

## ASCII Table

0.0.1

Generated by Doxygen 1.8.13



# Contents

<b>1</b>	<b>Todo List</b>	<b>1</b>
<b>2</b>	<b>Data Structure Index</b>	<b>3</b>
2.1	Data Structures . . . . .	3
<b>3</b>	<b>File Index</b>	<b>5</b>
3.1	File List . . . . .	5
<b>4</b>	<b>Data Structure Documentation</b>	<b>7</b>
4.1	ASCIITable Class Reference . . . . .	7
4.1.1	Detailed Description . . . . .	8
4.1.2	Constructor & Destructor Documentation . . . . .	8
4.1.2.1	ASCIITable() [1/3] . . . . .	8
4.1.2.2	ASCIITable() [2/3] . . . . .	8
4.1.2.3	ASCIITable() [3/3] . . . . .	9
4.1.2.4	~ASCIITable() . . . . .	9
4.1.3	Member Function Documentation . . . . .	9
4.1.3.1	dump() . . . . .	9
4.1.3.2	parserow() . . . . .	9
4.1.3.3	read() . . . . .	9
4.1.4	Field Documentation . . . . .	10
4.1.4.1	buffer . . . . .	10
4.1.4.2	bufsize . . . . .	10
4.1.4.3	c . . . . .	10
4.1.4.4	cc . . . . .	10

4.1.4.5	characters	10
4.1.4.6	colcount	10
4.1.4.7	cols	10
4.1.4.8	data	11
4.1.4.9	fbuffer	11
4.1.4.10	fcharcount	11
4.1.4.11	ff	11
4.1.4.12	field	11
4.1.4.13	ifname	11
4.1.4.14	ifp	11
4.1.4.15	mptr	12
4.1.4.16	nchar	12
4.1.4.17	nline	12
4.1.4.18	ofname	12
4.1.4.19	ptr	12
4.1.4.20	ret	12
4.1.4.21	rowcount	12
4.1.4.22	rows	13
4.1.4.23	temp	13
4.1.4.24	totchars	13
4.1.4.25	totlines	13

<b>5</b>	<b>File Documentation</b>	<b>15</b>
5.1	asciitable.h File Reference	15
5.1.1	Detailed Description	16
5.1.2	Macro Definition Documentation	16
5.1.2.1	FMAX	16
5.1.2.2	FS	16
5.1.2.3	FSIZE	16
5.1.2.4	LMAXSIZE	16
5.1.2.5	OFS	16
5.1.2.6	ORS	17
5.1.2.7	RMAX	17
5.1.2.8	RS	17
5.2	defines.h File Reference	17
5.3	errvals.h File Reference	18
5.3.1	Macro Definition Documentation	19
5.3.1.1	EX__BASE	19
5.3.1.2	EX__MAX	19
5.3.1.3	EX_ARGSLIMITS	19
5.3.1.4	EX_BADARGS	19
5.3.1.5	EX_CANTCREAT	19
5.3.1.6	EX_CONFIG	19
5.3.1.7	EX_DATAERR	19
5.3.1.8	EX_DENIED	20
5.3.1.9	EX_IOERR	20
5.3.1.10	EX_NOFILE	20
5.3.1.11	EX_NOHOST	20
5.3.1.12	EX_NOINPUT	20
5.3.1.13	EX_NOPERM	20
5.3.1.14	EX_NOUSER	20
5.3.1.15	EX_OK	20
5.3.1.16	EX_OSERR	21
5.3.1.17	EX_OSFILE	21
5.3.1.18	EX_PROTOCOL	21
5.3.1.19	EX_SEGFAULT	21
5.3.1.20	EX_SOFTWARE	21
5.3.1.21	EX_SYNERR	21
5.3.1.22	EX_TEMPFAIL	21
5.3.1.23	EX_UNAVAILABLE	21
5.3.1.24	EX_UNSUPPORTED	22
5.3.1.25	EX_USAGE	22
5.3.2	Function Documentation	22
5.3.2.1	error_what()	22

