Practice 9

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Hierarchical Index

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Chapter 2

Class Index

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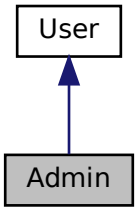
Chapter 4

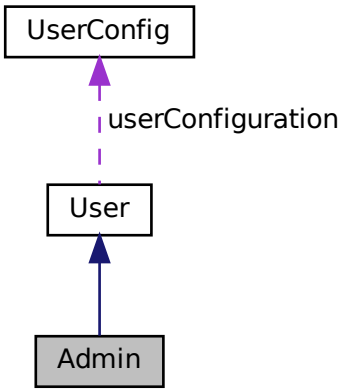
Class Documentation

4.1 Admin Class Reference

Inheritance diagram for Admin:



Collaboration diagram for Admin:



Public Member Functions

- Admin (std::string number="00000", std::string nif="00000000", std::string name="default")

  Creates a new Admin object.

Additional Inherited Members

4.1.1 Constructor & Destructor Documentation

4.1.1.1 Admin()

```
Admin::Admin (
            std::string number = "00000",
            std::string nif = "00000000",
            std::string name = "default" )
```

Creates a new Admin object.

Parameters

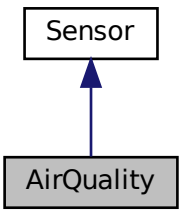
employeeNumber	
NIF	
name	

The documentation for this class was generated from the following files:

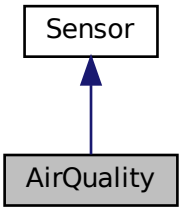
- include/Admin.h
- src/Admin.cpp

4.2 AirQuality Class Reference

Inheritance diagram for AirQuality:



Collaboration diagram for AirQuality:



Public Member Functions

- AirQuality (bool active=false, int valPerMin=1)

  Create a new Air Quality object.
- std::vector< int > requestData ()

  Request data from the air quality sensor.

Additional Inherited Members

4.2.1 Constructor & Destructor Documentation

4.2.1.1 AirQuality()

```
AirQuality::AirQuality (
            bool active = false,
            int valPerMin = 1 )
```

Create a new Air Quality object.

Parameters

active	By default off
valPerMin	By default 1 val/min

4.2.2 Member Function Documentation

4.2.2.1 requestData()

```
std::vector< int > AirQuality::requestData ( )  [virtual]
```

Request data from the air quality sensor.

Returns

std::vector<int> Data values

Note

This function is a placeholder, returns random values

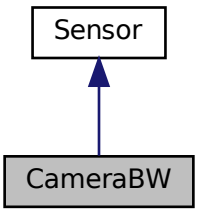
Implements Sensor.

The documentation for this class was generated from the following files:

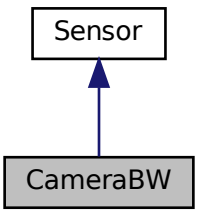
- include/AirQuality.h
- src/AirQuality.cpp

4.3 CameraBW Class Reference

Inheritance diagram for CameraBW:



Collaboration diagram for CameraBW:



Public Member Functions

- CameraBW (bool active=false, int valPerMin=1)

  Create a new BW camera object.
- std::vector< int > requestData ()

  Request data from the bw camera.

Additional Inherited Members

4.3.1 Constructor & Destructor Documentation

4.3.1.1 CameraBW()

```
CameraBW::CameraBW (
            bool active = false,
            int valPerMin = 1 )
```

Create a new BW camera object.

Parameters

active	By default off
valPerMin	By default 1 val/min

4.3.2 Member Function Documentation

4.3.2.1 requestData()

```
std::vector< int > CameraBW::requestData ( )  [virtual]
```

Request data from the bw camera.

Returns

std::vector<int> Data values

Note

This function is a placeholder, returns random values

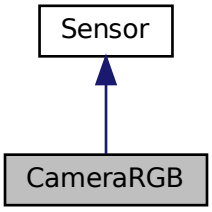
Implements Sensor.

The documentation for this class was generated from the following files:

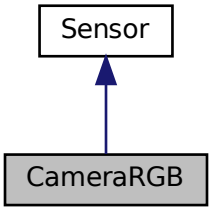
- include/CameraBW.h
- src/CameraBW.cpp

4.4 CameraRGB Class Reference

Inheritance diagram for CameraRGB:



Collaboration diagram for CameraRGB:



Public Member Functions

- CameraRGB (bool active=false, int valPerMin=1)
  Create a new RGB camera object.
- std::vector< int > requestData ()
  Request data from the rgb camera.

Additional Inherited Members

4.4.1 Constructor & Destructor Documentation

4.4.1.1 CameraRGB()

```
CameraRGB::CameraRGB (
            bool active = false,
            int valPerMin = 1 )
```

Create a new RGB camera object.

Parameters

active	By default off
valPerMin	By default 1 val/min

4.4.2 Member Function Documentation

4.4.2.1 requestData()

```
std::vector< int > CameraRGB::requestData ( )  [virtual]
```

Request data from the rgb camera.

Returns

std::vector<int> Data values

Note

This function is a placeholder, returns random values

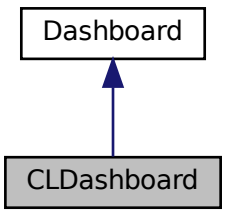
Implements Sensor.

The documentation for this class was generated from the following files:

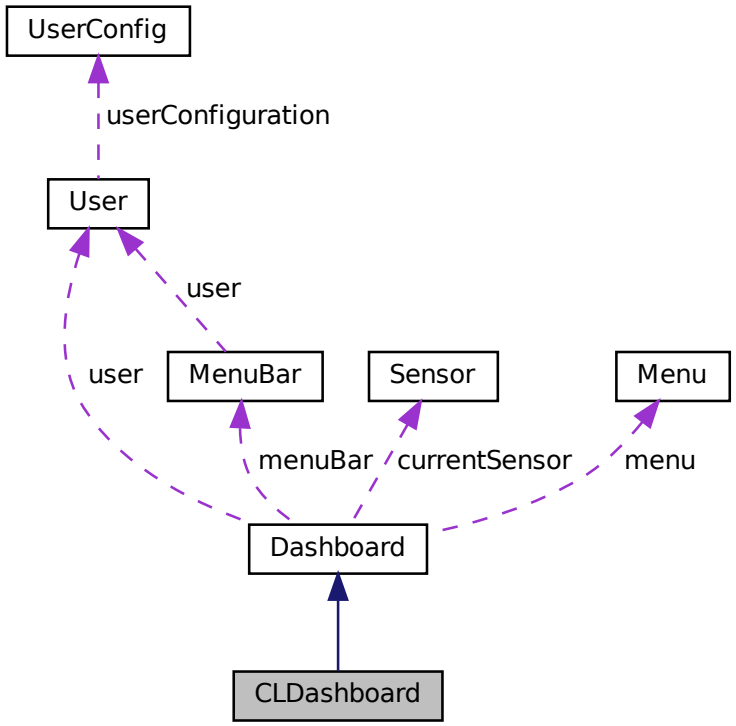
- include/CameraRGB.h
- src/CameraRGB.cpp

4.5 CLDashboard Class Reference

Inheritance diagram for CLDashboard:



Collaboration diagram for CLDashboard:



Public Member Functions

- CLDashboard (User &user)

  Create a new Dashboard for the command line.
- void showMainMenu ()

  Shows the default menu and starts the custom terminal.

Protected Member Functions

- void changeMainMenu (int n)

  Change the page of the menu.
- void readCommand ()

  Reads and executes a command from the terminal.
- void listSensor ()

  Command that lists the sensors in the current menu page.
- void helpCommand (std::string command="")

  Displays the use of the command.
- void errorCommand (std::string command="")

  Shows error message because the command not being found.
- void permissionError ()

  Shows error message because the permission being denied to execute it.

Additional Inherited Members

4.5.1 Constructor & Destructor Documentation

4.5.1.1 CLDashboard()

```
CLDashboard::CLDashboard (
            User & user )
```

Create a new Dashboard for the command line.

4.5.2 Member Function Documentation

4.5.2.1 changeMainMenu()

```
void CLDashboard::changeMainMenu (
            int n )  [protected]
```

Change the page of the menu.

Parameters

n	Number of pages to shift (positive to the right)

4.5.2.2 errorCommand()

```
void CLDashboard::errorCommand (
            std::string command = "" )  [protected]
```

Shows error message because the command not being found.

Parameters

command	Command input

4.5.2.3 helpCommand()

```
void CLDashboard::helpCommand (
```

```
std::string command = "" )  [protected]
```

Displays the use of the command.

Parameters

command	Command to display info about

4.5.2.4 listSensor()

```
void CLDashboard::listSensor ( )  [protected]
```

Command that lists the sensors in the current menu page.

4.5.2.5 permissionError()

```
void CLDashboard::permissionError ( )  [protected]
```

Shows error message because the permission being denied to execute it.

4.5.2.6 readCommand()

```
void CLDashboard::readCommand ( )  [protected]
```

Reads and executes a command from the terminal.

4.5.2.7 showMainMenu()

```
void CLDashboard::showMainMenu ( )  [virtual]
```

Shows the default menu and starts the custom terminal.

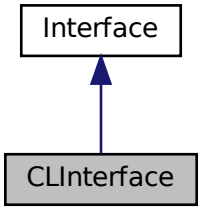
Implements Dashboard.

The documentation for this class was generated from the following files:

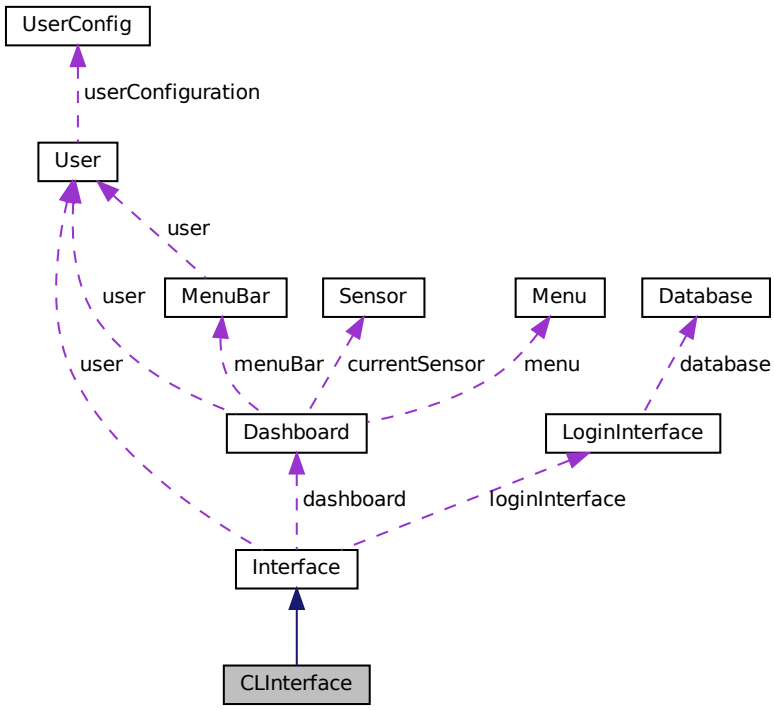
- include/CLDashboard.h
- src/CLDashboard.cpp

4.6 CLInterface Class Reference

Inheritance diagram for CLInterface:



Collaboration diagram for CLInterface:



Public Member Functions

- CLInterface ()

  Create a new Interface for the command line.
- void login (int tries)

  Controls the login interface for the command line.

Additional Inherited Members

4.6.1 Constructor & Destructor Documentation

4.6.1.1 CLInterface()

```
CLInterface::CLInterface ( )
```

Create a new Interface for the command line.

Note

Also gets the terminal size

4.6.2 Member Function Documentation

4.6.2.1 login()

```
void CLInterface::login (
            int tries )  [virtual]
```

Controls the login interface for the command line.

Parameters

tries	Number of tries to login

Note

If exceeded the number of tries, then the program will exit

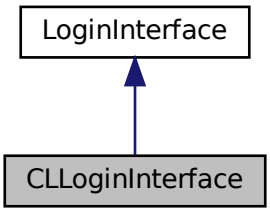
Implements Interface.

The documentation for this class was generated from the following files:

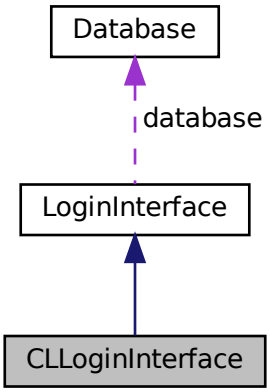
- include/CLInterface.h
- src/CLInterface.cpp

4.7 CLLoginInterface Class Reference

Inheritance diagram for CLLoginInterface:



Collaboration diagram for CLLoginInterface:



Public Member Functions

- void showWelcomeMessage ()

  Show the login screen messages in the command line.
- void askEmployeeNumber ()

  Ask the user to input the employee number from the command line.
- void askEmployeeNumber (const std::string &userNumber)

  Default setter of employee number.
- void askNIF ()

  Ask the user to input the employee nif from the command line.
- void askNIF (const std::string &nif)

  Default setter of employee nif.

Additional Inherited Members

4.7.1 Member Function Documentation

4.7.1.1 askEmployeeNumber() [1/2]

```
void CLLoginInterface::askEmployeeNumber ( )  [virtual]
```

Ask the user to input the employee number from the command line.

Implements LoginInterface.

4.7.1.2 askEmployeeNumber() [2/2]

```
void CLLoginInterface::askEmployeeNumber (
            const std::string & userNumber )  [virtual]
```

Default setter of employee number.

Note

This method is used when the user executes the main with the NIF and employee number

Parameters

userNumber	

Implements LoginInterface.

4.7.1.3 askNIF() [1/2]

```
void CLLoginInterface::askNIF ( )  [virtual]
```

Ask the user to input the employee nif from the command line.

Implements LoginInterface.

4.7.1.4 askNIF() [2/2]

```
void CLLoginInterface::askNIF (
            const std::string & nif )  [virtual]
```

Default setter of employee nif.

Note

This method is used when the user executes the main with the NIF and employee number

Parameters

nif	

Implements LoginInterface.

4.7.1.5 showWelcomeMessage()

```
void CLLoginInterface::showWelcomeMessage ( )  [virtual]
```

Show the login screen messages in the command line.

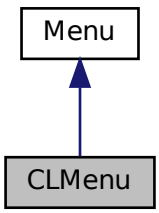
Implements LoginInterface.

The documentation for this class was generated from the following files:

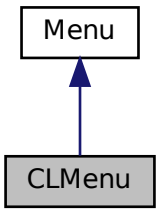
- include/CLLoginInterface.h
- src/CLLoginInterface.cpp

4.8 CLMenu Class Reference

Inheritance diagram for CLMenu:



Collaboration diagram for CLMenu:



Public Member Functions

- void show (std::vector< Sensor * > sensors, UserConfig &config)

  Shows the menu with six or less smaller sensors displayed in the command line.
- void show (Sensor *sensorToDisplay, UserConfig &config)

  Shows the menu for the sensor selected in a detailed format in the command line.

Protected Member Functions

- void clearMenu ()

  Clear the menu in the command line.

Additional Inherited Members

4.8.1 Member Function Documentation

4.8.1.1 clearMenu()

```
void CLMenu::clearMenu ( )  [protected]
```

Clear the menu in the command line.

4.8.1.2 show() [1/2]

```
void CLMenu::show (
            Sensor * sensorToDisplay,
            UserConfig & config )  [virtual]
```

Shows the menu for the sensor selected in a detailed format in the command line.

