

ABB

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# Chapter 1

## Class Index

### 1.1 Class List

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

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## Chapter 2

# File Index

### 2.1 File List

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## Chapter 3

# Class Documentation

### 3.1 ArbolABB Class Reference

```
#include <ArbolABB.h>
```

#### Public Member Functions

- [ArbolABB](#) ()
- virtual [~ArbolABB](#) ()
- [NodoArbol](#) \* [obtener\\_raiz](#) ()
- void [insertar](#) (int)
- bool [encuentra\\_en\\_arbol\\_ABB](#) (int)
- string [ver\\_arbol](#) (int)
- int [cantidad\\_de\\_nodos\\_presente](#) ()
- string [ruta](#) (int)
- string [nodos\\_hoja](#) ()
- string [nodos\\_internos\\_arbol](#) ()
- int [un\\_nivel\\_nodos](#) (int)
- int [nivel\\_de\\_un\\_nodo](#) (int)
- int [altura](#) ()
- string [sucesores](#) (int)
- int [obtiene\\_padre](#) (int)
- [NodoArbol](#) \* [obtiene\\_nodo](#) (int)
- string [recorrer\\_arbol\\_por\\_ancho](#) ()
- bool [arbol\\_esta\\_lleno](#) ()
- bool [arbol\\_esta\\_completo](#) ()
- bool [compara\\_cant\\_elem](#) ([ArbolABB](#) \*)
- bool [de\\_altura\\_son\\_iguales](#) ([ArbolABB](#) \*)
- string [arbol\\_auxiliar\\_esta\\_completo](#) ([NodoArbol](#) \*, int)
- bool [eliminar\\_nodo](#) (int)

#### 3.1.1 Detailed Description

Definition at line 8 of file [ArbolABB.h](#).

### 3.1.2 Constructor & Destructor Documentation

#### 3.1.2.1 ArbolABB()

```
ArbolABB::ArbolABB ( )
```

Definition at line 7 of file ArbolABB.cpp.

#### 3.1.2.2 ~ArbolABB()

```
ArbolABB::~~ArbolABB ( ) [virtual]
```

Definition at line 12 of file ArbolABB.cpp.

### 3.1.3 Member Function Documentation

#### 3.1.3.1 altura()

```
int ArbolABB::altura ( )
```

Definition at line 211 of file ArbolABB.cpp.

Here is the call graph for this function: Here is the caller graph for this function:

#### 3.1.3.2 arbol\_auxiliar\_esta\_completo()

```
string ArbolABB::arbol_auxiliar_esta_completo (
    NodoArbol * a,
    int cont )
```

Definition at line 352 of file ArbolABB.cpp.

Here is the call graph for this function: Here is the caller graph for this function:

#### 3.1.3.3 arbol\_esta\_completo()

```
bool ArbolABB::arbol_esta_completo ( )
```

Definition at line 322 of file ArbolABB.cpp.

Here is the call graph for this function: Here is the caller graph for this function:

#### 3.1.3.4 arbol\_esta\_lleno()

```
bool ArbolABB::arbol_esta_lleno ( )
```

Definition at line 299 of file ArbolABB.cpp.

Here is the caller graph for this function:

#### 3.1.3.5 cantidad\_de\_nodos\_presente()

```
int ArbolABB::cantidad_de_nodos_presente ( )
```

Definition at line 101 of file ArbolABB.cpp.

Here is the call graph for this function: Here is the caller graph for this function:

#### 3.1.3.6 compara\_cant\_elem()

```
bool ArbolABB::compara_cant_elem (
    ArbolABB * otroArbol )
```

Definition at line 363 of file ArbolABB.cpp.

Here is the call graph for this function: Here is the caller graph for this function:

#### 3.1.3.7 de\_altura\_son\_iguales()

```
bool ArbolABB::de_altura_son_iguales (
    ArbolABB * otroArbol )
```

Definition at line 374 of file ArbolABB.cpp.

Here is the call graph for this function: Here is the caller graph for this function:

#### 3.1.3.8 eliminar\_nodo()

```
bool ArbolABB::eliminar_nodo (
    int n )
```

Definition at line 386 of file ArbolABB.cpp.

Here is the call graph for this function: Here is the caller graph for this function:

#### 3.1.3.9 encuentra\_en\_arbol\_ABB()

```
bool ArbolABB::encuentra_en_arbol_ABB (
    int dato )
```

Definition at line 35 of file ArbolABB.cpp.

Here is the caller graph for this function:

#### 3.1.3.10 insertar()

```
void ArbolABB::insertar (
    int i )
```

Definition at line 52 of file ArbolABB.cpp.

Here is the call graph for this function: Here is the caller graph for this function:

#### 3.1.3.11 nivel\_de\_un\_nodo()

```
int ArbolABB::nivel_de_un_nodo (
    int dato )
```

Definition at line 193 of file ArbolABB.cpp.

Here is the call graph for this function: Here is the caller graph for this function:

#### 3.1.3.12 nodos\_hoja()

```
string ArbolABB::nodos_hoja ( )
```

Definition at line 138 of file ArbolABB.cpp.

#### 3.1.3.13 nodos\_internos\_arbol()

```
string ArbolABB::nodos_internos_arbol ( )
```

Definition at line 157 of file ArbolABB.cpp.

