command
```

```
"N/A"
end

-- ##### DB_COMM_DAO RELATED CLASSES #####

class_chart DIGITAL_VOTER_LIST
indexing
  in_cluster: "DB_COMM";
  author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";
  created: "2011-12-07";
  revised: "2011-12-13";
explanation
  "A class representing the database."
query
  "May I have a new DVL that uses these parameters?",
  "May I have a new DVL that uses this server?",
  "May I have a new DVL that uses the default connection?",
  "May I have a new connection that uses these parameters?",
  "May I have a reference to the voter table?",
  "May I have a reference to the polling station table?",
  "May I have a reference to the municipalities table?",
  "May I have a reference to the log table?"
command
  "N/A"
constraint
  "N/A"
end

class_chart DATA_ACCESS_OBJECT
indexing
  in_cluster: "DATA_ACCESS_OBJECTS";
  author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";
  created: "2011-11-29";
  revised: "2011-12-13";
explanation
  "A data access object supporting CRUD operations."
query
  "Read the object(s) from the database for which this predicate holds."
command
```

```
"Create this object in the database.",  
"Create all these objects in the database",  
"Update the object(s) in the database for which this predicate holds.",  
"Delete the objects(s) in the database for which this predicate holds."
```

**constraint**

```
"When inserting an element into the database, none of the element's fields must be null.",  
"A write operation followed by a read operation will return the object that was just written.",  
"After a call to delete, calling read with the same predicate will not return any results."
```

**end****class\_chart** DATA\_OBJECT**indexing**

```
in_cluster: "DATA_OBJECTS";  
author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";  
created: "2011-11-29";  
revised: "2011-12-13";
```

**explanation**

```
"The object used to transfer data between DAO and application."
```

**query**

```
"Get data.",  
"Is this object fully initialized?"
```

**command**

```
"Update your values to those of this object!",  
"Reset all your associations to other classes!"
```

**constraint**

```
"N/A"
```

**end****class\_chart** PESSIMISTIC\_VOTER\_DAO**indexing**

```
in_cluster: "DATA_ACCESS_OBJECTS";  
author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";  
created: "2011-12-01";  
revised: "2011-12-13";
```

**explanation**

```
"A pessimistic DAO implementation supporting explicit transaction control."
```

**query**

```
"Give me the voter with this id.",  
"Is there an open transaction?"
```

**command**

```
"Start transaction.",  
"Stop transaction.",  
"Update the voter with this id to have the following voted status.",
```

**constraint**

```
"A transaction must be started before any other operations can be performed."
```

**end****class\_chart** VOTER\_DO**indexing**

```
in_cluster: "DATA_OBJECTS";  
author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";  
created: "2011-12-01";  
revised: "2011-12-13";
```

**explanation**

```
"The object used to transfer voter data between DAO and application."
```

**inherit** DATA\_OBJECT**end****class\_chart** POLLING\_STATION\_DO**indexing**

```
in_cluster: "DATA_OBJECTS";  
author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";  
created: "2011-12-01";  
revised: "2011-12-13";
```

**explanation**

```
"The object used to transfer polling station data between DAO and application."
```

**inherit** DATA\_OBJECT**end****class\_chart** MUNICIPALITY\_DO**indexing**

```
in_cluster: "DATA_OBJECTS";  
author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";  
created: "2011-12-01";  
revised: "2011-12-13";
```

**explanation**

```
"The object used to transfer municipality data between DAO and application."
```

**inherit** DATA\_OBJECT



end

class\_chart LOG\_DO

indexing

in\_cluster: "DATA\_OBJECTS";

author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";

created: "2011-12-01";

revised: "2011-12-13";

explanation

"The object used to transfer log data between DAO and application."

inherit DATA\_OBJECT

end

class\_chart ACTIVITY

indexing

in\_cluster: "DATA\_OBJECTS";

author: "Claes Martinsen - clae@itu.dk, Jan Meier - jmei@itu.dk, Niels Søholm - nmar@itu.dk";

created: "2011-12-13";

explanation

"An enumeration of various log activities."

query

"What is your value?"

command

"N/A"

constraint

"Activities can have the following enumerations: R (read), W (write), U (unregister)."

end

--Comment: Change Log

-- Updated to conform with implementation of DBComm (07/12).

-- Updated DB\_COMM (13/12)