Parameters

sensorToDisplay	Sensor to display
config	User configuration

Implements Menu.

4.8.1.3 show() [2/2]

```
void CLMenu::show (
            std::vector< Sensor * > sensors,
            UserConfig & config )  [virtual]
```

Shows the menu with six or less smaller sensors displayed in the command line.

Parameters

sensors	Array of sensor to display <= 7
config	User configuration

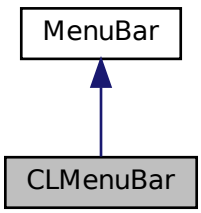
Implements Menu.

The documentation for this class was generated from the following files:

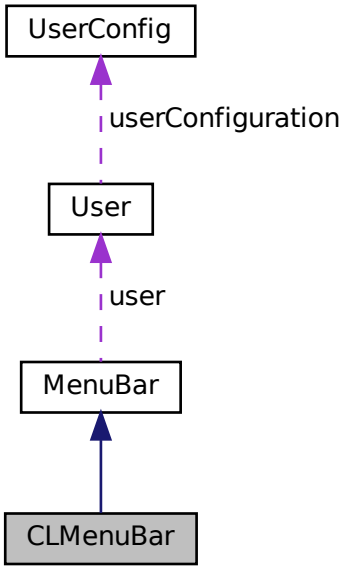
- include/CLMenu.h
- src/CLMenu.cpp

4.9 CLMenuBar Class Reference

Inheritance diagram for CLMenuBar:



Collaboration diagram for CLMenuBar:



Public Member Functions

- void show ()

  Show the menu bar in the command line.

Additional Inherited Members

4.9.1 Member Function Documentation

4.9.1.1 show()

```
void CLMenuBar::show ( )  [virtual]
```

Show the menu bar in the command line.

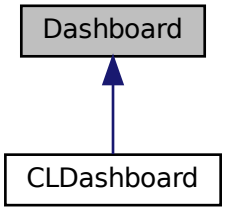
Implements MenuBar.

The documentation for this class was generated from the following files:

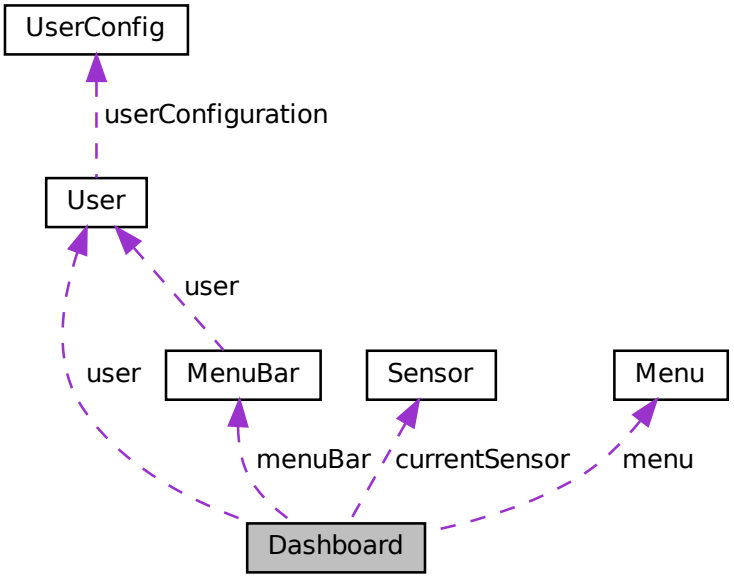
- include/CLMenuBar.h
- src/CLMenuBar.cpp

4.10 Dashboard Class Reference

Inheritance diagram for Dashboard:



Collaboration diagram for Dashboard:



Public Member Functions

- **Dashboard** (User &user)
- virtual void **showMainMenu** ()=0
- bool changeInterface (std::string newInterface="")

  Changes the current interface to the input one.
- void addToMainMenu ()

Adds all the current sensors to the dashboard.

- void addToMainMenu (Sensor *sensor)

  Adds a sensor to the dashboard.
- void moveWindowMainMenu (int n=1)

  Shifts the main menu n pages.
- void changeCurrentSensorInfo (std::string toChange, std::string newValue)

  Changes the current sensor values.
- void addNewSensor (std::string type)

  Creates the new sensor and calls addToMainMenu.
- void deleteSensor (std::string id)

  Deletes the desired sensor from the dashboard.
- void cleanSensor ()

  Deletes all the sensors from the dashboard.
- void exit ()

  Exits the dashboard and finishes the program.
- void logout ()

  Exits the dashboard and goes back to the login screen.
- bool canExit ()

  Called from main, checks if the program is allowed to exit.

Static Public Member Functions

- static Dashboard * Create (User &user, const std::string type="CLI")

  Create a new instance of the desired Dashboard interface.

Protected Attributes

- std::vector< Sensor * > sensor

  Vector of all the vectors in the dashboard.
- std::vector< std::vector< Sensor * > > mainMenu

  Vetor that contains the pages of the main Menu.
- int mainMenuIndex

  Current page of the main Menu.
- MenuBar * **menuBar**
- Menu * **menu**
- User * **user**
- std::string currentInterface

  Current interface, can be a sensor ID or the main menu (..)
- std::string lastInterface

  Last interface, can be a sensor ID or the main menu (..)
- Sensor * currentSensor

  If the currentInterface is a sensor then the value would be that sensor, if not the value is nullptr.
- bool **allowedToExit**

4.10.1 Member Function Documentation

4.10.1.1 addNewSensor()

```
void Dashboard::addNewSensor (
            std::string type )
```

Creates the new sensor and calls addToMainMenu.

Parameters

type	New sensor type

See also

addToMainMenu

4.10.1.2 addToMainMenu() [1/2]

```
void Dashboard::addToMainMenu ( )
```

Adds all the current sensors to the dashboard.

Note

Only called at the start of the program

4.10.1.3 addToMainMenu() [2/2]

```
void Dashboard::addToMainMenu (
            Sensor * sensor )
```

Adds a sensor to the dashboard.

Parameters

sensor	Sensor to add

4.10.1.4 canExit()

```
bool Dashboard::canExit ( )
```

Called from main, checks if the program is allowed to exit.

Returns

true End the program

false Cannot exit, goes to login screen

4.10.1.5 changeCurrentSensorInfo()

```
void Dashboard::changeCurrentSensorInfo (
            std::string toChange,
            std::string newValue )
```

Changes the current sensor values.

Parameters

toChange	Desired value to change
newValue	New value to add

4.10.1.6 changeInterface()

```
bool Dashboard::changeInterface (
            std::string newInterface = "" )
```

Changes the current interface to the input one.

Parameters

newInterface	Desired interface to change (.. = main Menu)

Returns

true = can change interface

false = cannot change interface

4.10.1.7 cleanSensor()

```
void Dashboard::cleanSensor ( )
```

Deletes all the sensors from the dashboard.

Note

Only called when exiting the dashboard

4.10.1.8 Create()

```
Dashboard * Dashboard::Create (
            User & user,
            const std::string type = "CLI" )  [static]
```

Create a new instance of the desired Dashboard interface.

Parameters

type	Type of Dashboard interface

Returns

Dashboard*

4.10.1.9 deleteSensor()

```
void Dashboard::deleteSensor (
            std::string id )
```

Deletes the desired sensor from the dashboard.

Parameters

id	ID of the sensor to delete

See also

addToMainMenu

4.10.1.10 exit()

```
void Dashboard::exit ( )
```

Exits the dashboard and finishes the program.

See also

cleanSensor

4.10.1.11 logout()

```
void Dashboard::logout ( )
```

Exits the dashboard and goes back to the login screen.

See also

cleanSensor

4.10.1.12 moveWindowMainMenu()

```
void Dashboard::moveWindowMainMenu (
            int n = 1 )
```

Shifts the main menu n pages.

Parameters

n	Number of pages to shift (positive to the right)

The documentation for this class was generated from the following files:

- include/Dashboard.h
- src/Dashboard.cpp

4.11 Database Class Reference

Public Member Functions

- void getUser (std::string employeeNumber, std::string NIF, User &currentUser)

  Get the User object in the database, if not throws an exception.
- void **resetUser** (User &currentUser)

4.11.1 Member Function Documentation

4.11.1.1 getUser()

```
void Database::getUser (
            std::string employeeNumber,
            std::string NIF,
            User & currentUser )
```

Get the User object in the database, if not throws an exception.

Parameters

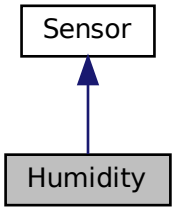
employeeNumber	
NIF	
currentUser	

The documentation for this class was generated from the following files:

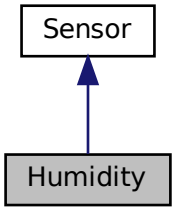
- include/Database.h
- src/Database.cpp

4.12 Humidity Class Reference

Inheritance diagram for Humidity:



Collaboration diagram for Humidity:



Public Member Functions

- Humidity (bool active=false, int valPerMin=1)
  Create a new Humidity object.
- std::vector< int > requestData ()
  Request data from the humidity sensor.

Additional Inherited Members

4.12.1 Constructor & Destructor Documentation

4.12.1.1 Humidity()

```
Humidity::Humidity (
            bool active = false,
            int valPerMin = 1 )
```

Create a new Humidity object.

Parameters

active	By default off
valPerMin	By default 1 val/min

4.12.2 Member Function Documentation

4.12.2.1 requestData()

```
std::vector< int > Humidity::requestData ( )  [virtual]
```

Request data from the humidity sensor.

Returns

std::vector<int> Data values

Note

This function is a placeholder, returns random values

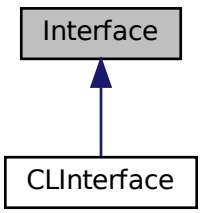
Implements Sensor.

The documentation for this class was generated from the following files:

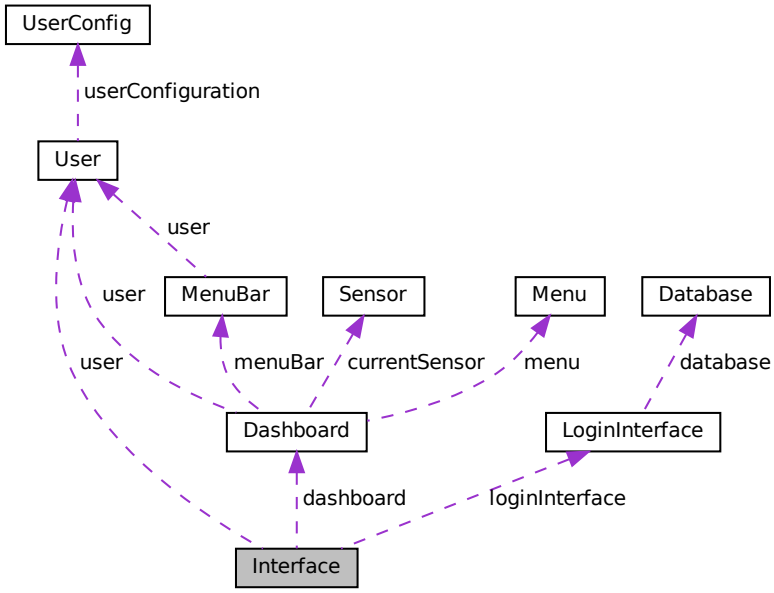
- include/Humidity.h
- src/Humidity.cpp

4.13 Interface Class Reference

Inheritance diagram for Interface:



Collaboration diagram for Interface:



Public Member Functions

- virtual void login (int tries)=0

  Virtual interface for the login method.
- void login (std::string userNumber, std::string nif)

  Default login method withouth any interface.
- bool loadMenu ()

  Creates and loads the dashboard.

Static Public Member Functions

- static Interface * Create (const std::string type="CLI")

  Create a new Interface instance of the type specified.

Protected Attributes

- LoginInterface * **loginInterface**
- Dashboard * **dashboard**
- User * **user**

4.13.1 Member Function Documentation

4.13.1.1 Create()

```
Interface * Interface::Create (
            const std::string type = "CLI" )  [static]
```

Create a new Interface instance of the type specified.

Parameters

type	Type of interface

Returns

Interface* New Interface instance

4.13.1.2 loadMenu()

```
bool Interface::loadMenu ( )
```

Creates and loads the dashboard.

Returns

true = exit

false = login again

4.13.1.3 login() [1/2]

```
virtual void Interface::login (
            int tries )  [pure virtual]
```

Virtual interface for the login method.

Parameters

tries	

Implemented in CLInterface.

4.13.1.4 login() [2/2]

```
void Interface::login (
            std::string userNumber,
            std::string nif )
```

Default login method withouth any interface.

Parameters

userNumber	
nif	

Note

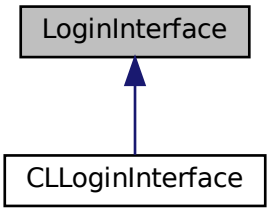
This method is used when the user executes the main with the NIF and employee number

The documentation for this class was generated from the following files:

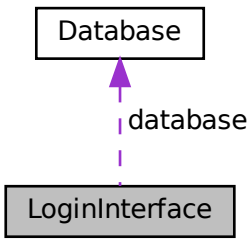
- include/Interface.h
- src/Interface.cpp

4.14 LoginInterface Class Reference

Inheritance diagram for LoginInterface:



Collaboration diagram for LoginInterface:



Public Member Functions

- virtual void **showWelcomeMessage** ()=0
- virtual void **askEmployeeNumber** ()=0
- virtual void **askEmployeeNumber** (const std::string &userNumber)=0
- virtual void **askNIF** ()=0
- virtual void **askNIF** (const std::string &userNumber)=0
- void checkUser (User &currentUser)

  Sets the user pass to the corresponding employee number and NIF in the database.
- **LoginInterface** (LoginInterface &otherLoginInterface)=delete
- void **operator=** (const LoginInterface &)=delete

Static Public Member Functions

- static LoginInterface * Create (const std::string="CLI")

  Create a new Login interface instance of the type specified.

Public Attributes

- Database * **database**

Protected Attributes

- std::string **inputNIF**
- std::string **inputEmployeeNumber**

4.14.1 Member Function Documentation

4.14.1.1 checkUser()

```
void LoginInterface::checkUser (
            User & currentUser )
```

Sets the user pass to the corresponding employee number and NIF in the database.

Parameters

currentUser	

4.14.1.2 Create()

```
LoginInterface * LoginInterface::Create (
            const std::string type = "CLI" )  [static]
```

Create a new Login interface instance of the type specified.

Parameters

type	Type of login interface

Returns

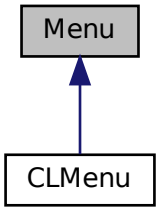
LoginInterface* New login interface instance

The documentation for this class was generated from the following files:

- include/LoginInterface.h
- src/LoginInterface.cpp

4.15 Menu Class Reference

Inheritance diagram for Menu:



Public Member Functions

- virtual void **show** (std::vector< Sensor * > sensors, UserConfig &config)=0
- virtual void **show** (Sensor *sensorToDisplay, UserConfig &config)=0

Static Public Member Functions

- static Menu * Create (const std::string type="CLI")

  Create a new Menu instance of the type specified.

4.15.1 Member Function Documentation

4.15.1.1 Create()

```
Menu * Menu::Create (
            const std::string type = "CLI" )  [static]
```

Create a new Menu instance of the type specified.