#### 3.1.3.14 obtener\_raiz()

```
NodoArbol * ArbolABB::obtener_raiz ( )
```

Definition at line 18 of file ArbolABB.cpp.

Here is the caller graph for this function:

#### 3.1.3.15 obtiene\_nodo()

```
NodoArbol * ArbolABB::obtiene_nodo (
    int dato )
```

Definition at line 260 of file ArbolABB.cpp.

Here is the call graph for this function: Here is the caller graph for this function:

#### 3.1.3.16 obtiene\_padre()

```
int ArbolABB::obtiene_padre (
    int dato )
```

Definition at line 243 of file ArbolABB.cpp.

Here is the call graph for this function: Here is the caller graph for this function:

#### 3.1.3.17 recorrer\_arbol\_por\_ancho()

```
string ArbolABB::recorrer_arbol_por_ancho ( )
```

Definition at line 277 of file ArbolABB.cpp.

Here is the call graph for this function: Here is the caller graph for this function:

#### 3.1.3.18 ruta()

```
string ArbolABB::ruta (
    int num )
```

Definition at line 121 of file ArbolABB.cpp.

Here is the call graph for this function:

#### 3.1.3.19 sucesores()

```
string ArbolABB::sucesores (
    int dato )
```

Definition at line 225 of file ArbolABB.cpp.

Here is the call graph for this function:

#### 3.1.3.20 un\_nivel\_nodos()

```
int ArbolABB::un_nivel_nodos (
    int n )
```

Definition at line 185 of file ArbolABB.cpp.

Here is the caller graph for this function:

### 3.1.3.21 ver\_arbol()

```
string ArbolABB::ver_arbol (
    int tipo )
```

Definition at line 76 of file ArbolABB.cpp.

Here is the caller graph for this function:

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

- [ArbolABB.h](#)
- [ArbolABB.cpp](#)

## 3.2 NodoArbol Class Reference

```
#include <NodoArbol.h>
```

### Public Member Functions

- [NodoArbol](#) (int)
- virtual [~NodoArbol](#) ()
- void [fija\\_dat](#) (int)
- void [pone\\_a\\_la\\_izquierda](#) (NodoArbol \*)
- void [pone\\_a\\_la\\_derecha](#) (NodoArbol \*)
- int [obtener\\_datos](#) ()
- [NodoArbol](#) \*& [obtiene\\_izquierda](#) ()
- [NodoArbol](#) \*& [obtiene\\_derecha](#) ()

### 3.2.1 Detailed Description

Definition at line 5 of file NodoArbol.h.

### 3.2.2 Constructor & Destructor Documentation

#### 3.2.2.1 NodoArbol()

```
NodoArbol::NodoArbol (
    int dato )
```

Definition at line 3 of file NodoArbol.cpp.

### 3.2.2.2 ~NodoArbol()

```
NodoArbol::~~NodoArbol ( ) [virtual]
```

Definition at line 10 of file NodoArbol.cpp.

## 3.2.3 Member Function Documentation

### 3.2.3.1 fija\_dat()

```
void NodoArbol::fija_dat (
    int dato )
```

Definition at line 17 of file NodoArbol.cpp.

### 3.2.3.2 obtener\_datos()

```
int NodoArbol::obtener_datos ( )
```

Definition at line 29 of file NodoArbol.cpp.

Here is the caller graph for this function:

### 3.2.3.3 obtiene\_derecha()

```
NodoArbol * & NodoArbol::obtiene_derecha ( )
```

Definition at line 37 of file NodoArbol.cpp.

Here is the caller graph for this function:

### 3.2.3.4 obtiene\_izquierda()

```
NodoArbol * & NodoArbol::obtiene_izquierda ( )
```

Definition at line 33 of file NodoArbol.cpp.

Here is the caller graph for this function:

### 3.2.3.5 pone\_a\_la\_derecha()

```
void NodoArbol::pone_a_la_derecha (
    NodoArbol * der )
```

Definition at line 25 of file NodoArbol.cpp.

### 3.2.3.6 pone\_a\_la\_izquierda()

```
void NodoArbol::pone_a_la_izquierda (
    NodoArbol * izq )
```

Definition at line 21 of file NodoArbol.cpp.

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

- [NodoArbol.h](#)
- [NodoArbol.cpp](#)





## Chapter 4

# File Documentation

### 4.1 ArbolABB.cpp File Reference

```
#include "ArbolABB.h"
#include "NodoArbol.h"
#include <cstdlib>
#include <sstream>
#include <string>
#include <cmath>
```

Include dependency graph for ArbolABB.cpp:

### 4.2 ArbolABB.h File Reference

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

Include dependency graph for ArbolABB.h: This graph shows which files directly or indirectly include this file:

#### Classes

- class [ArbolABB](#)

### 4.3 main.cpp File Reference

```
#include <iostream>
#include "NodoArbol.h"
#include "ArbolABB.h"
```

Include dependency graph for main.cpp:

#### Functions

- int [main](#) ()

### 4.3.1 Function Documentation

#### 4.3.1.1 main()

```
int main ( )
```

Definition at line 7 of file main.cpp.

Here is the call graph for this function:

## 4.4 NodoArbol.cpp File Reference

```
#include "NodoArbol.h"  
#include <cstdlib>  
Include dependency graph for NodoArbol.cpp:
```

## 4.5 NodoArbol.h File Reference

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

### Classes

- class [NodoArbol](#)

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