

# Design document – Prototype

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## Decision making process

Our group has decided to use C++ and Qt to do our software. Prototyping was done using Figma. Those were chosen mainly because we were familiar with them.

We are going to use QtCharts-module for displaying the data as graphs. That is probably the best for showing data visualized. We haven't decided yet on how we are going to fetch data from API.

## Idea for our software

This part is a short description of how our design is going to work. The idea is also visualized in the prototype.

- First user sees the starting page which shows no data yet. The header of the page shows the selections that the user needs to do to show data.
  - There are check boxes for selecting data, measurement station and the time period
  - From plus-sign user can submit choices
  - From ...-sign user can take closer look on settings
- When user selects data and station on certain time and presses +-sign, data is shown. If more than one station is selected, those will be shown on the same chart. If more data is selected it is shown in its own chart. (There is also a possibility for multiple stations)
- From settings (...-button) user can see the current selections, there is also options for looking history and saved selections.
- In current selections
  - User can remove selections from red trash cans
  - User can save current selections from save selections
  - User can clear all selections from clear selections
- In history selection history is shown
- In bookmarks
  - User can check saved selections
  - User can delete saved selections
  - User can upload selections to show the charts

## Most important parts

- Selection options
  - What data, from where and in what time
- Settings
  - Saving and managing selections
  - Viewing previously saved selections
- Charts
  - Show the actual data user selects
  - Charts, minimum, maximum and average values
  - Comparison between different data

## Classes

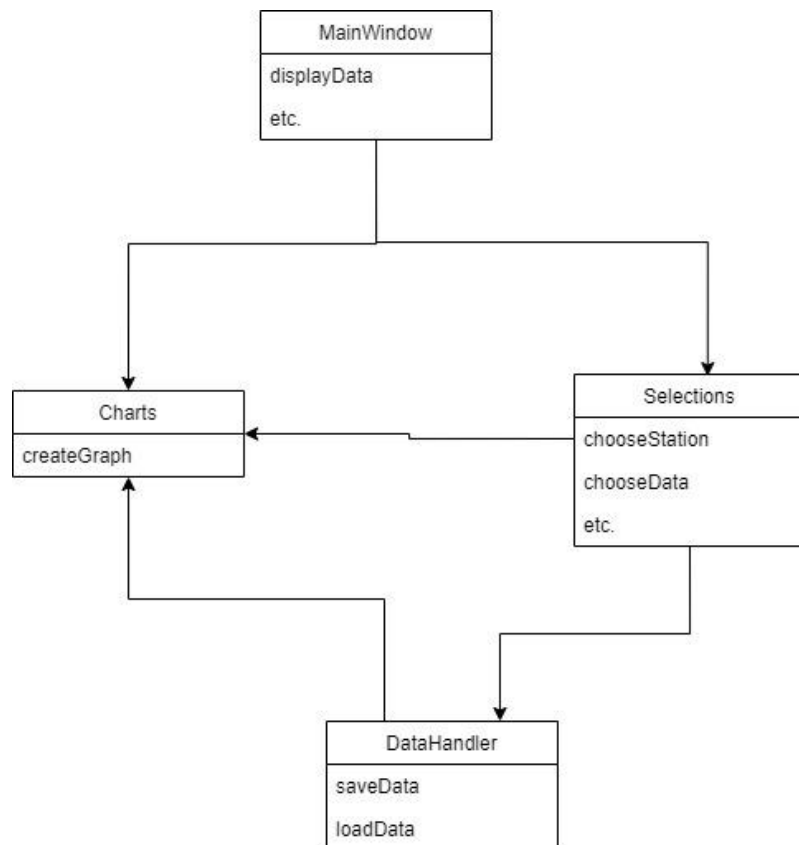


Figure 1 High level diagram of structure

MainWindow- responsible for gathering ui parts

Charts – Creates graphs using data from DataHandler

Selections- User makes choices about what data is shown or saved. Selections-class tells the dataHandler what to do

DataHandler – Handles the data and communicates with both Selections and Charts-classes. Gives data to charts to be shown