Parameters

type	Type of menu

Returns

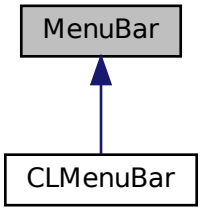
Menu* New menu instance

The documentation for this class was generated from the following files:

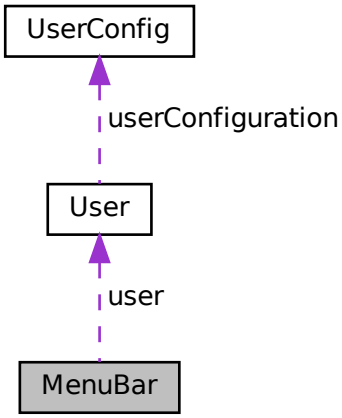
- include/Menu.h
- src/Menu.cpp

4.16 MenuBar Class Reference

Inheritance diagram for MenuBar:



Collaboration diagram for MenuBar:



Public Member Functions

- virtual void **show** ()=0
- void **setUser** (User &user)
- void setCurrentMenu (std::string currentMenu)

  Sets the current menu.

Static Public Member Functions

- static MenuBar * Create (const std::string type="CLI")

  Create a new Menu bar instance of the type specified.

Protected Attributes

- User **user**
- std::string **currentMenu**

4.16.1 Member Function Documentation

4.16.1.1 Create()

```
MenuBar * MenuBar::Create (
            const std::string type = "CLI" )  [static]
```

Create a new Menu bar instance of the type specified.

Parameters

type	Type of menu bar

Returns

MenuBar* New menu bar instance

4.16.1.2 setCurrentMenu()

```
void MenuBar::setCurrentMenu (
            std::string currentMenu )
```

Sets the current menu.

Parameters

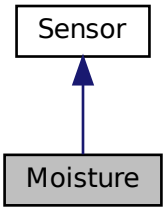
currentMenu	

The documentation for this class was generated from the following files:

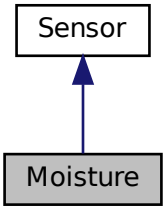
- include/MenuBar.h
- src/MenuBar.cpp

4.17 Moisture Class Reference

Inheritance diagram for Moisture:



Collaboration diagram for Moisture:



Public Member Functions

- Moisture (bool active=false, int valPerMin=1)

  Create a new Moisture object.
- std::vector< int > requestData ()

  Request data from the moisture sensor.

Additional Inherited Members

4.17.1 Constructor & Destructor Documentation

4.17.1.1 Moisture()

```
Moisture::Moisture (
            bool active = false,
            int valPerMin = 1 )
```

Create a new Moisture object.

Parameters

active	By default off
valPerMin	By default 1 val/min

4.17.2 Member Function Documentation

4.17.2.1 requestData()

```
std::vector< int > Moisture::requestData ( )  [virtual]
```

Request data from the moisture sensor.

Returns

std::vector<int> Data values

Note

This function is a placeholder, returns random values

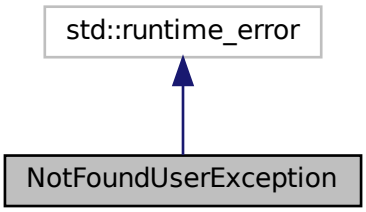
Implements Sensor.

The documentation for this class was generated from the following files:

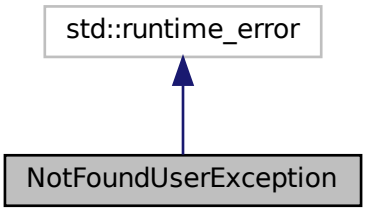
- include/Moisture.h
- src/Moisture.cpp

4.18 NotFoundUserException Class Reference

Inheritance diagram for NotFoundUserException:



Collaboration diagram for NotFoundUserException:

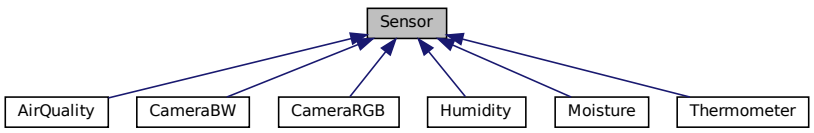


The documentation for this class was generated from the following file:

- include/NotFoundUserException.h

4.19 Sensor Class Reference

Inheritance diagram for Sensor:



Public Member Functions

- Sensor (std::string id="0000", std::string type="none", std::string magnitude="-", bool active=true, int valPer↩ Min=1)

  Construct a new Sensor:: Sensor object.
- std::string getId ()

  Returns the sensor id.
- std::string getType ()

  Returns the sensor type.
- void setActive (bool)

  Turns the sensor On/Off.
- bool isActive ()

  Returns if the sensor is On/Off.
- void setArea (std::string)

  Set the area of the sensor.
- std::string getArea ()

  Returns the area of the sensor.
- void setMagnitude (std::string magnitude)

  Set the sensor data values magnitude.
- std::string getMagnitude ()

  Returns the sensor magnitude.
- void setValPerMin (int valPerMin)

  Set the number of values per min.
- int getValPerMin ()

  Return the number of values per min.
- virtual std::vector< int > **requestData** ()=0

Static Public Member Functions

- static Sensor * Create (const std::string type)

  Creates an instance of the sensor type.

Protected Member Functions

- void **addNewData** (int)
- void **removeOldData** (int)

Protected Attributes

- std::string **id**
- bool **active**
- std::string **type**
- std::string **area**
- std::vector< int > **data**
- std::string **magnitude**
- int **valPerMin**

4.19.1 Constructor & Destructor Documentation

4.19.1.1 Sensor()

```
Sensor::Sensor (
            std::string id = "0000",
            std::string type = "none",
            std::string magnitude = "-",
            bool active = true,
            int valPerMin = 1 )
```

Construct a new Sensor:: Sensor object.

Parameters

id	Identification of type and number
type	Type of sensor
magnitude	Data values magnitude
active	Sensor is On/Off
valPerMin	Number of values per min

4.19.2 Member Function Documentation

4.19.2.1 Create()

```
Sensor * Sensor::Create (
            const std::string type )  [static]
```

Creates an instance of the sensor type.

Parameters

type	

Returns

Sensor*

4.19.2.2 getArea()

```
std::string Sensor::getArea ( )
```

Returns the area of the sensor.

Returns

std::string Area

4.19.2.3 getId()

```
std::string Sensor::getId ( )
```

Returns the sensor id.

Returns

std::string ID

4.19.2.4 getMagnitude()

```
std::string Sensor::getMagnitude ( )
```

Returns the sensor magnitude.

Returns

std::string Magnitude

4.19.2.5 getType()

```
std::string Sensor::getType ( )
```

Returns the sensor type.

Returns

std::string Sensor type

4.19.2.6 getValPerMin()

```
int Sensor::getValPerMin ( )
```

Return the number of values per min.

Returns

int Values per minute

4.19.2.7 isActive()

```
bool Sensor::isActive ( )
```

Returns if the sensor is On/Off.

Returns

true = ON

false = OFF

4.19.2.8 setActive()

```
void Sensor::setActive (
            bool active )
```

Turns the sensor On/Off.

Parameters

active	

4.19.2.9 setArea()

```
void Sensor::setArea (
            std::string area )
```

Set the area of the sensor.

Parameters

area	

4.19.2.10 setMagnitude()

```
void Sensor::setMagnitude (
            std::string magnitude )
```

Set the sensor data values magnitude.

Parameters

magnitude	

4.19.2.11 setValPerMin()

```
void Sensor::setValPerMin (
            int valPerMin )
```

Set the number of values per min.

Parameters

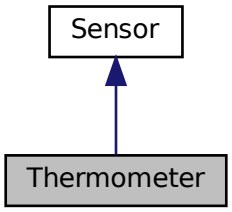
valPerMin	

The documentation for this class was generated from the following files:

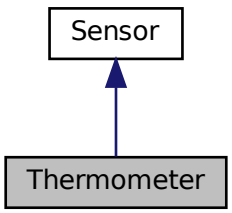
- include/Sensor.h
- src/Sensor.cpp

4.20 Thermometer Class Reference

Inheritance diagram for Thermometer:



Collaboration diagram for Thermometer:



Public Member Functions

- Thermometer (bool active=false, int valPerMin=1)

  Create a new Thermometer object.
- std::vector< int > requestData ()

  Request data from the thermometer.

Additional Inherited Members

4.20.1 Constructor & Destructor Documentation

4.20.1.1 Thermometer()

```
Thermometer::Thermometer (
            bool active = false,
            int valPerMin = 1 )
```

Create a new Thermometer object.

Parameters

active	By default off
valPerMin	By default 1 val/min

4.20.2 Member Function Documentation

4.20.2.1 requestData()

```
std::vector< int > Thermometer::requestData ( )  [virtual]
```

Request data from the thermometer.

Returns

std::vector<int> Data values

Note

This function is a placeholder, returns random values

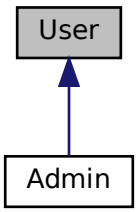
Implements Sensor.

The documentation for this class was generated from the following files:

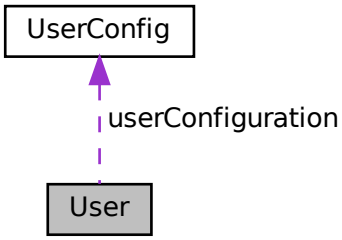
- include/Thermometer.h
- src/Thermometer.cpp

4.21 User Class Reference

Inheritance diagram for User:



Collaboration diagram for User:



Public Member Functions

- User (std::string number="00000", std::string nif="00000000", std::string name="default")

  Create a new User.
- **User** (UserConfig UserConfig, std::string number="00000", std::string nif="00000000", std::string name="default")
- std::string **getNIF** () const
- bool **isSameNIF** (std::string NIF)
- std::string **getEmployeeNumber** () const
- bool **isSameEmployeeNumber** (std::string employeeNumber)
- std::string getName () const

  Returns the user name.
- void **setName** (std::string newName)
- void addTimestamp ()

  Set the timestamp.
- std::string getTimestamp () const

  Returns the timestamp.

- bool hasAdminPermission ()

  Returns the user permissions.
- bool **operator<** (const User &) const
- bool **operator==** (const User &) const
- void setNIF (std::string)

  Set the user NIF.
- void setEmployeeNumber (std::string)

  Set the user employee number.
- void **setConfig** (UserConfig newConfig)
- UserConfig * **getConfiguration** ()

Protected Attributes

- char **name** [21]
- char **NIF** [9]
- char **employeeNumber** [6]
- char **lastLogTime** [25]
- bool **adminPermission**
- UserConfig **userConfiguration**

Friends

- std::ostream & **operator<<** (std::ostream &, const User &)

4.21.1 Constructor & Destructor Documentation

4.21.1.1 User()

```
User::User (
            std::string number = "00000",
            std::string nif = "00000000",
            std::string name = "default" )
```

Create a new User.

Parameters

employeeNumber	
NIF	
name	

4.21.2 Member Function Documentation

4.21.2.1 addTimestamp()

```
void User::addTimestamp ( )
```

Set the timestamp.

4.21.2.2 getName()

```
std::string User::getName ( ) const  [inline]
```

Returns the user name.

Returns

std::string User name

4.21.2.3 getTimestamp()

```
std::string User::getTimestamp ( ) const
```

Returns the timestamp.

Returns

std::string Timestamp

4.21.2.4 hasAdminPermission()

```
bool User::hasAdminPermission ( )
```

Returns the user permissions.

Returns

true = has admin pemissions

false = does not have admin permissions

4.21.2.5 setEmployeeNumber()

```
void User::setEmployeeNumber (
            std::string newEmployeeNumber )
```

Set the user employee number.

Parameters

employeeNumber	

4.21.2.6 setNIF()

```
void User::setNIF (
            std::string newNIF )
```

Set the user NIF.

Parameters

N↩ IF	

The documentation for this class was generated from the following files:

- include/User.h
- src/User.cpp

4.22 UserConfig Class Reference

Public Member Functions

- **UserConfig** (std::string language="ENG", std::array< int, 3 > backgroundColor={0, 0, 0}, std::array< int, 3 > fontColor={255, 255, 255}, std::array< int, 3 > graphicColor={255, 0, 0})
- std::string **getlanguage** () const
- void **setLanguage** (std::string newLanguage)
- std::array< int, 3 > * **getBackgroundColor** ()
- void **setBackgroundColor** (std::array< int, 3 > newBackgroundColor)
- std::array< int, 3 > * **getFontColor** ()
- void **setFontColor** (std::array< int, 3 > newFontColor)
- std::array< int, 3 > * **getGraphicColor** ()
- void **setGraphicColor** (std::array< int, 3 > newGraphicColor)

The documentation for this class was generated from the following files:

- include/UserConfig.h
- src/UserConfig.cpp

Chapter 5

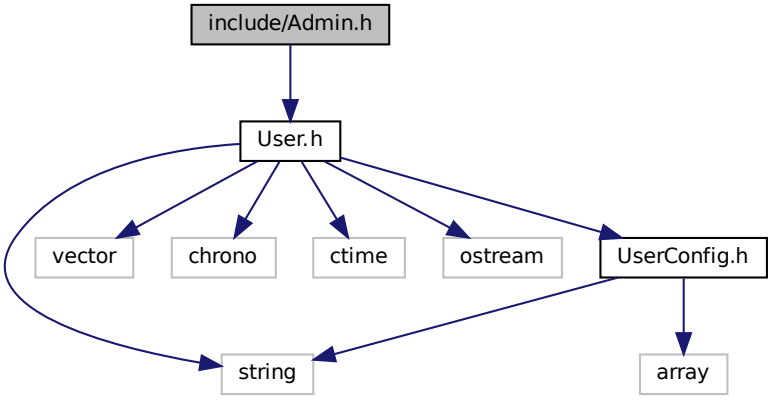
File Documentation

5.1 include/Admin.h File Reference

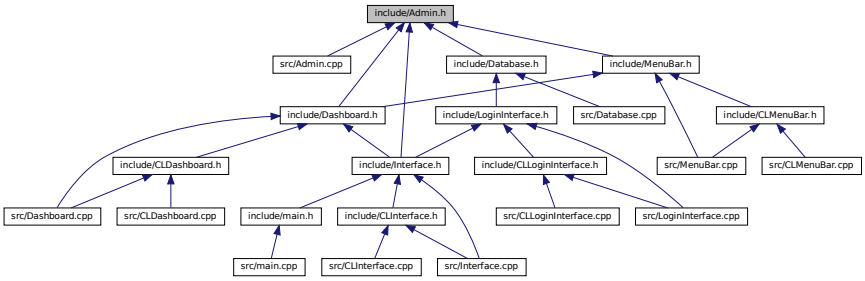
Header file of Admin.cpp.

```
#include "User.h"
```

Include dependency graph for Admin.h:



This graph shows which files directly or indirectly include this file:



