Arduino_WPF

Generated by Doxygen 1.9.8

1 Namespace Index 1

1.1 Package List . . . 1

2 Hierarchical Index 3

2.1 Class Hierarchy . . . 3

3 Class Index 5

3.1 Class List . . . 5

4 Namespace Documentation 7

4.1 Arduino_WPF Namespace Reference . . . 7

4.2 Arduino_WPF.Models Namespace Reference . . . 7

4.3 Arduino_WPF.Utils Namespace Reference . . . 7

4.4 Arduino_WPF.ViewModels Namespace Reference . . . 8

4.5 Arduino_WPF.Views Namespace Reference . . . 8

4.6 XamlGeneratedNamespace Namespace Reference . . . 8

5 Class Documentation 9

5.1 Arduino_WPF.App Class Reference . . . 9

5.1.1 Detailed Description . . . 9

5.2 Arduino_WPF.ViewModels.BaseViewModel Class Reference . . . 10

5.2.1 Member Function Documentation . . . 10

5.2.1.1 OnPropertyChanged() . . . 10

5.2.1.2 SetProperty< T >() . . . 10

5.3 Arduino_WPF.Models.COM Class Reference . . . 11

5.3.1 Constructor & Destructor Documentation . . . 12

5.3.1.1 COM() . . . 12

5.3.2 Member Function Documentation . . . 12

5.3.2.1 ExtractJsonObjects() . . . 12

5.3.2.2 ListOpenPorts() . . . 12

5.3.2.3 ReadPinConfiguration() . . . 13

5.3.2.4 ReadSerialOutput() . . . 13

5.3.2.5 SetBaudrate() . . . 13

5.3.2.6 SetDataBits() . . . 13

5.3.2.7 SetParity() . . . 14

5.3.2.8 WriteSerialOutput() . . . 14

5.4 Arduino_WPF.Views.CustomPin Class Reference . . . 14

5.4.1 Detailed Description . . . 15

5.5 Arduino_WPF.ViewModels.CustomPinViewModel Class Reference . . . 15

5.5.1 Constructor & Destructor Documentation . . . 16

5.5.1.1 CustomPinViewModel() . . . 16

5.6 XamlGeneratedNamespace.GeneratedInternalTypeHelper Class Reference . . . 17

5.6.1 Detailed Description . . . 17

5.7 Arduino_WPF.Views.MainWindow Class Reference . . . 18

5.7.1 Detailed Description . . . 19
5.8 Arduino_WPF.ViewModels.MainWindowViewModel Class Reference . . . 19
5.9 Arduino_WPF.Models.Pin Class Reference . . . 20
5.9.1 Constructor & Destructor Documentation . . . 20
5.9.1.1 Pin() . . . 20
5.9.2 Member Function Documentation . . . 21
5.9.2.1 ReadPinData() . . . 21
5.9.2.2 WritePinData() . . . 21
5.10 Arduino_WPF.Views.PinView Class Reference . . . 22
5.10.1 Detailed Description . . . 22
5.11 Arduino_WPF.ViewModels.PinViewViewModel Class Reference . . . 22
5.11.1 Constructor & Destructor Documentation . . . 23
5.11.1.1 PinViewViewModel() . . . 23
5.12 Arduino_WPF.Utils.PresetJsonLoader Class Reference . . . 23
5.12.1 Member Function Documentation . . . 24
5.12.1.1 GetPresetAnalogConfigurations() . . . 24
5.12.1.2 GetPresetConfigurations() . . . 24
5.12.1.3 LoadConfigurationsFromFile() . . . 24
5.12.1.4 LoadPresetJsonConfigurations() . . . 25
5.13 Arduino_WPF.Views.SerialConnectionView Class Reference . . . 25
5.13.1 Detailed Description . . . 25
5.14 Arduino_WPF.ViewModels.SerialConnectionViewViewModel Class Reference . . . 26
5.15 Arduino_WPF.ViewModels.SerialMonitorViewModel Class Reference . . . 27
5.16 Arduino_WPF.Views.SerialMonitorWindow Class Reference . . . 28
5.16.1 Detailed Description . . . 28
5.17 Arduino_WPF.Views.SerialMonitorWinodw Class Reference . . . 28
5.17.1 Detailed Description . . . 29
5.18 Arduino_WPF.Utils.SerialReader Class Reference . . . 29
5.18.1 Constructor & Destructor Documentation . . . 29
5.18.1.1 SerialReader() . . . 29
5.18.2 Member Function Documentation . . . 30
5.18.2.1 OnPropertyChanged() . . . 30
5.18.2.2 ReadSerialLoop() . . . 30
5.19 Arduino_WPF.Utils.StringToVisibilityConverter Class Reference . . . 30
5.19.1 Member Function Documentation . . . 31
5.19.1.1 Convert() . . . 31
5.19.1.2 ConvertBack() . . . 31

Index **33**

Chapter 1

Namespace Index

1.1 Package List

Here are the packages with brief descriptions (if available):

Arduino_WPF 7
Arduino_WPF.Models 7
Arduino_WPF.Utils 7
Arduino_WPF.ViewModels 8
Arduino_WPF.Views 8
XamlGeneratedNamespace 8

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

Application
- Arduino_WPF.App . . . 9

System.Windows.Application
- Arduino_WPF.App . . . 9
- Arduino_WPF.App . . . 9

Arduino_WPF.Models.COM . . . 11

System.Windows.Markup.IComponentConnector
- Arduino_WPF.Views.CustomPin . . . 14
- Arduino_WPF.Views.CustomPin . . . 14
- Arduino_WPF.Views.MainWindow . . . 18
- Arduino_WPF.Views.MainWindow . . . 18
- Arduino_WPF.Views.MainWindow . . . 18
- Arduino_WPF.Views.MainWindow . . . 18
- Arduino_WPF.Views.MainWindow . . . 18
- Arduino_WPF.Views.MainWindow . . . 18
- Arduino_WPF.Views.PinView . . . 22
- Arduino_WPF.Views.PinView . . . 22
- Arduino_WPF.Views.SerialConnectionView . . . 25
- Arduino_WPF.Views.SerialConnectionView . . . 25
- Arduino_WPF.Views.SerialMonitorWindow . . . 28
- Arduino_WPF.Views.SerialMonitorWindow . . . 28
- Arduino_WPF.Views.SerialMonitorWinodw . . . 28

