**Class Ui\_MainWindow:**

setupLog:

makes a logWriter object so the that during the execution information can be written to the log: self.log

setupUi(mainWindow):

makes the mainwindow and fills it with the basic buttons and labels. parameter is a QMainWindow type

setIndex(index):

changes the index of the stackWidget so that the current page can be changed, it also updates the devices list and some labels if necessary. Parameter is of type int.

setSensorType(type):

sets the selected sensortype when a device is added. Parameter is of type string

changeMinVal(minVal):

changes the minimum value of the current device. Parameter is of type text because it is taken from a Qlineedit but it is converted to an int.

checkStringForNumber(string):

checks the given string if it consists of only numbers. Parameter is of type string

changeLanguage():

changes the language. Parameter is of type string

setupSettingsWindow():

makes the settings window in QWidget page 1, page 1 is then added to the stackedWidget.

setupsEnterDevice():

makes the enter device window in QWidget page 2, page 2 is then added to the stackedWidget.

setupGraphsWindow():

makes the graphs window in QWidget page 3, page 3 is then added to the stackedWidget.

setupManual():

makes the manual window in QWidget page 4, page 4 is then added to the stackedWidget

rollUpOut():

rolls the current device up or down depending on its status

addDeviceNoPar():

adds a device to the dashboard(takes no parameters), first it checks all the input, then it creates a Device object which makes the connection. It also starts a receiving daemon thread for the device. It sets the currentDevice to the first device. At last it updates the maingrid.

showPopup(type, popupText, popupIText):

shows a popup of given type, popupText is the first part of the popup, popupIText is the next more detailed part of the popup. All parameters are of type string

setCurrentDevice(name)

sets the current device to the device with the given name

retranslateUi(type):

retranslates all the text in the GUI to the givin type. Parameter of type int: 0 is English, 1 is Dutch.

updateMaingrid(Mainwindow):

updates the maingrid. Parameter is of type QMainwindow

updatelabels(queue):

updates the Sky en Temp labels, takes the data from the queue: for Sky it calculates the avg of 3 numbers and decides how bright it is, for Temp it displays the current temp data. Parameter is of type Queue.

fillGraph(queue):

fills the graph with received data. Parameter is of type Queue

**Class Language:**

\_\_init\_\_(type):

Calls the setLang() functie, gives type as parameter

setLang(type):

loads the language with the given type, Parameter is of type int

load\_english():

loads the English language

load\_dutch():

loads the Dutch language

**Class Device:**

\_\_init\_\_(name, portNumber, sensorType, minval, maxLength):

name: string, the name of the device

portNumber: string, the port to which the device has connected

sensorType: string, the type of the sensor the device has

minVal: int, the minimum value to which the device has to roll out/up

maxLength: int, the length the device can roll out

Calls establishConnection() to make the connection and assigns all variables.

establishConnection():

makes the connection

transmit(message):

message: int, the message that has to be send

transmits a message to the device

receive(queue):

queue: Queue, the queue in which the data is put

An infinite loop that receives data from the device is called as daemon thread by the main thread

rollUp():

Transmits message to the device that says that it must roll up

rolldown():

Transmits message to the device that says that it must roll down

getName():

returns the name of the device

getStatus():

returns *rolled up* or *rolled down* depending on the status, which could be 0 or 1

setMinVal(minVal):

minVal: int, the minimum value that will be transmitted to the device

doReceive(queue):

queue: Queue, the queue in which the data must be put

infitie loop that calls receive

**Class PlotCanvas**

\_\_init\_\_(parent, width, height, dpi):

Parent: The parent of the canvas, default=None

Width: int, the width of the canvas, default=5

Height: int, the height of the graph, default=4

Dpi: int, the Dots Per Inch, default=100

Plot(data, sensorType):

Data: List, the list which contains the data

sensorType: string, the sensorType of the graph