Classes

- class Admin

5.1.1 Detailed Description

Header file of Admin.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

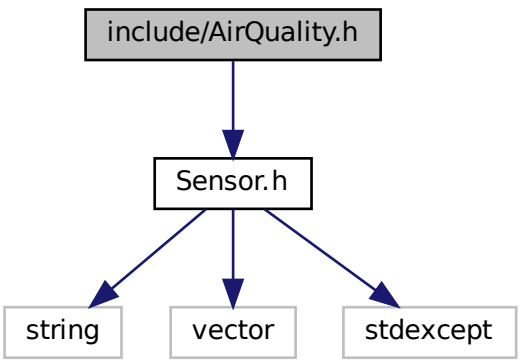
Copyright (c) 2022

5.2 include/AirQuality.h File Reference

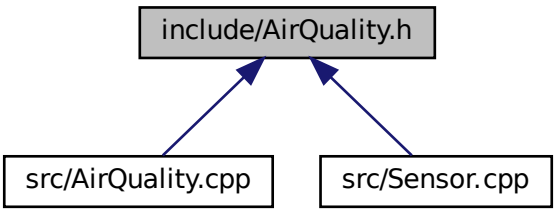
Header file of AirQuality.cpp.

```
#include "Sensor.h"
```

Include dependency graph for AirQuality.h:



This graph shows which files directly or indirectly include this file:



Classes

- class AirQuality

5.2.1 Detailed Description

Header file of AirQuality.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

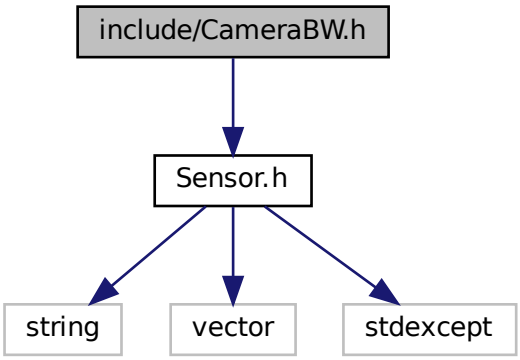
Copyright (c) 2022

5.3 include/CameraBW.h File Reference

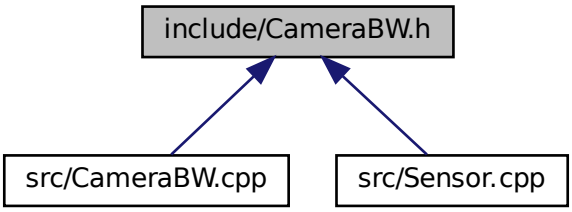
Header file of CameraBW.cpp.

```
#include "Sensor.h"
```

Include dependency graph for CameraBW.h:



This graph shows which files directly or indirectly include this file:



Classes

- class CameraBW

5.3.1 Detailed Description

Header file of CameraBW.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

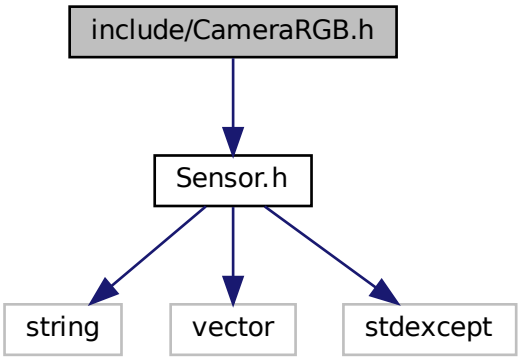
Copyright (c) 2022

5.4 include/CameraRGB.h File Reference

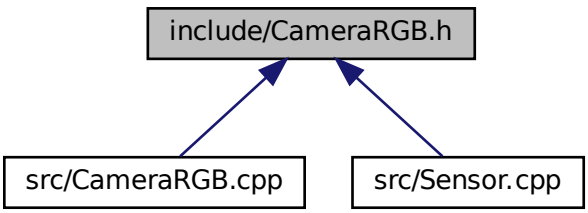
Header file of CameraRGB.cpp.

```
#include "Sensor.h"
```

Include dependency graph for CameraRGB.h:



This graph shows which files directly or indirectly include this file:



Classes

- class CameraRGB

5.4.1 Detailed Description

Header file of CameraRGB.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

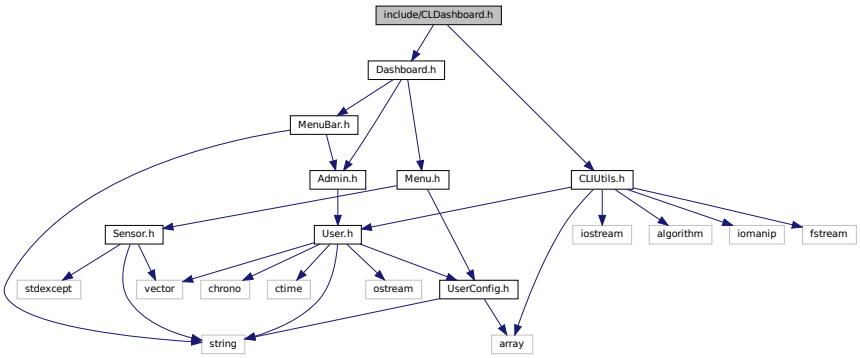
Copyright (c) 2022

5.5 include/CLDashboard.h File Reference

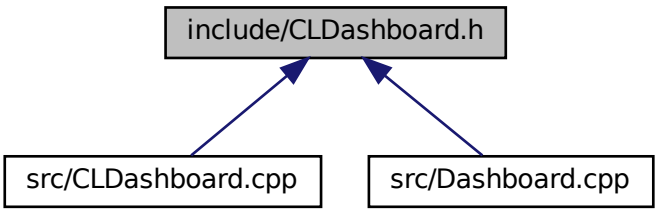
Header file of CLDashboard.cpp.

```
#include "Dashboard.h"
#include "CLIUtils.h"
```

Include dependency graph for CLDashboard.h:



This graph shows which files directly or indirectly include this file:



Classes

- class CLDashboard

5.5.1 Detailed Description

Header file of CLDashboard.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

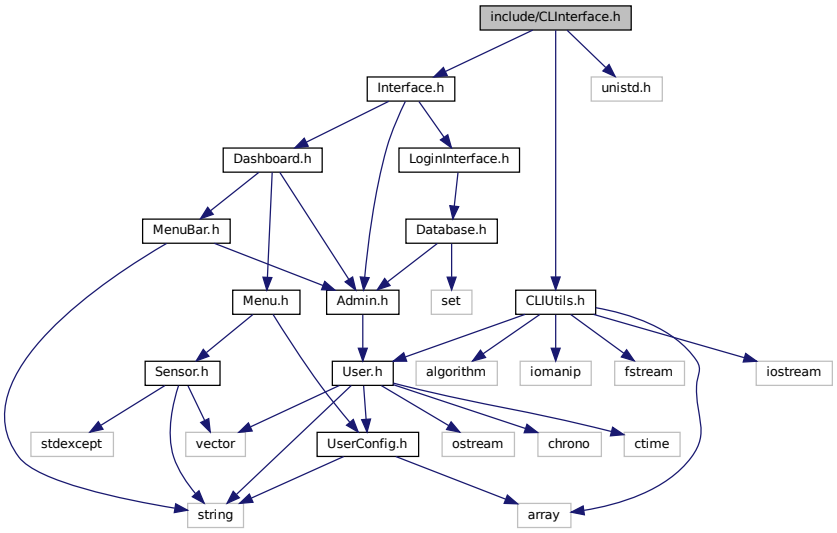
Copyright (c) 2022

5.6 include/CLInterface.h File Reference

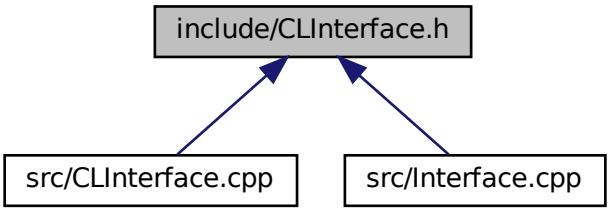
Header file of CLInterface.cpp.

```
#include "Interface.h"
#include "CLIUtils.h"
#include <unistd.h>
```

Include dependency graph for CLInterface.h:



This graph shows which files directly or indirectly include this file:



Classes

- class CLInterface

5.6.1 Detailed Description

Header file of CLInterface.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

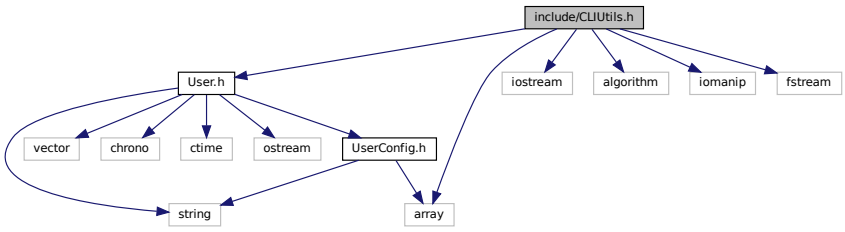
Copyright (c) 2022

5.7 include/CLIUtils.h File Reference

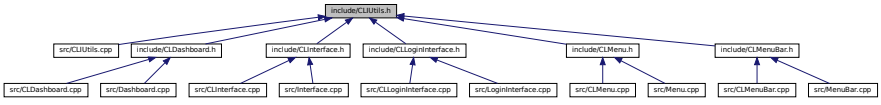
Header file of CLIUtils.cpp.

```
#include "User.h"
#include <iostream>
#include <algorithm>
#include <iomanip>
#include <fstream>
#include <array>
```

Include dependency graph for CLIUtils.h:



This graph shows which files directly or indirectly include this file:



Functions

- void **setTerminalSize** ()
- int **getTerminalWidth** ()
- int **getTerminalHeight** ()
- void printCenterFromFile (const std::string fileName, std::array< int, 3 > frontColor, std::array< int, 3 > backColor)

  Print the contents of the file in the center.
- void printCenter (const std::string toPrint, std::array< int, 3 > frontColor, std::array< int, 3 > backColor, const int padding=0)

  Print the string in the center.
- void **printRight** (const std::string toPrint, std::array< int, 3 > frontColor, std::array< int, 3 > backColor, const int padding=0)
- void **printLeft** (const std::string toPrint, std::array< int, 3 > frontColor, std::array< int, 3 > backColor, const int padding=0)
- void printColor (std::string toPrint, std::array< int, 3 > frontColor, std::array< int, 3 > backColor)

  Print the string to the terminal in the given color.
- void **startCustomTerminal** (int)
- std::vector< std::string > **newCommand** (User &user, std::string="")
- void **clearCustomTerminal** (int)
- void **moveCursor** (int posX, int posY)
- void **printGraphic** (const std::vector< int > &data, std::array< int, 3 > frontColor, std::array< int, 3 > backColor, std::array< int, 3 > pointColor, int valPerY=1, int posX=10, int posY=10, int scale=1)

5.7.1 Detailed Description

Header file of CLIUtils.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

Copyright (c) 2022

5.7.2 Function Documentation

5.7.2.1 printCenter()

```
void printCenter (
            const std::string toPrint,
            std::array< int, 3 > frontColor,
            std::array< int, 3 > backColor,
            const int padding = 0 )
```

Print the string in the center.

Parameters

toPrint	
frontColor	
backColor	
padding	

5.7.2.2 printCenterFromFile()

```
void printCenterFromFile (
            const std::string fileName,
            std::array< int, 3 > frontColor,
            std::array< int, 3 > backColor )
```

Print the contents of the file in the center.

Parameters

fileName	
frontColor	
backColor	

5.7.2.3 printColor()

```
void printColor (
            std::string toPrint,
            std::array< int, 3 > frontColor,
            std::array< int, 3 > backColor )
```

Print the string to the terminal in the given color.

Parameters

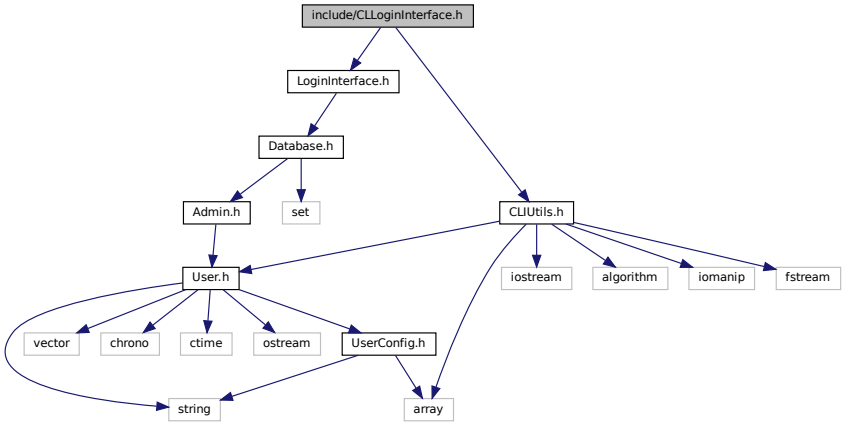
toPrint	
frontColor	
backColor	

5.8 include/CLLoginInterface.h File Reference

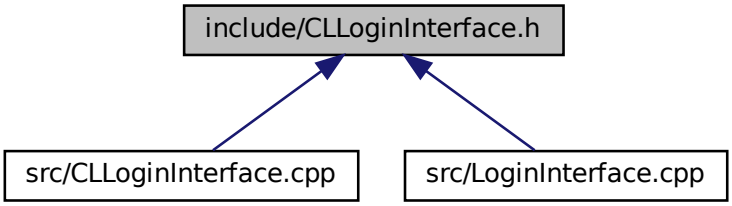
Header file of CLLoginInterface.cpp.

```
#include "LoginInterface.h"
#include "CLIUtils.h"
```

Include dependency graph for CLLoginInterface.h:



This graph shows which files directly or indirectly include this file:



Classes

- class CLLoginInterface

5.8.1 Detailed Description

Header file of CLLoginInterface.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

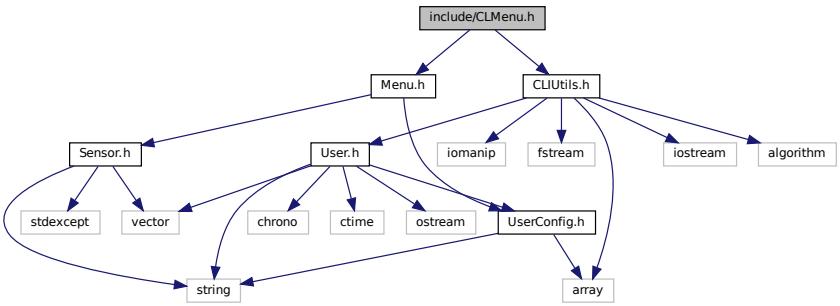
Copyright (c) 2022

5.9 include/CLMenu.h File Reference

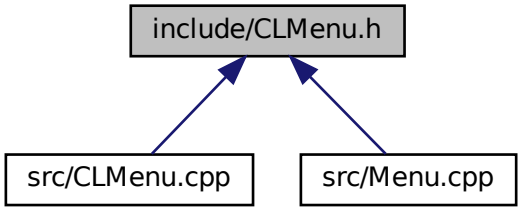
Header file of CLMenu.cpp.

```
#include "Menu.h"
#include "CLIUtils.h"
```

Include dependency graph for CLMenu.h:



This graph shows which files directly or indirectly include this file:



Classes

- class CLMenu

5.9.1 Detailed Description

Header file of CLMenu.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

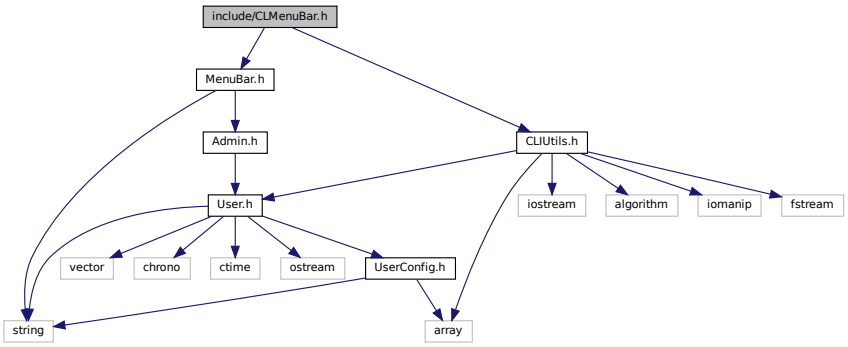
Copyright (c) 2022

5.10 include/CLMenuBar.h File Reference

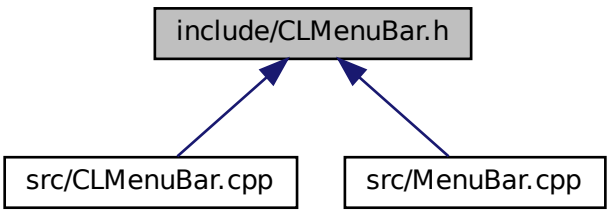
Header file of CLMenuBar.cpp.

```
#include "MenuBar.h"
#include "CLIUtils.h"
```

Include dependency graph for CLMenuBar.h:



This graph shows which files directly or indirectly include this file:



Classes

- class CLMenuBar

5.10.1 Detailed Description

Header file of CLMenuBar.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

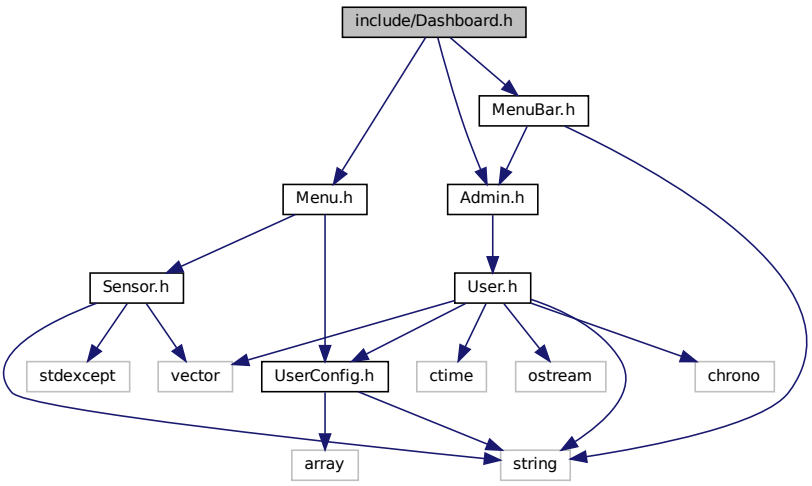
Copyright (c) 2022

5.11 include/Dashboard.h File Reference

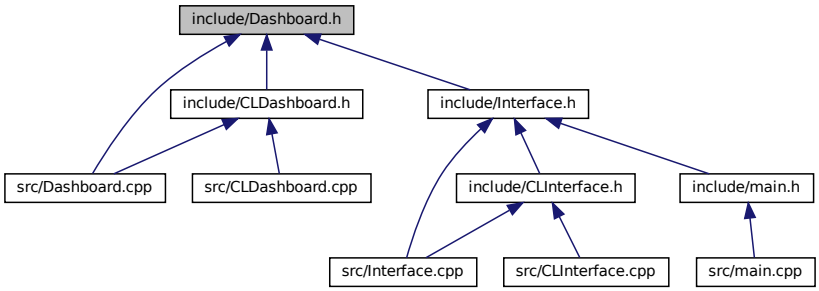
Header file of Dashboard.cpp.

```
#include "Admin.h"
#include "MenuBar.h"
#include "Menu.h"
```

Include dependency graph for Dashboard.h:



This graph shows which files directly or indirectly include this file:



Classes

- class Dashboard

5.11.1 Detailed Description

Header file of Dashboard.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

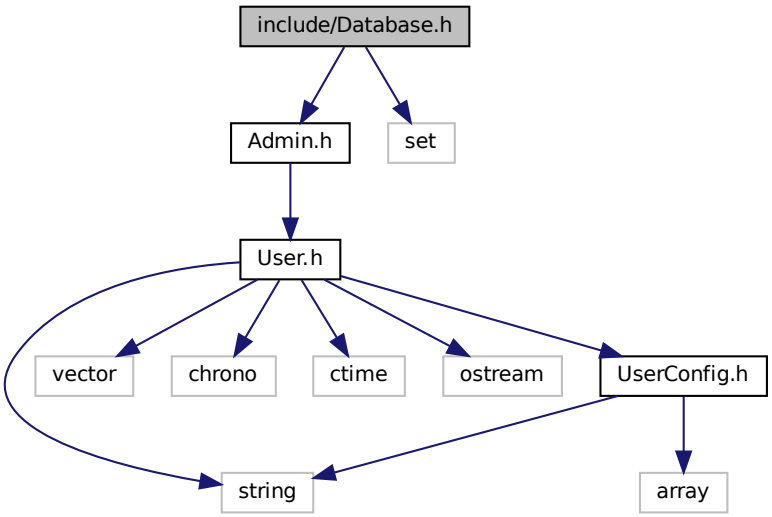
Copyright (c) 2022

5.12 include/Database.h File Reference

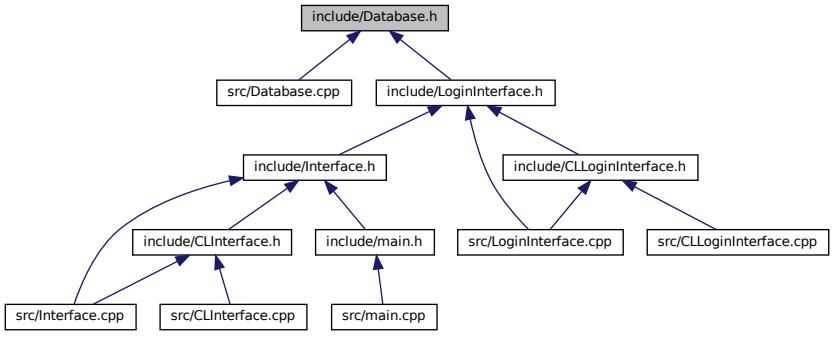
Header file of Database.cpp.

```
#include "Admin.h"
#include <set>
```

Include dependency graph for Database.h:



This graph shows which files directly or indirectly include this file:



Classes

- class Database

5.12.1 Detailed Description

Header file of Database.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

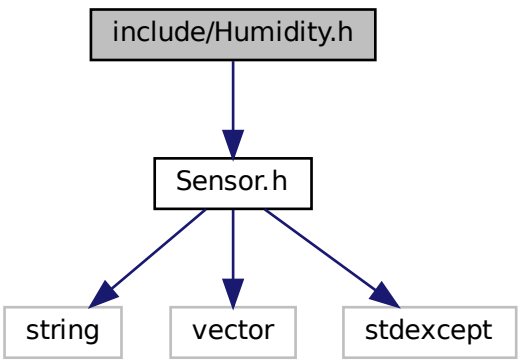
Copyright (c) 2022

5.13 include/Humidity.h File Reference

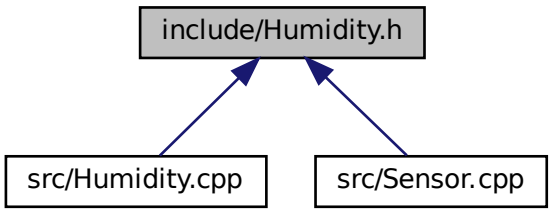
Header file of Humidity.cpp.

```
#include "Sensor.h"
```

Include dependency graph for Humidity.h:



This graph shows which files directly or indirectly include this file:



Classes

- class Humidity

5.13.1 Detailed Description

Header file of Humidity.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

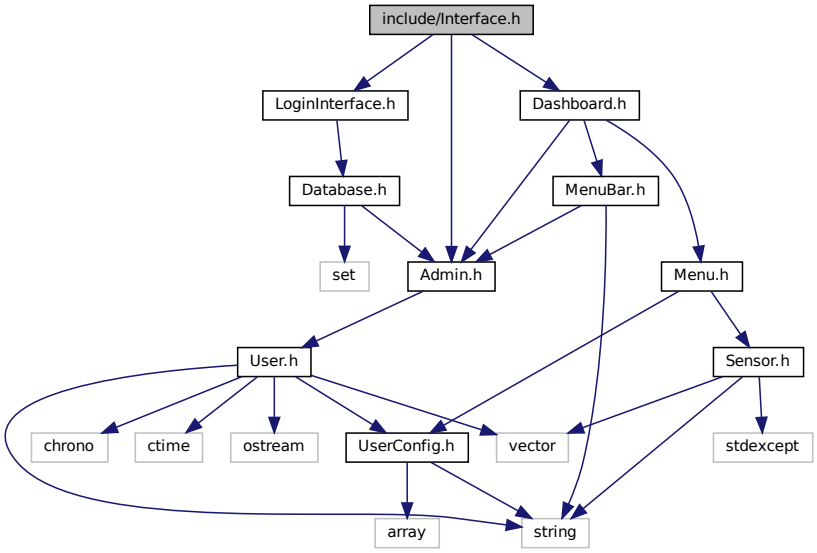
Copyright (c) 2022

5.14 include/Interface.h File Reference

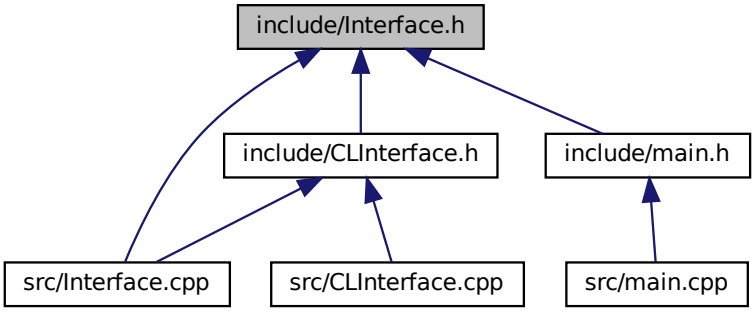
Header file of Interface.cpp.

```
#include "LoginInterface.h"
#include "Dashboard.h"
#include "Admin.h"
```

Include dependency graph for Interface.h:



This graph shows which files directly or indirectly include this file:



Classes

- class Interface

5.14.1 Detailed Description

Header file of Interface.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

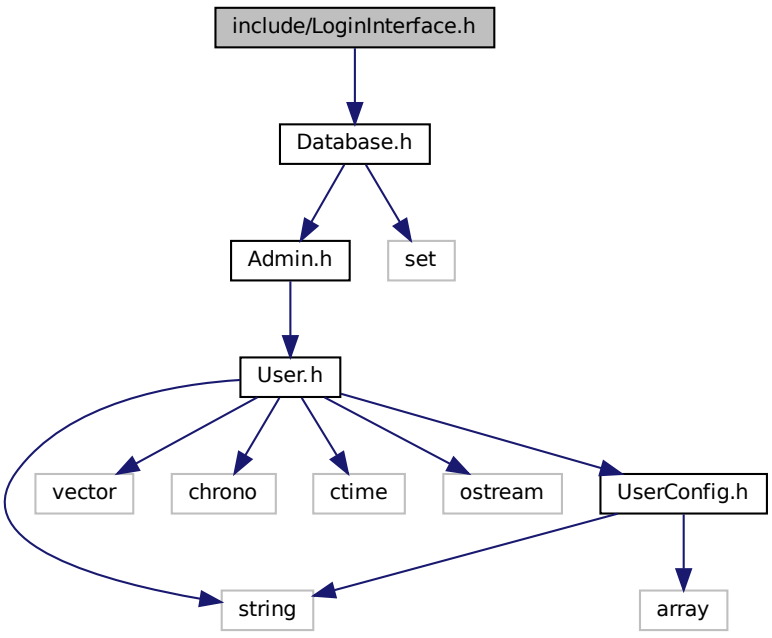
Copyright (c) 2022

5.15 include/LoginInterface.h File Reference

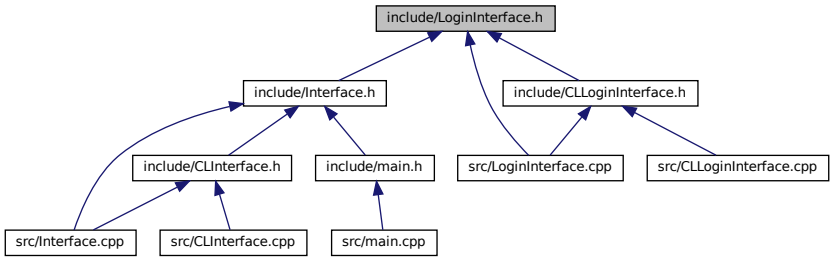
Header file of LoginInterface.cpp.

```
#include "Database.h"
```

Include dependency graph for LoginInterface.h:



This graph shows which files directly or indirectly include this file:



Classes

- class LoginInterface

5.15.1 Detailed Description

Header file of LoginInterface.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

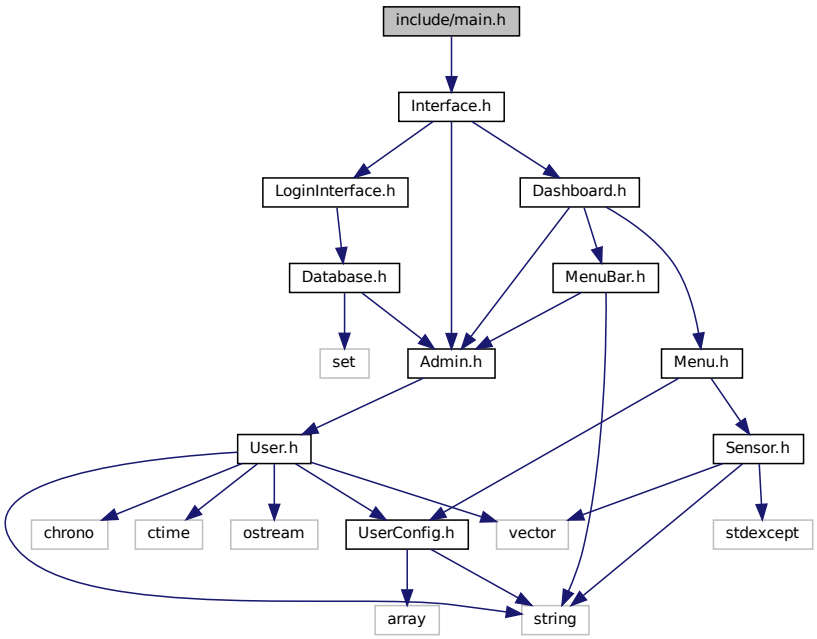
Copyright (c) 2022

5.16 include/main.h File Reference

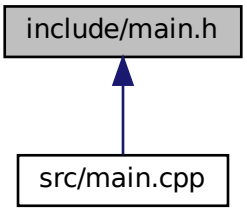
Header file of main.cpp.

```
#include "Interface.h"
```

Include dependency graph for main.h:



This graph shows which files directly or indirectly include this file:



Functions

- int **main** (int argc, char ∗argv[ ])