INotifyPropertyChanged
- Arduino_WPF.Utils.SerialReader . . . 29
- Arduino_WPF.ViewModels.BaseViewModel . . . 10
  - Arduino_WPF.ViewModels.CustomPinViewModel . . . 15
  - Arduino_WPF.ViewModels.MainWindowViewModel . . . 19
  - Arduino_WPF.ViewModels.PinViewViewModel . . . 22
  - Arduino_WPF.ViewModels.SerialConnectionViewViewModel . . . 26
  - Arduino_WPF.ViewModels.SerialMonitorViewModel . . . 27

System.Windows.Markup.InternalTypeHelper
- XamlGeneratedNamespace.GeneratedInternalTypeHelper . . . 17
- XamlGeneratedNamespace.GeneratedInternalTypeHelper . . . 17

IValueConverter
- Arduino_WPF.Utils.StringToVisibilityConverter . . . 30

Arduino_WPF.Models.Pin 20
Arduino_WPF.Utils.PresetJsonLoader 23
System.Windows.Controls.UserControl
Arduino_WPF.Views.CustomPin 14
Arduino_WPF.Views.CustomPin 14
Arduino_WPF.Views.CustomPin 14
Arduino_WPF.Views.PinView 22
Arduino_WPF.Views.PinView 22
Arduino_WPF.Views.PinView 22
Arduino_WPF.Views.SerialConnectionView 25
Arduino_WPF.Views.SerialConnectionView 25
Arduino_WPF.Views.SerialConnectionView 25
System.Windows.Window
Arduino_WPF.Views.MainWindow 18
Arduino_WPF.Views.MainWindow 18
Arduino_WPF.Views.MainWindow 18
Arduino_WPF.Views.MainWindow 18
Arduino_WPF.Views.MainWindow 18
Arduino_WPF.Views.MainWindow 18
Arduino_WPF.Views.MainWindow 18
Arduino_WPF.Views.SerialMonitorWindow 28
Arduino_WPF.Views.SerialMonitorWindow 28
Arduino_WPF.Views.SerialMonitorWindow 28
Arduino_WPF.Views.SerialMonitorWinodw 28

Chapter 3

Class Index

3.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

Arduino_WPF.App
    Interaction logic for App.xaml . . . 9
Arduino_WPF.ViewModels.BaseViewModel . . . 10
Arduino_WPF.Models.COM . . . 11
Arduino_WPF.Views.CustomPin
    CustomPin . . . 14
Arduino_WPF.ViewModels.CustomPinViewModel . . . 15
XamlGeneratedNamespace.GeneratedInternalTypeHelper
    GeneratedInternalTypeHelper . . . 17
Arduino_WPF.Views.MainWindow
    MainWindow . . . 18
Arduino_WPF.ViewModels.MainWindowViewModel . . . 19
Arduino_WPF.Models.Pin . . . 20
Arduino_WPF.Views.PinView
    PinView . . . 22
Arduino_WPF.ViewModels.PinViewViewModel . . . 22
Arduino_WPF.Utils.PresetJsonLoader . . . 23
Arduino_WPF.Views.SerialConnectionView
    SerialConnectionView . . . 25
Arduino_WPF.ViewModels.SerialConnectionViewViewModel . . . 26
Arduino_WPF.ViewModels.SerialMonitorViewModel . . . 27
Arduino_WPF.Views.SerialMonitorWindow
    SerialMonitorWindow . . . 28
Arduino_WPF.Views.SerialMonitorWinodw
    SerialMonitorWinodw . . . 28
Arduino_WPF.Utils.SerialReader . . . 29
Arduino_WPF.Utils.StringToVisibilityConverter . . . 30

Chapter 4

Namespace Documentation

4.1 Arduino_WPF Namespace Reference

Classes

- class App

  Interaction logic for App.xaml.

4.2 Arduino_WPF.Models Namespace Reference

Classes

- class COM
- class Pin

Enumerations

- enum PinMode {
  Input , **Output** , **Input_Pullup** , **Analog** ,
  PWM , **Servo** , **Unknown** }

  Enum for the different pin modes.
- enum State { **Low** , **High** , **Unknown** }

  Enum for the different pin states.

4.3 Arduino_WPF.Utils Namespace Reference

Classes

- class PresetJsonLoader
- class SerialReader
- class StringToVisibilityConverter

4.4 Arduino_WPF.ViewModels Namespace Reference

Classes

- class BaseViewModel
- class CustomPinViewModel
- class MainWindowViewModel
- class PinViewViewModel
- class SerialConnectionViewViewModel
- class SerialMonitorViewModel

4.5 Arduino_WPF.Views Namespace Reference

Classes

- class CustomPin

  CustomPin.
- class MainWindow

  MainWindow.
- class PinView

  PinView.
- class SerialConnectionView

  SerialConnectionView.
- class SerialMonitorWindow

  SerialMonitorWindow.
- class SerialMonitorWinodw

  SerialMonitorWinodw.

4.6 XamlGeneratedNamespace Namespace Reference

Classes

- class GeneratedInternalTypeHelper

  GeneratedInternalTypeHelper.

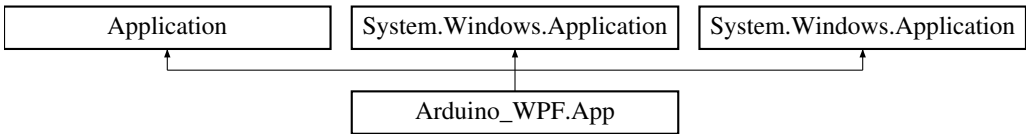
Chapter 5

Class Documentation

5.1 Arduino_WPF.App Class Reference

Interaction logic for App.xaml.

Inheritance diagram for Arduino_WPF.App:



Public Member Functions

- void **InitializeComponent** ()
  InitializeComponent.
- void **InitializeComponent** ()
  InitializeComponent.

Static Public Member Functions

- static void **Main** ()
  Application Entry Point.
- static void **Main** ()
  Application Entry Point.

5.1.1 Detailed Description

Interaction logic for App.xaml.