<a href="#">Index</a>	23
-----------------------	----

# Chapter 1

## Todo List

Global **ASCIITable::dump** (void)

write docs

Global **ASCIITable::nline**

check colcount / nline redundancy

Global **ASCIITable::parserow** (char \*mybuffer, int mncols)

write docs

Global **ASCIITable::read** (const FILE \*inf)

write docs

Global **ASCIITable::~~ASCIITable** (void)

write docs





## Chapter 2

# Data Structure Index

### 2.1 Data Structures

Here are the data structures with brief descriptions:

<a href="#">ASCIITable</a>	Implements basic input/output operations on ascii table dataset . . . . .	7
----------------------------	---	---



## Chapter 3

# File Index

### 3.1 File List

Here is a list of all files with brief descriptions:

<a href="#">asciitable.h</a>	15
<a href="#">defines.h</a>	17
<a href="#">errvals.h</a>	18



## Chapter 4

# Data Structure Documentation

### 4.1 ASCII Table Class Reference

implements basic input/output operations on ascii table dataset

```
#include <asciitable.h>
```

#### Public Member Functions

- [ASCII Table](#) (const char \*infile, int nrows, int ncols)  
*constructor: takes in input the file name to be read, the number of rows and the number of columns of the input table and soon read the file content into RAM memory to be processed*
- [ASCII Table](#) (void)  
*constructor: takes no arguments and do nothing*
- [ASCII Table](#) (int nrows, int ncols)  
*constructor:*
- [~ASCII Table](#) (void)
- int [read](#) (const FILE \*inf)
- int [dump](#) (void)
- int [parserow](#) (char \*mybuffer, int mncols)

#### Data Fields

- float [data](#) [256][256]
- int [rows](#)
- int [cols](#)
- char \* [buffer](#)
- char \* [ifname](#) =(char\*)"table.asc"  
*name of the input file that can be read and saved into the [ASCII Table](#) in RAM*
- char \* [ofname](#) =(char\*)"otable.asc"  
*name of the output file that can be written saving into the [ASCII Table](#) in RAM*
- FILE \* [ifp](#)  
*input file object pointer*
- int [ret](#)
- int [nline](#) =0

- int `colcount` =0
- int `rowcount` =0
- int `nchar` =0
- FILE \* `ptr`
- FILE \* `mptr`
- int `c`
- int `cc`
- int `totlines`
- int `totchars`
- char \* `field`
- int `fcharcount`
- int `ff` =0
- char `temp` [FSIZE]
- char \* `fbuffer`
- size\_t `bufsize` = LMAXSIZE
- size\_t `characters`

#### 4.1.1 Detailed Description

implements basic input/output operations on ascii table dataset

#### 4.1.2 Constructor & Destructor Documentation

##### 4.1.2.1 ASCIITable() [1/3]

```
ASCIITable::ASCIITable (
    const char * infile,
    int nrows,
    int ncols )
```

constructor: takes in input the file name to be read, the number of rows and the number of columns of the input table and soon read the file content into RAM memory to be processed

##### 4.1.2.2 ASCIITable() [2/3]

```
ASCIITable::ASCIITable (
    void )
```

constructor: takes no arguments and do nothing

#### 4.1.2.3 ASCIITable() [3/3]

```
ASCIITable::ASCIITable (  
    int nrows,  
    int ncols )
```

constructor:

