

# DataStructures4Beamer

## 1.0

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# Contents



# Chapter 1

## Class Index

### 1.1 Class Hierarchy

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

latex . . . . .	??
array . . . . .	??
list . . . . .	??
list_node . . . . .	??
node . . . . .	??
tree . . . . .	??



## Chapter 2

# Class Index

### 2.1 Class List

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

<a href="#">array</a>	.....	??
<a href="#">latex</a>	.....	??
<a href="#">list</a>	.....	??
<a href="#">list_node</a>	.....	??
<a href="#">node</a>	.....	??
<a href="#">tree</a>	.....	??



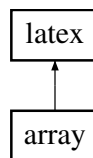


## Chapter 3

# Class Documentation

### 3.1 array Class Reference

Inheritance diagram for array:



#### Public Member Functions

- int `delete_element` ()  
*Deletes the first element in the array.*
- void `delete_element_in_pos` (int)  
*Deletes the element in the position "pos" of the array.*
- void `insert_element` (int)  
*Inserts an element with value "elem" to the first position of the array.*
- void `insert_element_in_pos` (int, int)  
*Inserts an element with value "elem" to the position "pos" of the array.*
- void `fill_vector` (int)  
*Fills an empty array, assigns zero to each position.*
- `array` (int n=10)  
*Constructor initializes an array of size "n".*
- int `sum_vector` ()  
*Returns the sum of all elements in the array.*
- int `max` ()  
*Returns the element with the highest value in the array.*
- int `min` ()  
*Returns the element with the lowest value in the array.*
- void `invest_vector` ()  
*Reverses the positions of the elements in the array.*
- void `exchange_elements2` (int, int)  
*Change the position of two elements.*
- void `print_vector` ()  
*Displays the array values right through console.*

- int `get_amount` ()  
*Returns current number of elements contained in the array.*
- void `clean_vector` ()  
*Deletes all elements in the array.*
- int `get_objet` (int)  
*Returns the element in the position "n" in the array.*
- void `exchange_elements` (int, int)  
*Change the position of two elements.*
- int `frequency` (int)  
*Calculate and return the frequency of element "elem".*
- int `mode` ()  
*Calculate and return the mode of the array.*
- int `arithmetic_mean` ()  
*Calculate and return the average of the values in the array.*
- bool `search_element` (int)  
*Confirms if exist the element "elem" in the array.*
- void `order` ()  
*Orders the array from lowest to highest.*
- virtual `~array` (void)  
*Destructor, deletes the array.*
- string `getCadena` ()

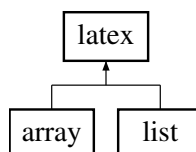
### Additional Inherited Members

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

- /home/mtorres/Dropbox/Universidad/Estructuras/Proyecto1/FoxHound/PROYECTO/array.h
- /home/mtorres/Dropbox/Universidad/Estructuras/Proyecto1/FoxHound/PROYECTO/array.cpp

## 3.2 latex Class Reference

Inheritance diagram for latex:



### Public Member Functions

- virtual string `getCadena` ()

### Protected Attributes

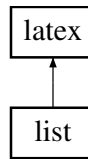
- string `cadena`

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

- /home/mtorres/Dropbox/Universidad/Estructuras/Proyecto1/FoxHound/PROYECTO/latex.h
- /home/mtorres/Dropbox/Universidad/Estructuras/Proyecto1/FoxHound/PROYECTO/latex.cpp

### 3.3 list Class Reference

Inheritance diagram for list:



#### Public Member Functions

- [list](#) ()  
*Default constructor.*
- [~list](#) ()  
*Destructor.*
- bool [search](#) (int v)  
*Confirms if the value "v" is in the list.*
- void [insert\\_at\\_beginning](#) (int v)  
*Inserts a new node with value "v" at beginning of the list.*
- void [insert\\_at\\_end](#) (int v)  
*Inserts a new node at end of the list.*
- void [insert\\_in\\_position](#) (int v, int pos)  
*Inserts a new node with value "v" in the position "pos" of the list.*
- void [delete\\_first\\_node](#) ()  
*Deletes the first node of the list.*
- void [delete\\_last\\_node](#) ()  
*Deletes the last node of the list.*
- void [delete\\_in\\_position](#) (int pos)  
*Deletes the node in the position "pos" of the list.*
- void [next\\_node](#) ()  
*Set the current node in the next node of the list.*
- void [go\\_to\\_first\\_node](#) ()  
*Set the current node in the first node of the list.*
- void [go\\_to\\_last\\_node](#) ()  
*Set the current node in the last node of the list.*
- bool [get\\_current\\_node](#) ()  
*Returns the current node, if this is not NULL.*
- int [current\\_value](#) ()  
*Returns the value of the current node.*
- string [getCadena](#) ()
- void [begin\\_tex](#) (string)  
*Writes the headers and required latex libraries and packages on the .tex file.*
- void [end\\_tex](#) ()  
*Writes the footers on the .tex file.*
- string [to\\_string](#) (int v)  
*Convert an int "v" to string.*

## Public Attributes

- int **size**  
*Size of the list.*

## Additional Inherited Members

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

- /home/mtorres/Dropbox/Universidad/Estructuras/Proyecto1/FoxHound/PROYECTO/list.h
- /home/mtorres/Dropbox/Universidad/Estructuras/Proyecto1/FoxHound/PROYECTO/list.cpp

## 3.4 list\_node Class Reference

### Public Member Functions

- **list\_node** (int v, **list\_node** \*)
- void **set\_value** (int)
- int **get\_value** ()
- void **set\_next** (**list\_node** \*)
- **list\_node** \* **get\_next** ()

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

- /home/mtorres/Dropbox/Universidad/Estructuras/Proyecto1/FoxHound/PROYECTO/list\_node.h
- /home/mtorres/Dropbox/Universidad/Estructuras/Proyecto1/FoxHound/PROYECTO/list\_node.cpp

## 3.5 node Struct Reference

### Public Attributes

- int **key\_value**
- **node** \* **left**
- **node** \* **right**

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

- /home/mtorres/Dropbox/Universidad/Estructuras/Proyecto1/FoxHound/PROYECTO/tree\_node.h

## 3.6 tree Class Reference

### Public Member Functions

- void **insert\_root** (int key)
- void **insert1** (int key)
- void **insert2** (int key)
- **node** \* **search** (int key)
- void **finish\_tree** ()

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

- /home/mtorres/Dropbox/Universidad/Estructuras/Proyecto1/FoxHound/PROYECTO/tree.h
- /home/mtorres/Dropbox/Universidad/Estructuras/Proyecto1/FoxHound/PROYECTO/tree.cpp