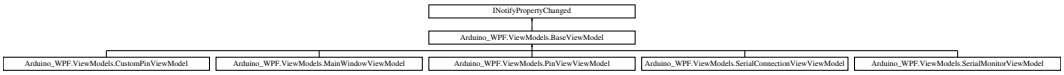
App.

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

- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/App.xaml.cs
- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/obj/Debug/net8.0-windows/App.↩g.cs
- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/obj/Debug/net8.0-windows/App.↩g.i.cs

5.2 Arduino_WPF.ViewModels.BaseViewModel Class Reference

Inheritance diagram for Arduino_WPF.ViewModels.BaseViewModel:



Protected Member Functions

- void OnPropertyChanged ([CallerMemberName] string? propertyName=null)

  This method is called when a property is changed.
- bool SetProperty< T > (ref T field, T value, [CallerMemberName] string? propertyName=null)

  This method sets the property and calls OnPropertyChanged if the value is different.

Events

- PropertyChangedEventHandler **PropertyChanged**

5.2.1 Member Function Documentation

5.2.1.1 OnPropertyChanged()

```
void Arduino_WPF.ViewModels.BaseViewModel.OnPropertyChanged (
            [CallerMemberName] string?  propertyName = null )  [protected]
```

This method is called when a property is changed.

Parameters

propertyName	

5.2.1.2 SetProperty< T >()

```
bool Arduino_WPF.ViewModels.BaseViewModel.SetProperty< T > (
            ref T field,
            T value,
            [CallerMemberName] string?  propertyName = null )  [protected]
```

This method sets the property and calls OnPropertyChanged if the value is different.

Template Parameters

T	

Parameters

field	
value	
propertyName	

Returns

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

- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/ViewModels/BaseViewModel.cs

5.3 Arduino_WPF.Models.COM Class Reference

Public Member Functions

- COM (int baudrate, string port, Parity parity, int dataBits, StopBits stopBits)

  Constructor for the COM class.
- void **OpenConnection** ()

  Opens the connection to the serial port.
- void **CloseConnection** ()

  Closes the connection to the serial port.
- void SetBaudrate (int baudrate)

  This method sets the port of the serial port.
- void SetParity (Parity parity)

  This method sets the parity of the serial port.
- void SetDataBits (int dataBits)

  This method sets the data bits of the serial port.
- string ReadSerialOutput ()

  Reads the serial buffer and returns it as a string.
- void **ClearSerialOutput** ()

  Clears the serial buffer.
- void WriteSerialOutput (string data)

  Writes data to the serial port.
- string ReadPinConfiguration ()

  Reads the pin configuration from the serial buffer and returns it as a string.
- List< JObject > ExtractJsonObjects (ref string data)

  This method extracts JSON objects from a string and returns them as a list of JObjects.

Static Public Member Functions

- static string[ ] ListOpenPorts ()

  Lists the open ports.

Properties

- int **Baudrate** `[get, set]`
- string **Port** `[get, set]`
- Parity **Parity** `[get, set]`
- int **DataBits** `[get, set]`
- StopBits **StopBits** `[get, set]`

5.3.1 Constructor & Destructor Documentation

5.3.1.1 COM()

```
Arduino_WPF.Models.COM.COM (
            int baudrate,
            string port,
            Parity parity,
            int dataBits,
            StopBits stopBits )
```

Constructor for the COM class.

Parameters

baudrate	
port	
parity	
dataBits	
stopBits	

5.3.2 Member Function Documentation

5.3.2.1 ExtractJsonObjects()

```
List< JObject > Arduino_WPF.Models.COM.ExtractJsonObjects (
            ref string data )
```

This method extracts JSON objects from a string and returns them as a list of JObjects.

Parameters

data	

Returns

List of JObjects

5.3.2.2 ListOpenPorts()

```
static string[] Arduino_WPF.Models.COM.ListOpenPorts ( )  [static]
```

Lists the open ports.

Returns

5.3.2.3 ReadPinConfiguration()

```
string Arduino_WPF.Models.COM.ReadPinConfiguration ( )
```

Reads the pin configuration from the serial buffer and returns it as a string.

Returns

Pin configuration as a string

5.3.2.4 ReadSerialOutput()

```
string Arduino_WPF.Models.COM.ReadSerialOutput ( )
```

Reads the serial buffer and returns it as a string.

Returns

Serial buffer as a string

5.3.2.5 SetBaudrate()

```
void Arduino_WPF.Models.COM.SetBaudrate (
            int baudrate )
```

This method sets the port of the serial port.

Parameters

baudrate	

5.3.2.6 SetDataBits()

```
void Arduino_WPF.Models.COM.SetDataBits (
            int dataBits )
```

This method sets the data bits of the serial port.

Parameters

dataBits	

5.3.2.7 SetParity()

```
void Arduino_WPF.Models.COM.SetParity (
            Parity parity )
```

This method sets the parity of the serial port.

Parameters

parity	

5.3.2.8 WriteSerialOutput()

```
void Arduino_WPF.Models.COM.WriteSerialOutput (
            string data )
```

Writes data to the serial port.

Parameters

data	

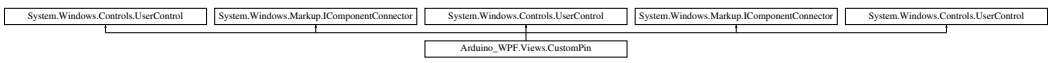
The documentation for this class was generated from the following file:

- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/Models/COM.cs

5.4 Arduino_WPF.Views.CustomPin Class Reference

CustomPin.

Inheritance diagram for Arduino_WPF.Views.CustomPin:



Public Member Functions

- void **InitializeComponent** ()

  InitializeComponent.
- void **InitializeComponent** ()

  InitializeComponent.

5.4.1 Detailed Description

CustomPin.

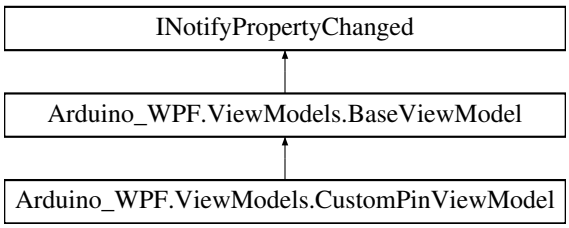
Interaction logic for CustomPin.xaml.