5.16.1 Detailed Description

Header file of main.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

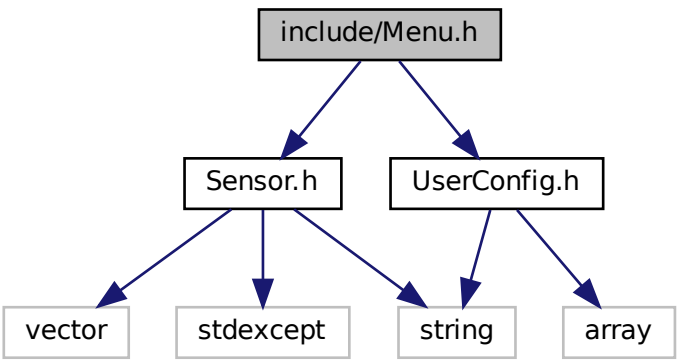
Copyright (c) 2022

5.17 include/Menu.h File Reference

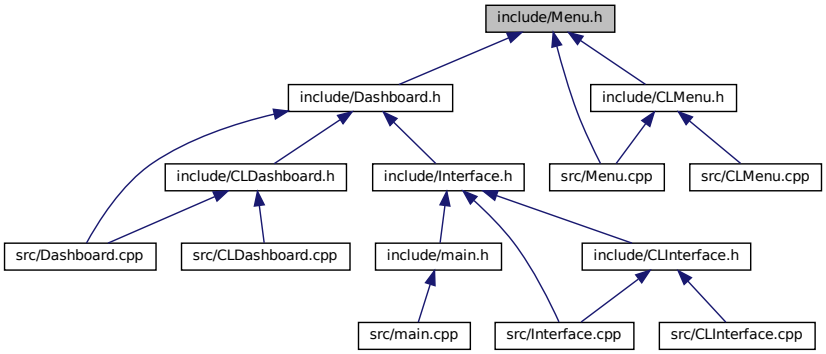
Header file of Menu.cpp.

```
#include "Sensor.h"
#include "UserConfig.h"
```

Include dependency graph for Menu.h:



This graph shows which files directly or indirectly include this file:



Classes

- class Menu

5.17.1 Detailed Description

Header file of Menu.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

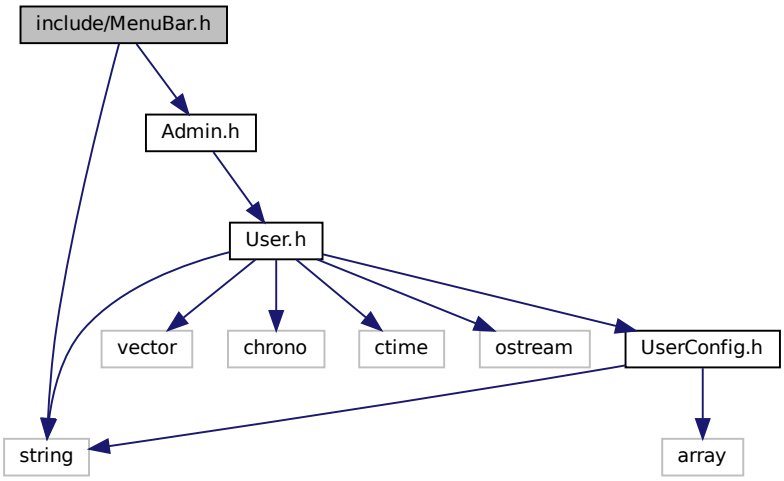
Copyright (c) 2022

5.18 include/MenuBar.h File Reference

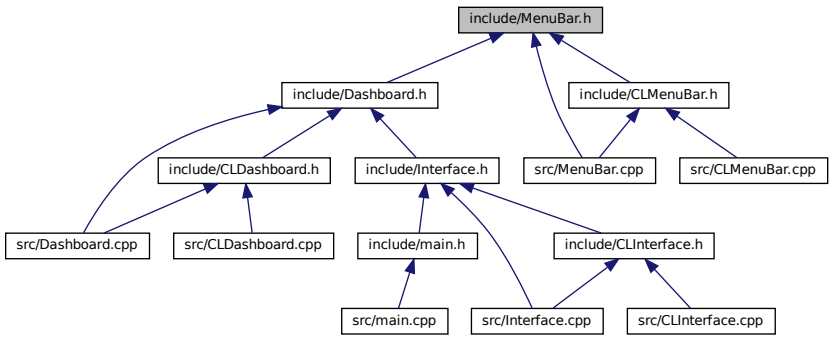
Header file of MenuBar.cpp.

```
#include <string>
#include "Admin.h"
```

Include dependency graph for MenuBar.h:



This graph shows which files directly or indirectly include this file:



Classes

- class MenuBar

5.18.1 Detailed Description

Header file of MenuBar.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

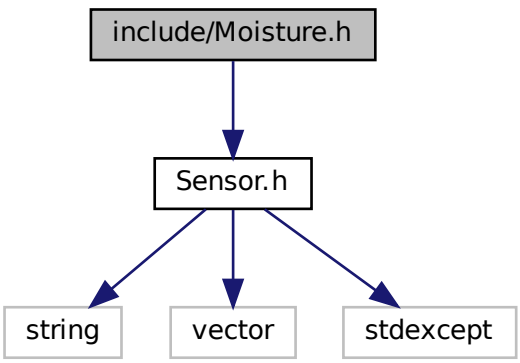
Copyright (c) 2022

5.19 include/Moisture.h File Reference

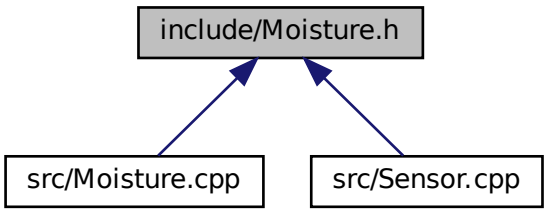
Header file of Moisture.cpp.

```
#include "Sensor.h"
```

Include dependency graph for Moisture.h:



This graph shows which files directly or indirectly include this file:



Classes

- class Moisture

5.19.1 Detailed Description

Header file of Moisture.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

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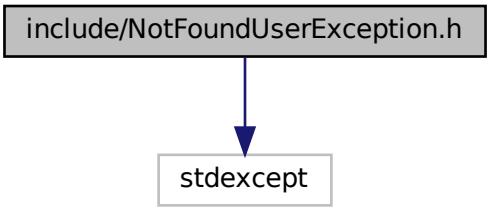
5.20 include/NotFoundUserException.h File Reference

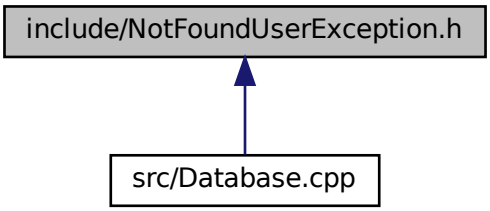
Exception thrown when user not found in database.

```
#include <stdexcept>
```

Include dependency graph for NotFoundUserException.h:



This graph shows which files directly or indirectly include this file:



Classes

- class NotFoundUserException

5.20.1 Detailed Description

Exception thrown when user not found in database.

Author

Javier Izquierdo Hernandez (j.izquierdoh.2021@alumnos.urjc.es)

Version

0.1

Date

2022-12-20

Copyright

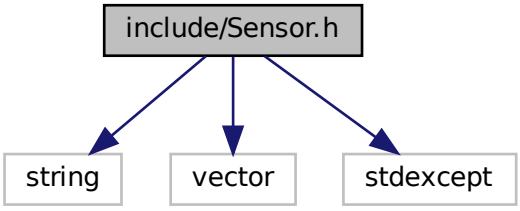
Copyright (c) 2022

5.21 include/Sensor.h File Reference

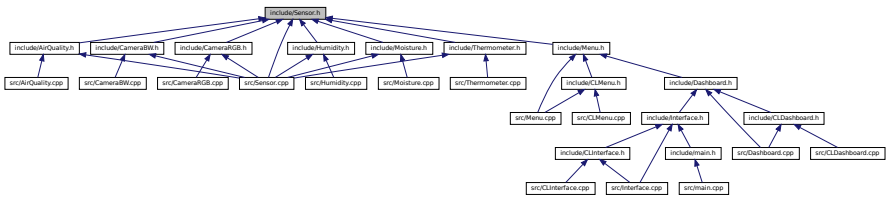
Header file of Sensor.cpp.

```
#include <string>
#include <vector>
#include <stdexcept>
```

Include dependency graph for Sensor.h:



This graph shows which files directly or indirectly include this file:



Classes

- class Sensor

5.21.1 Detailed Description

Header file of Sensor.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

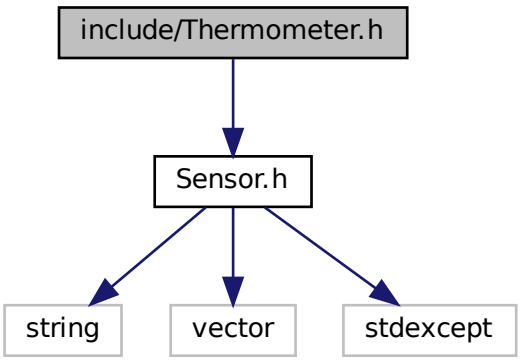
Copyright (c) 2022

5.22 include/Thermometer.h File Reference

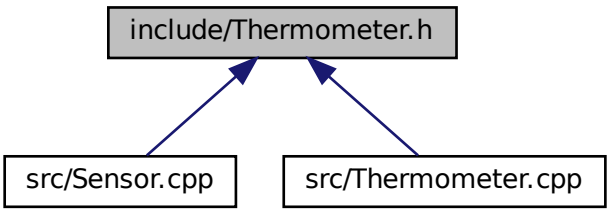
Header file of Thermometer.cpp.

```
#include "Sensor.h"
```

Include dependency graph for Thermometer.h:



This graph shows which files directly or indirectly include this file:



Classes

- class Thermometer

5.22.1 Detailed Description

Header file of Thermometer.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

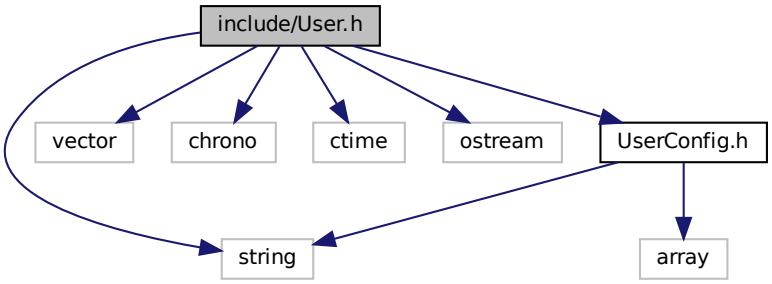
Copyright (c) 2022

5.23 include/User.h File Reference

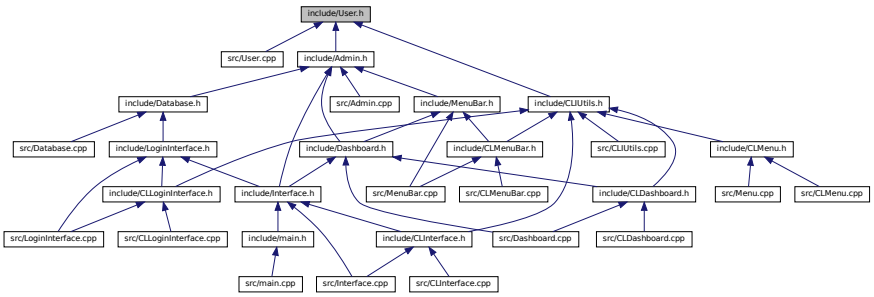
Header file of User.cpp.

```
#include <string>
#include <vector>
#include <chrono>
#include <ctime>
#include <ostream>
#include "UserConfig.h"
```

Include dependency graph for User.h:



This graph shows which files directly or indirectly include this file:



Classes

- class User

5.23.1 Detailed Description

Header file of User.cpp.

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

2.0

Date

2022-11-23

Copyright

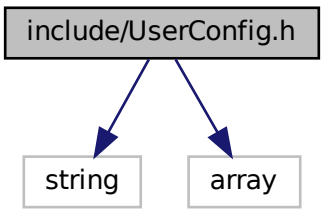
Copyright (c) 2022

5.24 include/UserConfig.h File Reference

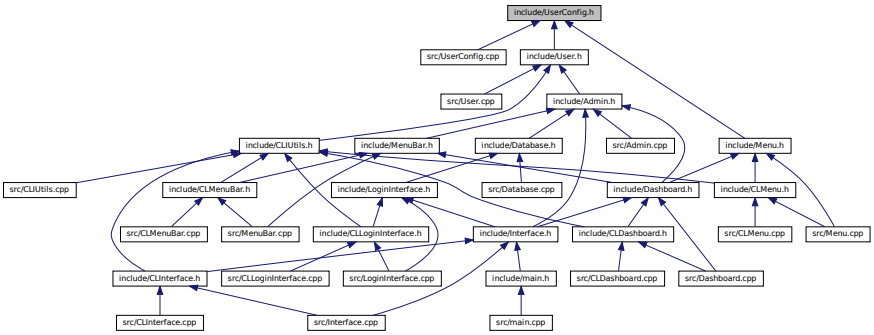
Header file of UserConfig.cpp.

```
#include <string>
#include <array>
```

Include dependency graph for UserConfig.h:



This graph shows which files directly or indirectly include this file:



Classes

- class UserConfig

5.24.1 Detailed Description

Header file of UserConfig.cpp.

Author

Javier Izquierdo Hernandez (j.izquierdoh.2021@alumnos.urjc.es)

Version

0.1

Date

2022-12-22

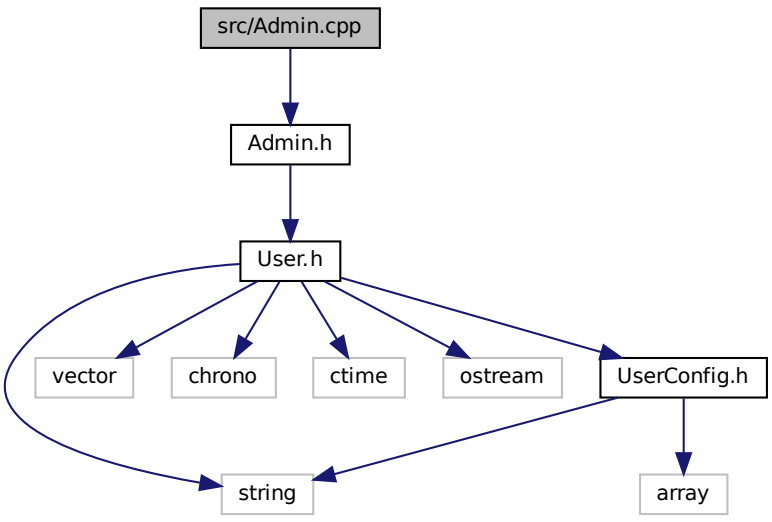
Copyright

Copyright (c) 2022

5.25 src/Admin.cpp File Reference

```
#include "Admin.h"
```

Include dependency graph for Admin.cpp:



5.25.1 Detailed Description

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

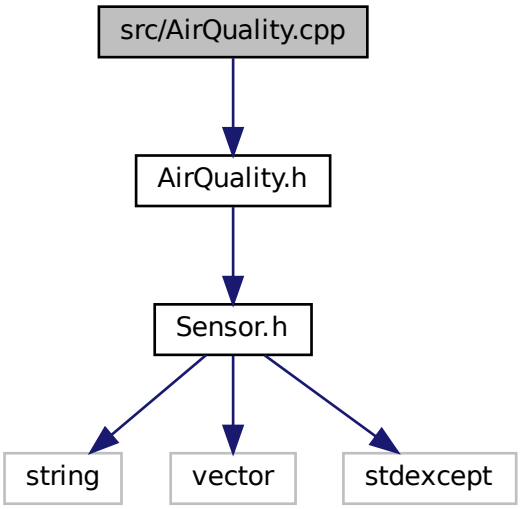
Copyright

Copyright (c) 2022

5.26 src/AirQuality.cpp File Reference

```
#include "AirQuality.h"
```

Include dependency graph for AirQuality.cpp:



5.26.1 Detailed Description

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

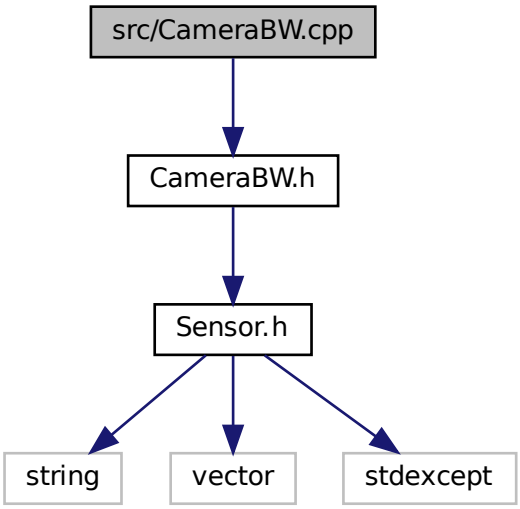
Copyright

Copyright (c) 2022

5.27 src/CameraBW.cpp File Reference

```
#include "CameraBW.h"
```

Include dependency graph for CameraBW.cpp:



5.27.1 Detailed Description

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

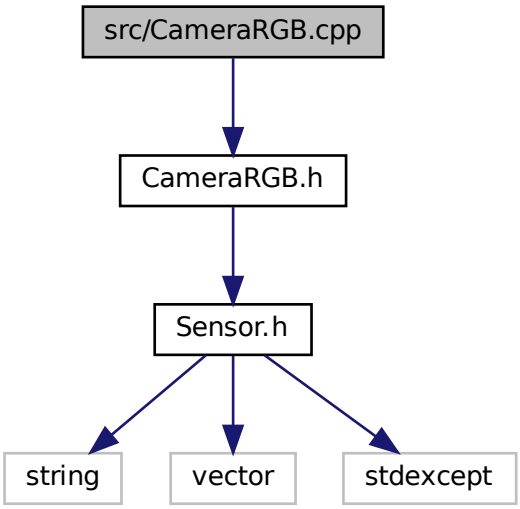
Copyright

Copyright (c) 2022

5.28 src/CameraRGB.cpp File Reference

```
#include "CameraRGB.h"
```

Include dependency graph for CameraRGB.cpp:



5.28.1 Detailed Description

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

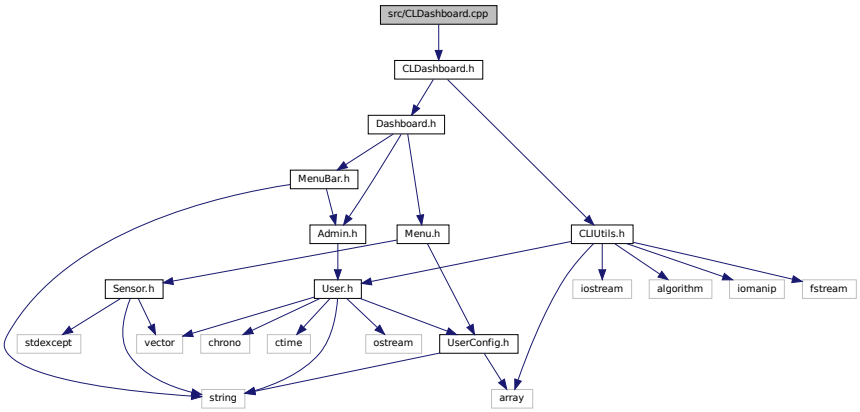
2022-11-23

Copyright

Copyright (c) 2022

5.29 src/CLDashboard.cpp File Reference

`#include "CLDashboard.h"`
Include dependency graph for CLDashboard.cpp:



5.29.1 Detailed Description

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

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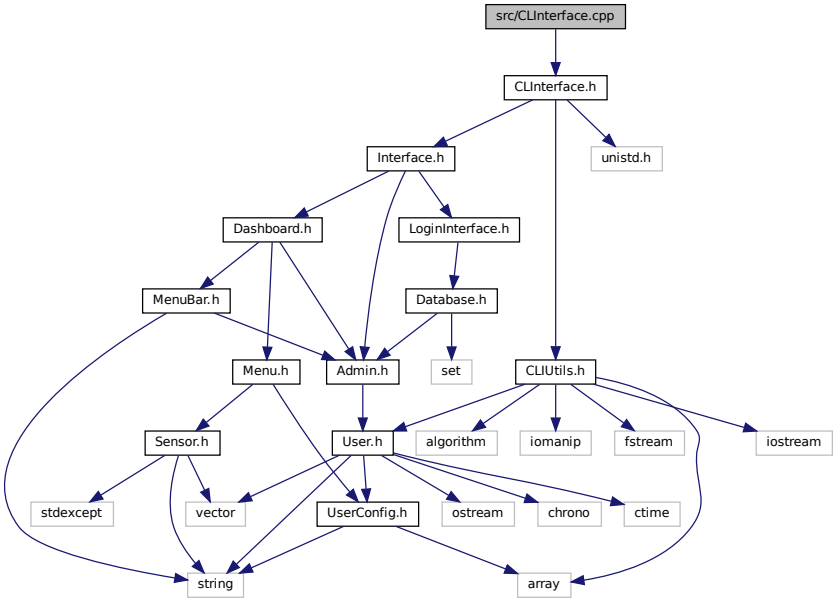
5.30 src/CLInterface.cpp File Reference

```
#include "CLInterface.h"
```

Include dependency graph for CLInterface.cpp:



5.30.1 Detailed Description

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

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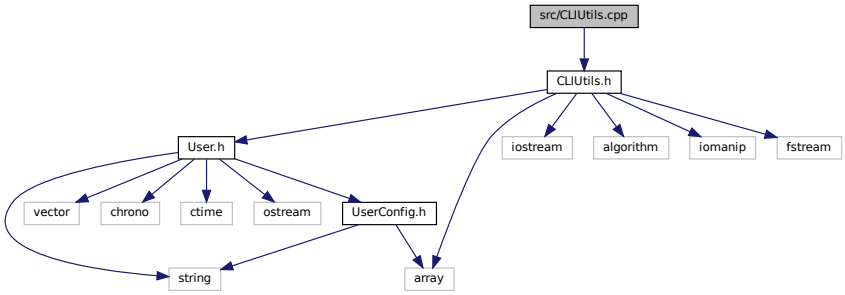
5.31 src/CLIUtils.cpp File Reference

```
#include "CLIUtils.h"
```

Include dependency graph for CLIUtils.cpp:



Functions

- void **setTerminalSize** ()
- int **getTerminalWidth** ()
- int **getTerminalHeight** ()
- void printCenterFromFile (std::string fileName, std::array< int, 3 > frontColor, std::array< int, 3 > backColor)

  Print the contents of the file in the center.
- void printCenter (const std::string toPrint, std::array< int, 3 > frontColor, std::array< int, 3 > backColor, const int padding)

  Print the string in the center.
- void **printRight** (const std::string toPrint, std::array< int, 3 > frontColor, std::array< int, 3 > backColor, const int padding)
- void **printLeft** (const std::string toPrint, std::array< int, 3 > frontColor, std::array< int, 3 > backColor, const int padding)
- void printColor (std::string toPrint, std::array< int, 3 > frontColor, std::array< int, 3 > backColor)

  Print the string to the terminal in the given color.
- void **startCustomTerminal** (int terminalSize)
- void **clearCustomTerminal** (int terminalSize)
- void **moveCursor** (int posX, int posY)
- std::vector< std::string > **newCommand** (User &user, std::string currentSensor)
- void **printGraphic** (const std::vector< int > &data, std::array< int, 3 > frontColor, std::array< int, 3 > backColor, std::array< int, 3 > pointColor, int valPerY, int posX, int posY, int scale)

Variables

- int **terminalWidth**
- int **terminalHeight**

5.31.1 Detailed Description

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

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5.31.2 Function Documentation

5.31.2.1 printCenter()

```
void printCenter (
            const std::string toPrint,
            std::array< int, 3 > frontColor,
            std::array< int, 3 > backColor,
            const int padding = 0 )
```

Print the string in the center.

Parameters

toPrint	
frontColor	
backColor	
padding	

5.31.2.2 printCenterFromFile()

```
void printCenterFromFile (
            const std::string fileName,
            std::array< int, 3 > frontColor,
            std::array< int, 3 > backColor )
```

Print the contents of the file in the center.

Parameters

fileName	
frontColor	
backColor	

5.31.2.3 printColor()

```
void printColor (
            std::string toPrint,
            std::array< int, 3 > frontColor,
            std::array< int, 3 > backColor )
```

Print the string to the terminal in the given color.

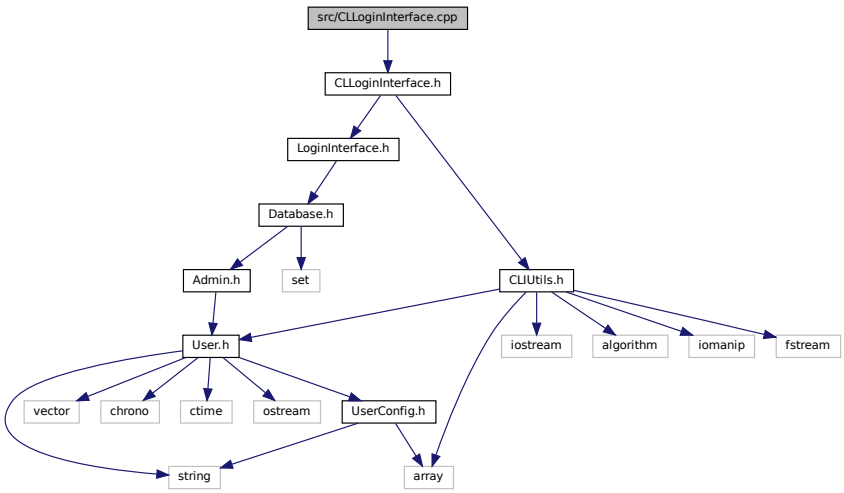
Parameters

toPrint	
frontColor	
backColor	

5.32 src/CLLoginInterface.cpp File Reference

```
#include "CLLoginInterface.h"
```

Include dependency graph for CLLoginInterface.cpp:



5.32.1 Detailed Description

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

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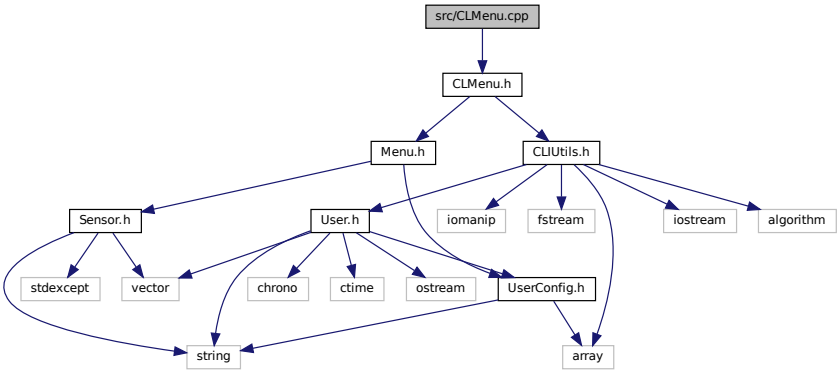
5.33 src/CLMenu.cpp File Reference

`#include "CLMenu.h"`
Include dependency graph for CLMenu.cpp:



5.33.1 Detailed Description

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

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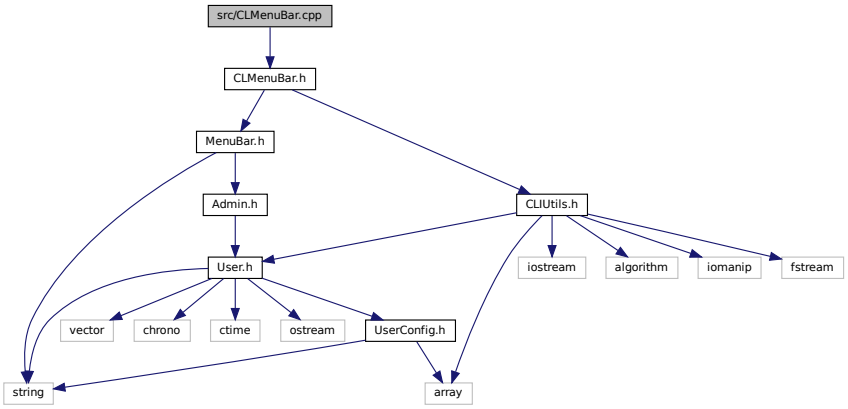
5.34 src/CLMenuBar.cpp File Reference

```
#include "CLMenuBar.h"
```

Include dependency graph for CLMenuBar.cpp:



5.34.1 Detailed Description

Author

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Version

1.0

Date

2022-11-23

Copyright

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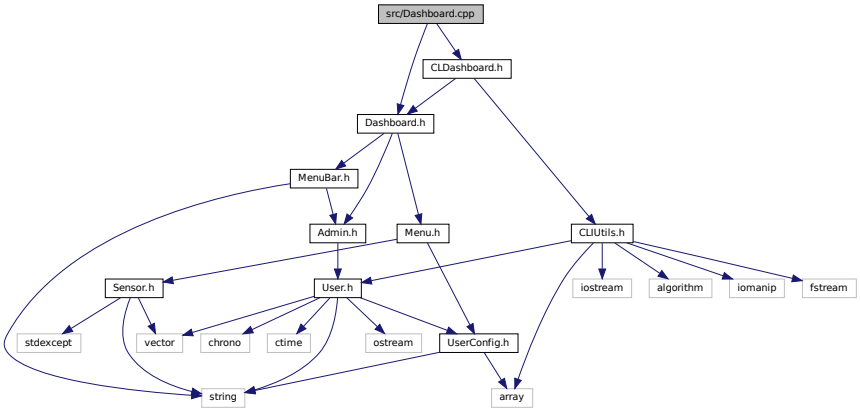
5.35 src/Dashboard.cpp File Reference

```
#include "Dashboard.h"
#include "CLDashboard.h"
```

Include dependency graph for Dashboard.cpp:



5.35.1 Detailed Description

Author

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Version

1.0

Date

2022-11-23

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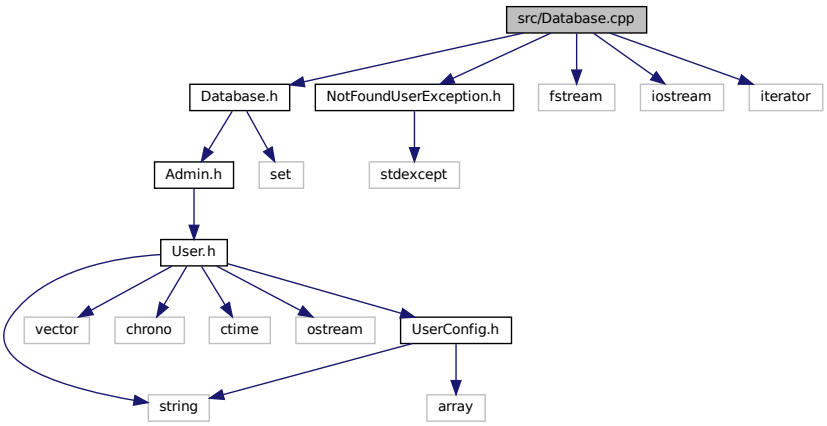
5.36 src/Database.cpp File Reference

```
#include "Database.h"
#include "NotFoundUserException.h"
#include <fstream>
#include <iostream>
```

```
#include <iterator>
```