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

- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/obj/Debug/net8.0-windows/↩ Views/CustomPin.g.cs
- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/obj/Debug/net8.0-windows/↩ Views/CustomPin.g.i.cs
- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/Views/CustomPin.xaml.cs

5.5 Arduino_WPF.ViewModels.CustomPinViewModel Class Reference

Inheritance diagram for Arduino_WPF.ViewModels.CustomPinViewModel:



Public Member Functions

- CustomPinViewModel (int iD, PinMode pinMode, State state, COM com, Action< object > OnClickExitButton)

  Constructor for the CustomPinViewModel class.
- void **UpdateState** ()

  This method updates the state of the pin.
- void **WritePin** ()

  This method writes the configured PinData to the Microcontroller.

Properties

- ObservableCollection< PinMode > **PinModes** `[get]`
- ObservableCollection< State > **PinStates** `[get]`
- string **Titel** `[get]`

  This property gets the title of the pin.
- string **LastRefreshText** `[get]`

  This property gets the text for the refresh label.
- int **ID** `[get, set]`

  This property gets the ID of the pin.
- PinMode **PinMode** `[get, set]`

  This property gets the pinMode of the pin.
- State **State** `[get, set]`

This property gets the state of the pin.

- PinMode **SelectedPinMode** `[get, set]`
- State **SelectedState** `[get, set]`
- bool **IsPinInput** `[get, set]`
- DateTime **LastRefresh** `[get]`

  This property gets the last refresh of the pin.
- ICommand **OnClickExitButtonCommand** `[get, set]`

  This property gets the command for the exit button.
- ICommand **WritePinCommand** `[get, set]`

  This property gets the command for the Write pin button.

Additional Inherited Members

Protected Member Functions inherited from Arduino_WPF.ViewModels.BaseViewModel

- void OnPropertyChanged ([CallerMemberName] string? propertyName=null)

  This method is called when a property is changed.
- bool SetProperty< T > (ref T field, T value, [CallerMemberName] string? propertyName=null)

  This method sets the property and calls OnPropertyChanged if the value is different.

Events inherited from Arduino_WPF.ViewModels.BaseViewModel

- PropertyChangedEventHandler **PropertyChanged**

5.5.1 Constructor & Destructor Documentation

5.5.1.1 CustomPinViewModel()

```
Arduino_WPF.ViewModels.CustomPinViewModel.CustomPinViewModel (
            int iD,
            PinMode pinMode,
            State state,
            COM com,
            Action< object > OnClickExitButton )
```

Constructor for the CustomPinViewModel class.

Parameters

iD	
pinMode	
state	
OnClickExitButton	

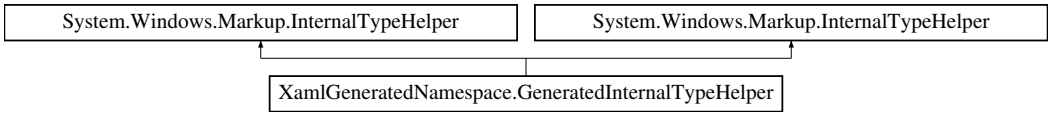
The documentation for this class was generated from the following file:

- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/ViewModels/CustomPinView↩ Model.cs

5.6 XamlGeneratedNamespace.GeneratedInternalTypeHelper Class Reference

GeneratedInternalTypeHelper.

Inheritance diagram for XamlGeneratedNamespace.GeneratedInternalTypeHelper:



Protected Member Functions

- override object **CreateInstance** (System.Type type, System.Globalization.CultureInfo culture)

  CreateInstance.
- override object **GetPropertyValue** (System.Reflection.PropertyInfo propertyInfo, object target, System.↩ Globalization.CultureInfo culture)

  GetPropertyValue.
- override void **SetPropertyValue** (System.Reflection.PropertyInfo propertyInfo, object target, object value, System.Globalization.CultureInfo culture)

  SetPropertyValue.
- override System.Delegate **CreateDelegate** (System.Type delegateType, object target, string handler)

  CreateDelegate.
- override void **AddEventHandler** (System.Reflection.EventInfo eventInfo, object target, System.Delegate handler)

  AddEventHandler.
- override object **CreateInstance** (System.Type type, System.Globalization.CultureInfo culture)

  CreateInstance.
- override object **GetPropertyValue** (System.Reflection.PropertyInfo propertyInfo, object target, System.↩ Globalization.CultureInfo culture)

  GetPropertyValue.
- override void **SetPropertyValue** (System.Reflection.PropertyInfo propertyInfo, object target, object value, System.Globalization.CultureInfo culture)

  SetPropertyValue.
- override System.Delegate **CreateDelegate** (System.Type delegateType, object target, string handler)

  CreateDelegate.
- override void **AddEventHandler** (System.Reflection.EventInfo eventInfo, object target, System.Delegate handler)

  AddEventHandler.

5.6.1 Detailed Description

GeneratedInternalTypeHelper.

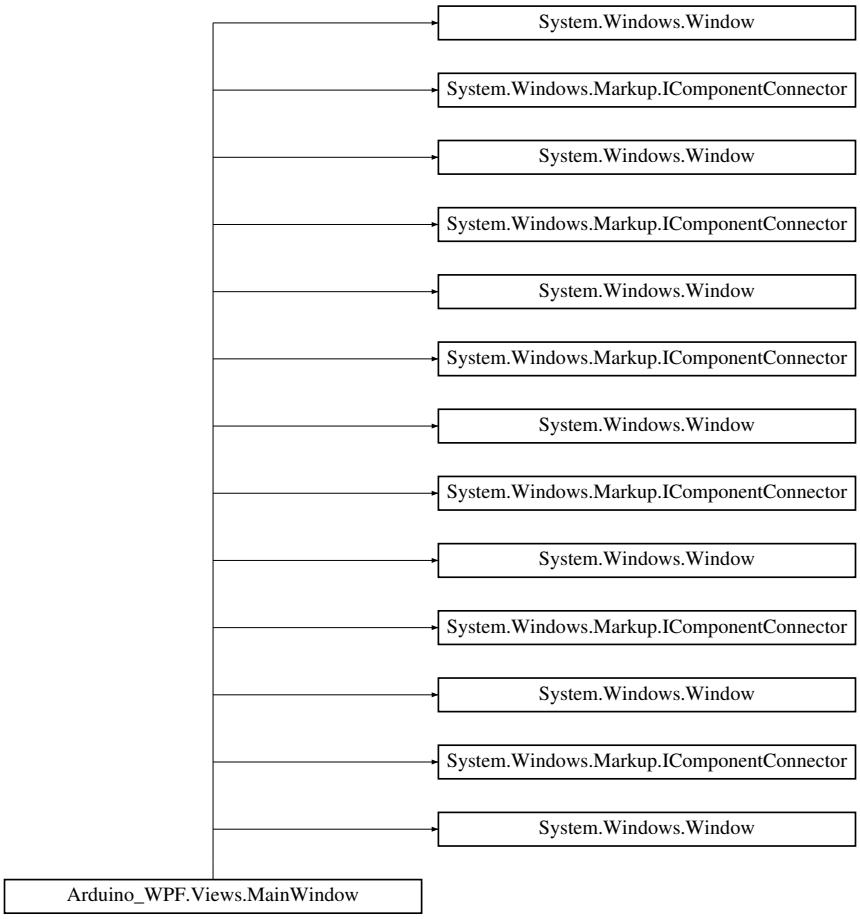
The documentation for this class was generated from the following files:

- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/obj/Debug/net8.0-windows/Generated↩ InternalTypeHelper.g.cs
- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/obj/Debug/net8.0-windows/Generated↩ InternalTypeHelper.g.i.cs

5.7 Arduino_WPF.Views.MainWindow Class Reference

MainWindow.

Inheritance diagram for Arduino_WPF.Views.MainWindow:



Public Member Functions

- void **InitializeComponent** ()

  InitializeComponent.
- void **InitializeComponent** ()

  InitializeComponent.
- void **InitializeComponent** ()

  InitializeComponent.
- void **InitializeComponent** ()

  InitializeComponent.
- void **InitializeComponent** ()

  InitializeComponent.
- void **InitializeComponent** ()

  InitializeComponent.

5.7.1 Detailed Description

MainWindow.

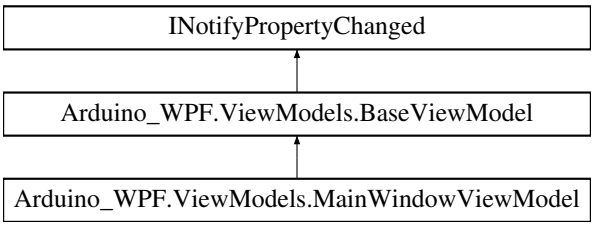
Interaction logic for MainWindow.xaml.

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

- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/obj/Debug/net8.0-windows/↩ Views/MainWindow.g.cs
- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/obj/Debug/net8.0-windows/↩ Views/MainWindow.g.i.cs
- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/obj/Debug/net8.0-windows/↩ Views/MainWindow_BACKUP_521.g.i.cs
- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/obj/Debug/net8.0-windows/↩ Views/MainWindow_BASE_521.g.i.cs
- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/obj/Debug/net8.0-windows/↩ Views/MainWindow_LOCAL_521.g.i.cs
- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/obj/Debug/net8.0-windows/↩ Views/MainWindow_REMOTE_521.g.i.cs
- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/Views/MainWindow.xaml.cs

5.8 Arduino_WPF.ViewModels.MainWindowViewModel Class Reference

Inheritance diagram for Arduino_WPF.ViewModels.MainWindowViewModel:



Public Member Functions

- **MainWindowViewModel** ()

  This is the constructor of the MainWindowViewModel class.

Properties

- ICommand **ShowComConfigurationViewCommand** `[get, set]`
- ICommand **ShowPinViewCommand** `[get, set]`
- object **SelectedViewModel** `[get, set]`

Additional Inherited Members

Protected Member Functions inherited from Arduino_WPF.ViewModels.BaseViewModel

- void OnPropertyChanged ([CallerMemberName] string? propertyName=null)

  This method is called when a property is changed.
- bool SetProperty< T > (ref T field, T value, [CallerMemberName] string? propertyName=null)

  This method sets the property and calls OnPropertyChanged if the value is different.

Events inherited from Arduino_WPF.ViewModels.BaseViewModel

- PropertyChangedEventHandler **PropertyChanged**

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

- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/ViewModels/MainWindow↩ ViewModel.cs

5.9 Arduino_WPF.Models.Pin Class Reference

Public Member Functions

- Pin (int id, PinMode pinMode, State state)

  Constructor for the Pin class.
- string WritePinData (State newState, PinMode newPinMode)

  Writes the pin data to a JSON string.
- void ReadPinData (string json)

  Reads the pin data from a JSON string.

Properties

- int **Id** `[get, set]`
- PinMode **Mode** `[get, set]`
- State **State** `[get, set]`
- DateTime **LastRefresh** `[get, set]`

5.9.1 Constructor & Destructor Documentation

5.9.1.1 Pin()

```
Arduino_WPF.Models.Pin.Pin (
            int id,
            PinMode pinMode,
            State state )
```

Constructor for the Pin class.

Parameters

id	
pinMode	
state	

5.9.2 Member Function Documentation

5.9.2.1 ReadPinData()

```
void Arduino_WPF.Models.Pin.ReadPinData (
            string json )
```

Reads the pin data from a JSON string.

Parameters

json	

Exceptions

ArgumentNullException	

5.9.2.2 WritePinData()

```
string Arduino_WPF.Models.Pin.WritePinData (
            State newState,
            PinMode newPinMode )
```

Writes the pin data to a JSON string.

Parameters

newState	
newPinMode	

Returns

Exceptions

ArgumentOutOfRangeException	

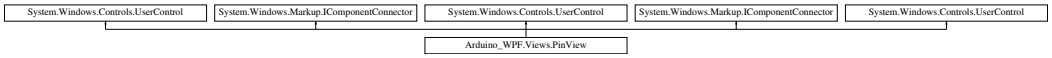
The documentation for this class was generated from the following file:

- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/Models/Pin.cs

5.10 Arduino_WPF.Views.PinView Class Reference

PinView.

Inheritance diagram for Arduino_WPF.Views.PinView:



Public Member Functions

- void **InitializeComponent** ()

  InitializeComponent.
- void **InitializeComponent** ()

  InitializeComponent.

5.10.1 Detailed Description

PinView.