Include dependency graph for Database.cpp:



5.36.1 Detailed Description

Author

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Version

1.0

Date

2022-11-23

Copyright

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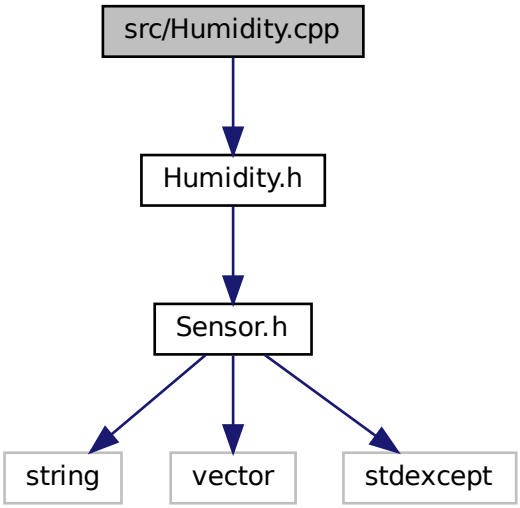
5.37 src/Humidity.cpp File Reference

```
#include "Humidity.h"
```

Include dependency graph for Humidity.cpp:



5.37.1 Detailed Description

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

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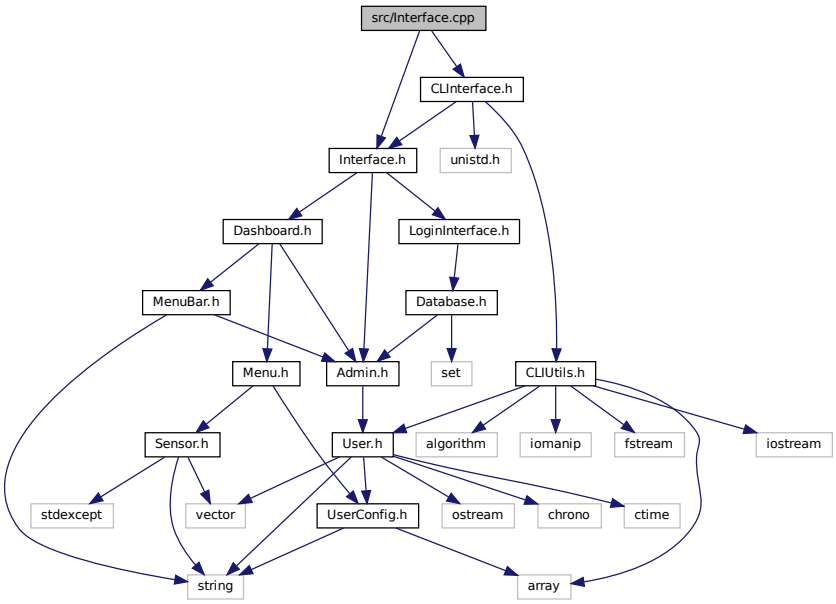
5.38 src/Interface.cpp File Reference

```
#include "Interface.h"
#include "CLInterface.h"
```

Include dependency graph for Interface.cpp:



5.38.1 Detailed Description

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

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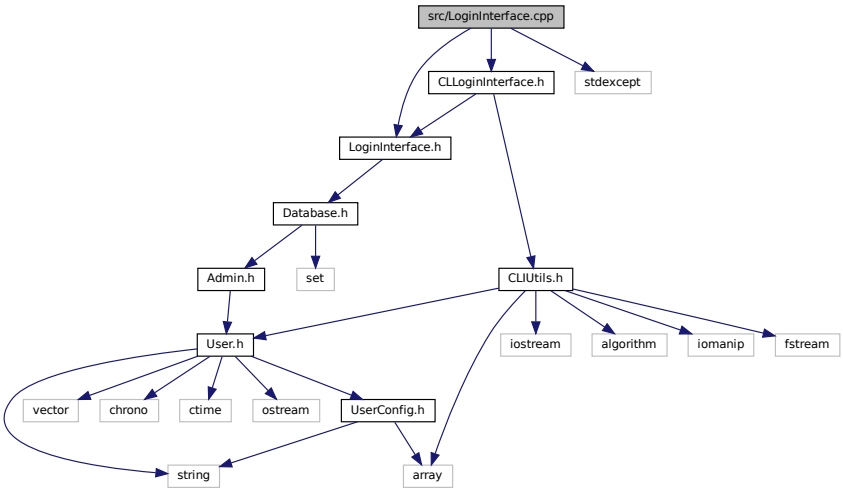
5.39 src/LoginInterface.cpp File Reference

```
#include "LoginInterface.h"
#include "CLLoginInterface.h"
```

```
#include <stdexcept>
```

Include dependency graph for LoginInterface.cpp:



5.39.1 Detailed Description

Author

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Version

1.0

Date

2022-11-23

Copyright

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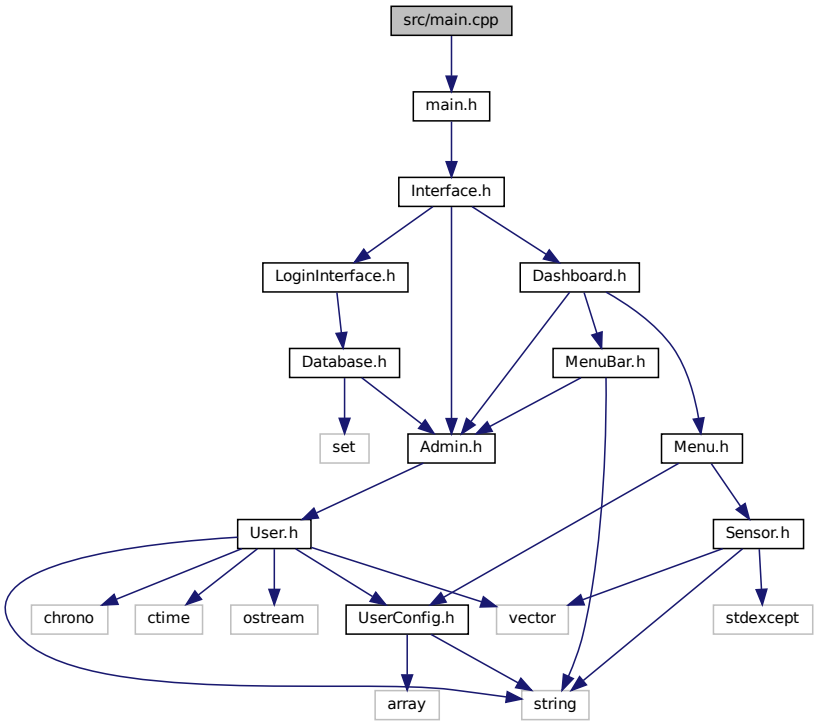
5.40 src/main.cpp File Reference

```
#include "main.h"
```

Include dependency graph for main.cpp:



Functions

- int **main** (int argc, char ∗argv[ ])

5.40.1 Detailed Description

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

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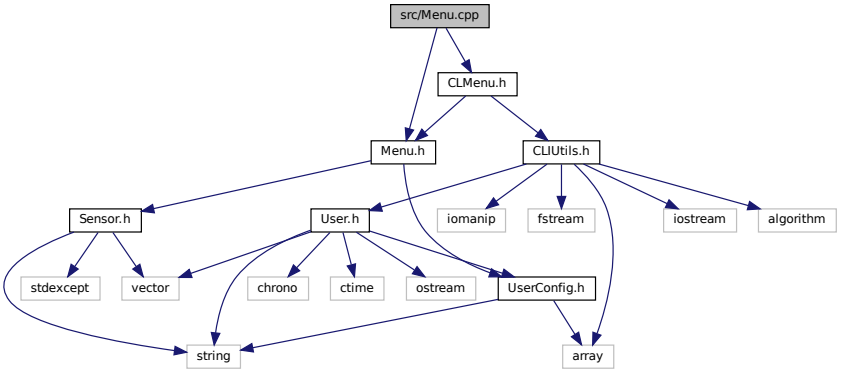
5.41 src/Menu.cpp File Reference

```
#include "Menu.h"
#include "CLMenu.h"
```

Include dependency graph for Menu.cpp:



5.41.1 Detailed Description

Author

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Version

1.0

Date

2022-11-23

Copyright

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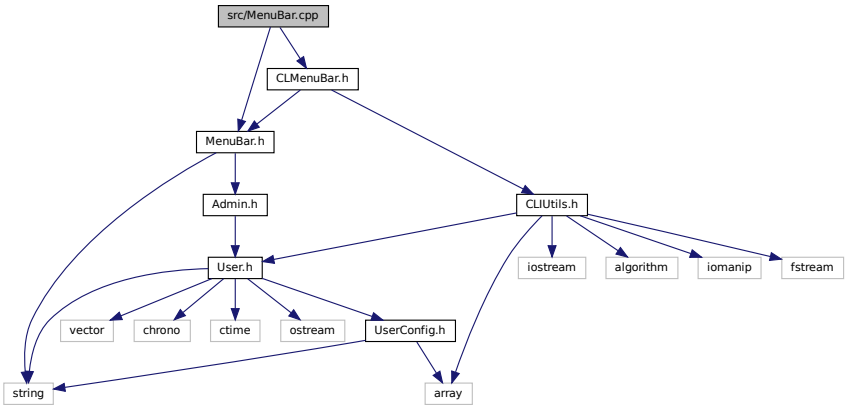
5.42 src/MenuBar.cpp File Reference

```
#include "MenuBar.h"
#include "CLMenuBar.h"
```

Include dependency graph for MenuBar.cpp:



5.42.1 Detailed Description

Author

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Version

1.0

Date

2022-11-23

Copyright

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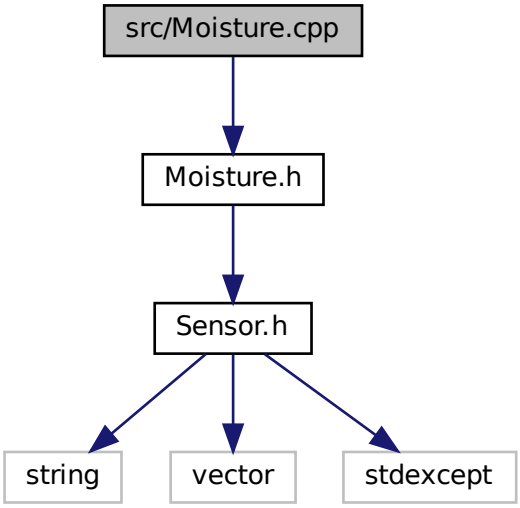
5.43 src/Moisture.cpp File Reference

```
#include "Moisture.h"
```

Include dependency graph for Moisture.cpp:



5.43.1 Detailed Description

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

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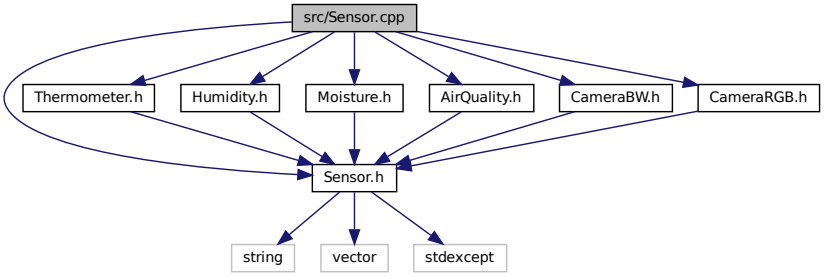
5.44 src/Sensor.cpp File Reference

```
#include "Sensor.h"
#include "Thermometer.h"
#include "Humidity.h"
#include "Moisture.h"
#include "AirQuality.h"
#include "CameraBW.h"
```

```
#include "CameraRGB.h"
```

Include dependency graph for Sensor.cpp:



5.44.1 Detailed Description

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

1.0

Date

2022-11-23

Copyright

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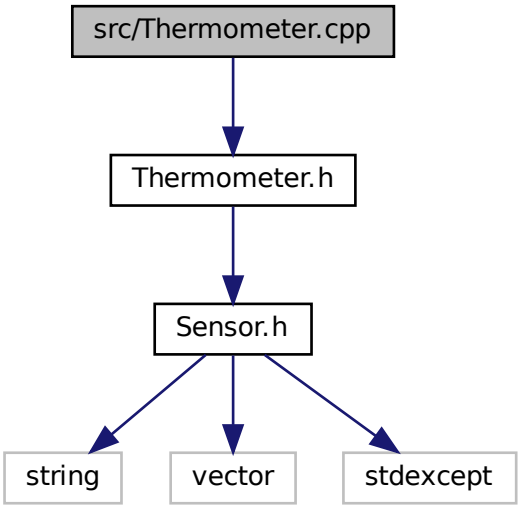
5.45 src/Thermometer.cpp File Reference

```
#include "Thermometer.h"
```

Include dependency graph for Thermometer.cpp:



5.45.1 Detailed Description

Author

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Version

1.0

Date

2022-11-23

Copyright

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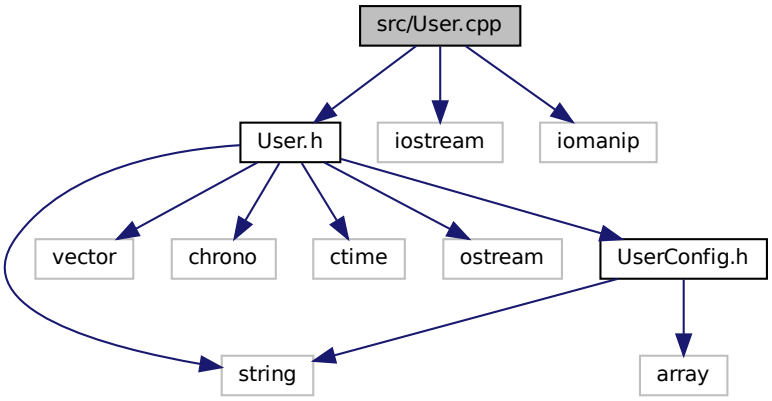
5.46 src/User.cpp File Reference

```
#include "User.h"
#include <iostream>
```

```
#include <iomanip>
```

Include dependency graph for User.cpp:



Functions

- std::ostream & **operator**<< (std::ostream &output, const User &user)

5.46.1 Detailed Description

Author

Javier Izquierdo (j.izquierdoh.2021@alumnos.urjc.es)

Version

2.0

Date

2022-11-23

Copyright

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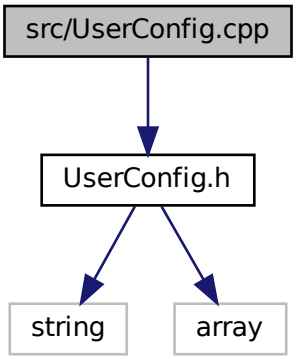
5.47 src/UserConfig.cpp File Reference

```
#include "UserConfig.h"
```
Include dependency graph for UserConfig.cpp:



5.47.1 Detailed Description

Author

Javier Izquierdo Hernandez (j.izquierdoh.2021@alumnos.urjc.es)

Version

0.1

Date

2022-12-22

Copyright

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