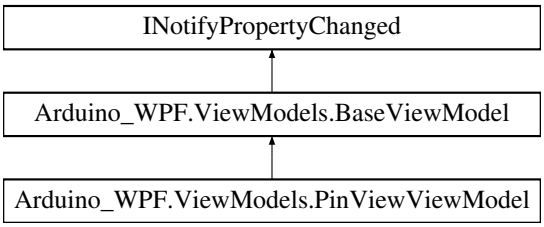
Interaction logic for MainView.xaml.

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

- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/obj/Debug/net8.0-windows/↩ Views/PinView.g.cs
- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/obj/Debug/net8.0-windows/↩ Views/PinView.g.i.cs
- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/Views/PinView.xaml.cs

5.11 Arduino_WPF.ViewModels.PinViewViewModel Class Reference

Inheritance diagram for Arduino_WPF.ViewModels.PinViewViewModel:



Public Member Functions

- PinViewViewModel (COM com, SerialReader reader)

  This is the constructor of the PinViewViewModel class.

Properties

- ObservableCollection< CustomPinViewModel > **Pins** = [] `[get, set]`
- ICommand **AddPinCommand** `[get, set]`
- COM **COM** `[get, set]`

Additional Inherited Members

Protected Member Functions inherited from Arduino_WPF.ViewModels.BaseViewModel

- void OnPropertyChanged ([CallerMemberName] string? propertyName=null)

  This method is called when a property is changed.
- bool SetProperty< T > (ref T field, T value, [CallerMemberName] string? propertyName=null)

  This method sets the property and calls OnPropertyChanged if the value is different.

Events inherited from Arduino_WPF.ViewModels.BaseViewModel

- PropertyChangedEventHandler **PropertyChanged**

5.11.1 Constructor & Destructor Documentation

5.11.1.1 PinViewViewModel()

```
Arduino_WPF.ViewModels.PinViewViewModel.PinViewViewModel (
            COM com,
            SerialReader reader )
```

This is the constructor of the PinViewViewModel class.

Parameters

com	
reader	

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

- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/ViewModels/PinViewView↩ Model.cs

5.12 Arduino_WPF.Utils.PresetJsonLoader Class Reference

Static Public Member Functions

- static string LoadPresetJsonConfigurations ()

  Loads the preset JSON configurations.
- static List< PresetJsonLoader > GetPresetConfigurations ()

Gets the preset configurations.

- static List< PresetJsonLoader > GetPresetAnalogConfigurations ()

  Gets the preset analog configurations.

- static List< PresetJsonLoader > LoadConfigurationsFromFile (string filePath)

  Loads the configurations from a file.

Properties

- int **Id** `[get, set]`
- string **Mode** `[get, set]`
- int **State** `[get, set]`

5.12.1 Member Function Documentation

5.12.1.1 GetPresetAnalogConfigurations()

```
static List< PresetJsonLoader > Arduino_WPF.Utils.PresetJsonLoader.GetPresetAnalogConfigurations
( )  [static]
```

Gets the preset analog configurations.

Returns

returns a list of preset analog configurations.

5.12.1.2 GetPresetConfigurations()

```
static List< PresetJsonLoader > Arduino_WPF.Utils.PresetJsonLoader.GetPresetConfigurations ( )
[static]
```

Gets the preset configurations.

Returns

returns a list of preset configurations.

5.12.1.3 LoadConfigurationsFromFile()

```
static List< PresetJsonLoader > Arduino_WPF.Utils.PresetJsonLoader.LoadConfigurationsFromFile
(
            string filePath )  [static]
```

Loads the configurations from a file.

Parameters

filePath	

Returns

List of preset configurations.

5.12.1.4 LoadPresetJsonConfigurations()

```
static string Arduino_WPF.Utils.PresetJsonLoader.LoadPresetJsonConfigurations ( )  [static]
```

Loads the preset JSON configurations.

Returns

The serialized JSON string.

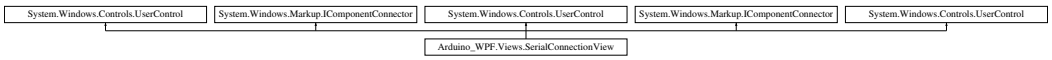
The documentation for this class was generated from the following file:

- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/Utils/PresetJsonLoader.cs

5.13 Arduino_WPF.Views.SerialConnectionView Class Reference

SerialConnectionView.

Inheritance diagram for Arduino_WPF.Views.SerialConnectionView:



Public Member Functions

- void **InitializeComponent** ()
  InitializeComponent.
- void **InitializeComponent** ()
  InitializeComponent.

5.13.1 Detailed Description

SerialConnectionView.

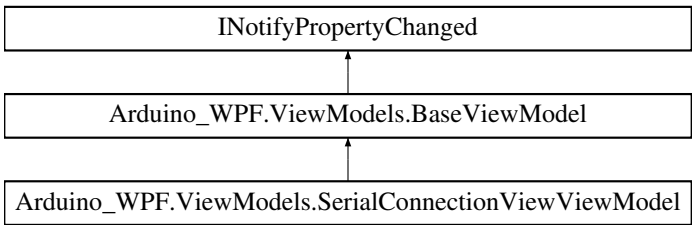
Interaction logic for SerialConnectionView.xaml.

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

- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/obj/Debug/net8.0-windows/↩ Views/SerialConnectionView.g.cs
- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/obj/Debug/net8.0-windows/↩ Views/SerialConnectionView.g.i.cs
- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/Views/SerialConnectionView.↩ xaml.cs

5.14 Arduino_WPF.ViewModels.SerialConnectionViewViewModel Class Reference

Inheritance diagram for Arduino_WPF.ViewModels.SerialConnectionViewViewModel:



Public Member Functions

- **SerialConnectionViewViewModel** ()

  This method initializes the SerialConnectionViewViewModel.

Public Attributes

- SerialReader **SerialReader**

Properties

- ObservableCollection< string > **AvailablePorts** `[get]`
- int **BaudRate** `[get, set]`
- Parity **Parity** `[get, set]`
- int **DataBits** `[get, set]`
- StopBits **StopBits** `[get, set]`
- string **SelectedPort** `[get, set]`
- string **ReadPinConfiguration** `[get, set]`
- COM **COM** `[get]`
- PresetJsonLoader **SelectedPresetConfiguration** `[get, set]`
- List< PresetJsonLoader > **PresetConfigurations** `[get, set]`
- ICommand **OpenCOMCommand** `[get]`
- ICommand **CloseCOMCommand** `[get]`
- ICommand **ListPortsCommand** `[get]`
- ICommand **ShowSerialMonitorCommand** `[get]`
- ObservableCollection< Parity > **ParityValues** `[get]`
- ObservableCollection< StopBits > **StopBitsValues** `[get]`
- ICommand **LoadPresetConfigurationsCommand** `[get]`
- ICommand **SetSelectedPresetConfigurationCommand** `[get]`
- ICommand **LoadConfigurationsFromFileCommand** `[get]`

Additional Inherited Members

Protected Member Functions inherited from Arduino_WPF.ViewModels.BaseViewModel

- void OnPropertyChanged ([CallerMemberName] string? propertyName=null)

  This method is called when a property is changed.
- bool SetProperty< T > (ref T field, T value, [CallerMemberName] string? propertyName=null)

  This method sets the property and calls OnPropertyChanged if the value is different.

Events inherited from Arduino_WPF.ViewModels.BaseViewModel

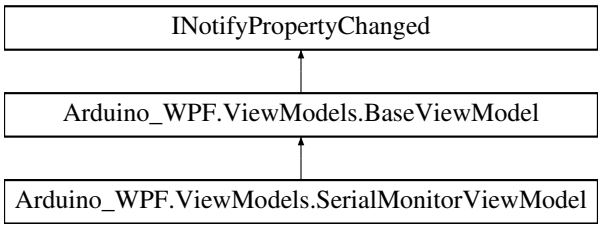
- PropertyChangedEventHandler **PropertyChanged**

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

- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/ViewModels/SerialConnection↩ ViewViewModel.cs

5.15 Arduino_WPF.ViewModels.SerialMonitorViewModel Class Reference

Inheritance diagram for Arduino_WPF.ViewModels.SerialMonitorViewModel:



Public Member Functions

- **SerialMonitorViewModel** (COM com, SerialReader serialReader)
- void **SerialReaderPropertyChanged** (object sender, PropertyChangedEventArgs e)
- void **ClearSerialOutput** ()

  This method clears the serial output.
- void **CopyResultToClipboard** ()

  This method copies the result to the clipboard.

Properties

- string **SerialOutput** `[get, set]`
- ICommand **ClearSerialOutputCommand** `[get]`
- ICommand **CopyResultToClipboardCommand** `[get]`

Additional Inherited Members

Protected Member Functions inherited from Arduino_WPF.ViewModels.BaseViewModel

- void OnPropertyChanged ([CallerMemberName] string? propertyName=null)

  This method is called when a property is changed.
- bool SetProperty< T > (ref T field, T value, [CallerMemberName] string? propertyName=null)

  This method sets the property and calls OnPropertyChanged if the value is different.

Events inherited from Arduino_WPF.ViewModels.BaseViewModel

- PropertyChangedEventHandler **PropertyChanged**

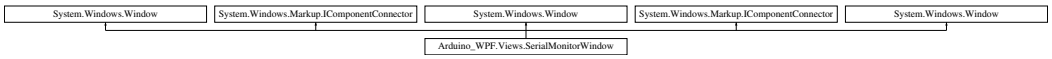
The documentation for this class was generated from the following file:

- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/ViewModels/SerialMonitor↩ ViewModel.cs

5.16 Arduino_WPF.Views.SerialMonitorWindow Class Reference

SerialMonitorWindow.

Inheritance diagram for Arduino_WPF.Views.SerialMonitorWindow:



Public Member Functions

- void **InitializeComponent** ()

  InitializeComponent.
- void **InitializeComponent** ()

  InitializeComponent.
- **SerialMonitorWindow** (COM com, SerialReader reader)

5.16.1 Detailed Description

SerialMonitorWindow.

Interaction logic for SerialMonitorWinodw.xaml.

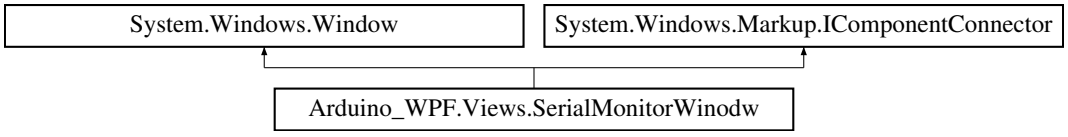
The documentation for this class was generated from the following files:

- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/obj/Debug/net8.0-windows/↩ Views/SerialMonitorWindow.g.cs
- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/obj/Debug/net8.0-windows/↩ Views/SerialMonitorWindow.g.i.cs
- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/Views/SerialMonitorWindow.↩ xaml.cs

5.17 Arduino_WPF.Views.SerialMonitorWinodw Class Reference

SerialMonitorWinodw.

Inheritance diagram for Arduino_WPF.Views.SerialMonitorWinodw:



Public Member Functions

- void **InitializeComponent** ()

  InitializeComponent.

5.17.1 Detailed Description

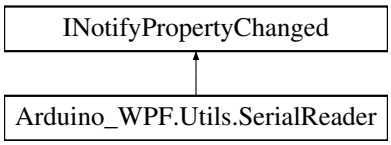
SerialMonitorWinodw.

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

- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/obj/Debug/net8.0-windows/↩ Views/SerialMonitorWinodw.g.i.cs

5.18 Arduino_WPF.Utils.SerialReader Class Reference

Inheritance diagram for Arduino_WPF.Utils.SerialReader:



Public Member Functions

- SerialReader (COM com)

  This is the constructor of the SerialReader class.
- async Task ReadSerialLoop ()

  This method reads the serial output in a loop.

Protected Member Functions

- void OnPropertyChanged ([CallerMemberName] string? propertyName=null)

  This method is called when a property is changed.

Properties

- Pin **LastReceivedPinConfig** `[get, set]`
- string **SerialOutput** `[get, set]`

Events

- PropertyChangedEventHandler? **PropertyChanged**

5.18.1 Constructor & Destructor Documentation

5.18.1.1 SerialReader()

```
Arduino_WPF.Utils.SerialReader.SerialReader (
            COM com )
```

This is the constructor of the SerialReader class.

Parameters

com	

5.18.2 Member Function Documentation

5.18.2.1 OnPropertyChanged()

```
void Arduino_WPF.Utils.SerialReader.OnPropertyChanged (
            [CallerMemberName] string?  propertyName = null )  [protected]
```

This method is called when a property is changed.

Parameters

propertyName	

5.18.2.2 ReadSerialLoop()

```
async Task Arduino_WPF.Utils.SerialReader.ReadSerialLoop ( )
```

This method reads the serial output in a loop.

Returns

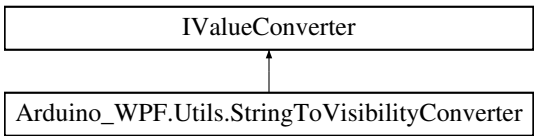
Task

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

- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/Utils/SerialReader.cs

5.19 Arduino_WPF.Utils.StringToVisibilityConverter Class Reference

Inheritance diagram for Arduino_WPF.Utils.StringToVisibilityConverter:



Public Member Functions

- object Convert (object value, Type targetType, object parameter, CultureInfo culture)
  This method converts a string to a visibility.
- object ConvertBack (object value, Type targetType, object parameter, CultureInfo culture)
  This method converts a visibility to a string.

5.19.1 Member Function Documentation

5.19.1.1 Convert()

```
object Arduino_WPF.Utils.StringToVisibilityConverter.Convert (
            object value,
            Type targetType,
            object parameter,
            CultureInfo culture )
```

This method converts a string to a visibility.

Parameters

value	
targetType	
parameter	
culture	

Returns

5.19.1.2 ConvertBack()

```
object Arduino_WPF.Utils.StringToVisibilityConverter.ConvertBack (
            object value,
            Type targetType,
            object parameter,
            CultureInfo culture )
```

This method converts a visibility to a string.

Parameters

value	
targetType	
parameter	
culture	

Returns

Exceptions

NotImplementedException	

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

- C:/Users/Adrian/Documents/git/Arduino_WPF/Arduino_WPF/Arduino_WPF/Utils/StringToVisibilityConverter.↩
cs

Index

Arduino_WPF, 7
Arduino_WPF.App, 9
Arduino_WPF.Models, 7
Arduino_WPF.Models.COM, 11
    COM, 12
    ExtractJsonObjects, 12
    ListOpenPorts, 12
    ReadPinConfiguration, 13
    ReadSerialOutput, 13
    SetBaudrate, 13
    SetDataBits, 13
    SetParity, 14
    WriteSerialOutput, 14
Arduino_WPF.Models.Pin, 20
    Pin, 20
    ReadPinData, 21
    WritePinData, 21
Arduino_WPF.Utils, 7
Arduino_WPF.Utils.PresetJsonLoader, 23
    GetPresetAnalogConfigurations, 24
    GetPresetConfigurations, 24
    LoadConfigurationsFromFile, 24
    LoadPresetJsonConfigurations, 25
Arduino_WPF.Utils.SerialReader, 29
    OnPropertyChanged, 30
    ReadSerialLoop, 30
    SerialReader, 29
Arduino_WPF.Utils.StringToVisibilityConverter, 30
    Convert, 31
    ConvertBack, 31
Arduino_WPF.ViewModels, 8
Arduino_WPF.ViewModels.BaseViewModel, 10
    OnPropertyChanged, 10
    SetProperty< T >, 10
Arduino_WPF.ViewModels.CustomPinViewModel, 15
    CustomPinViewModel, 16
Arduino_WPF.ViewModels.MainWindowViewModel, 19
Arduino_WPF.ViewModels.PinViewViewModel, 22
    PinViewViewModel, 23
Arduino_WPF.ViewModels.SerialConnectionViewViewModel, 26
Arduino_WPF.ViewModels.SerialMonitorViewModel, 27
Arduino_WPF.Views, 8
Arduino_WPF.Views.CustomPin, 14
Arduino_WPF.Views.MainWindow, 18
Arduino_WPF.Views.PinView, 22
Arduino_WPF.Views.SerialConnectionView, 25
Arduino_WPF.Views.SerialMonitorWindow, 28
Arduino_WPF.Views.SerialMonitorWinodw, 28

COM
    Arduino_WPF.Models.COM, 12
Convert
    Arduino_WPF.Utils.StringToVisibilityConverter, 31
ConvertBack
    Arduino_WPF.Utils.StringToVisibilityConverter, 31
CustomPinViewModel
    Arduino_WPF.ViewModels.CustomPinViewModel, 16

ExtractJsonObjects
    Arduino_WPF.Models.COM, 12

GetPresetAnalogConfigurations
    Arduino_WPF.Utils.PresetJsonLoader, 24
GetPresetConfigurations
    Arduino_WPF.Utils.PresetJsonLoader, 24

ListOpenPorts
    Arduino_WPF.Models.COM, 12
LoadConfigurationsFromFile
    Arduino_WPF.Utils.PresetJsonLoader, 24
LoadPresetJsonConfigurations
    Arduino_WPF.Utils.PresetJsonLoader, 25

OnPropertyChanged
    Arduino_WPF.Utils.SerialReader, 30
    Arduino_WPF.ViewModels.BaseViewModel, 10

Pin
    Arduino_WPF.Models.Pin, 20
PinViewViewModel
    Arduino_WPF.ViewModels.PinViewViewModel, 23

ReadPinConfiguration
    Arduino_WPF.Models.COM, 13
ReadPinData
    Arduino_WPF.Models.Pin, 21
ReadSerialLoop
    Arduino_WPF.Utils.SerialReader, 30
ReadSerialOutput
    Arduino_WPF.Models.COM, 13

SerialReader
    Arduino_WPF.Utils.SerialReader, 29
SetBaudrate
    Arduino_WPF.Models.COM, 13
SetDataBits
    Arduino_WPF.Models.COM, 13
SetParity
    Arduino_WPF.Models.COM, 14

SetProperty< T >
Arduino_WPF.ViewModels.BaseViewModel, 10

WritePinData
Arduino_WPF.Models.Pin, 21
WriteSerialOutput
Arduino_WPF.Models.COM, 14

XamlGeneratedNamespace, 8
XamlGeneratedNamespace.GeneratedInternalTypeHelper, 17