#### 4.1.2.4 ~ASCIITable()

```
ASCIITable::~~ASCIITable (  
    void )
```

**Todo** write docs

### 4.1.3 Member Function Documentation

#### 4.1.3.1 dump()

```
int ASCIITable::dump (  
    void )
```

**Todo** write docs

#### 4.1.3.2 parserow()

```
int ASCIITable::parserow (  
    char * mybuffer,  
    int mncols )
```

**Todo** write docs

#### 4.1.3.3 read()

```
int ASCIITable::read (  
    const FILE * inf )
```

**Todo** write docs

## 4.1.4 Field Documentation

### 4.1.4.1 buffer

```
char* ASCIIITable::buffer
```

### 4.1.4.2 bufsize

```
size_t ASCIIITable::bufsize = LMAXSIZE
```

### 4.1.4.3 c

```
int ASCIIITable::c
```

### 4.1.4.4 cc

```
int ASCIIITable::cc
```

### 4.1.4.5 characters

```
size_t ASCIIITable::characters
```

### 4.1.4.6 colcount

```
int ASCIIITable::colcount =0
```

### 4.1.4.7 cols

```
int ASCIIITable::cols
```



#### 4.1.4.8 data

```
float ASCIIITable::data[256][256]
```

#### 4.1.4.9 fbuffer

```
char* ASCIIITable::fbuffer
```

#### 4.1.4.10 fcharcount

```
int ASCIIITable::fcharcount
```

#### 4.1.4.11 ff

```
int ASCIIITable::ff =0
```

#### 4.1.4.12 field

```
char* ASCIIITable::field
```

#### 4.1.4.13 ifname

```
char* ASCIIITable::ifname =(char*)"table.asc"
```

name of the input file that can be read and saved into the [ASCII Table](#) in RAM

#### 4.1.4.14 ifp

```
FILE* ASCIIITable::ifp
```

input file object pointer

#### 4.1.4.15 mptr

```
FILE* ASCIITable::mptr
```

#### 4.1.4.16 nchar

```
int ASCIITable::nchar =0
```

#### 4.1.4.17 nline

```
int ASCIITable::nline =0
```

**Todo** check colcount / nline redundancy

#### 4.1.4.18 ofname

```
char* ASCIITable::ofname =(char*)"otable.asc"
```

name of the output file that can be written saving into the [ASCIITable](#) in RAM

#### 4.1.4.19 ptr

```
FILE* ASCIITable::ptr
```

#### 4.1.4.20 ret

```
int ASCIITable::ret
```

#### 4.1.4.21 rowcount

```
int ASCIITable::rowcount =0
```

#### 4.1.4.22 rows

```
int ASCIITable::rows
```

#### 4.1.4.23 temp

```
char ASCIITable::temp[FSIZE]
```

#### 4.1.4.24 totchars

```
int ASCIITable::totchars
```

#### 4.1.4.25 totlines

```
int ASCIITable::totlines
```

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

- [asciitable.h](#)



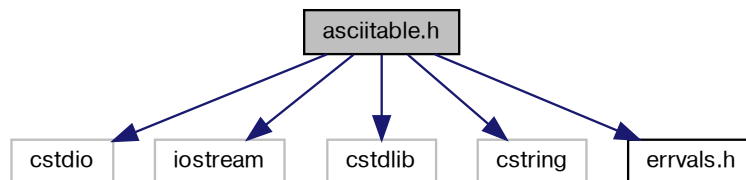
## Chapter 5

# File Documentation

### 5.1 asciitable.h File Reference

```
#include <cstdio>
#include <iostream>
#include <cstdlib>
#include <cstring>
#include "errvals.h"
```

Include dependency graph for asciitable.h:



### Data Structures

- class [ASCIITable](#)  
*implements basic input/output operations on ascii table dataset*

### Macros

- `#define LMAXSIZE 64` /\* max allowed line length \*/
- `#define FSIZE 16` /\* max allowed number of characters in a field (cell) include '\0' \*/
- `#define FMAX 16` /\* max allowed number of fields (columns) in a row \*/
- `#define RMAX 16` /\* max allowed number of records (rows) in a file \*/
- `#define RS '\n'` /\* (input) record (row) separator \*/
- `#define FS ' '` /\* (input) field (column) separator \*/
- `#define ORS '\n'` /\* output record (row) separator \*/
- `#define OFS ' '` /\* output field (column) separator \*/

### 5.1.1 Detailed Description

(C) 2021 Francesco Lazzarotto [francesco.lazzarotto@iaps.inaf.it](mailto:francesco.lazzarotto@iaps.inaf.it) This program is free software↵ : you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation, either version 3 of the License, or (at your option) any later version. This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details. You should have received a copy of the GNU General Public License along with this program. If not, see <http://www.gnu.org/licenses/>.

### 5.1.2 Macro Definition Documentation

#### 5.1.2.1 FMAX

```
#define FMAX 16 /* max allowed number of fields (columns) in a row */
```

#### 5.1.2.2 FS

```
#define FS ' ' /* (input) field (column) separator */
```

#### 5.1.2.3 FSIZE

```
#define FSIZE 16 /* max allowed number of characters in a field (cell) include '\0' */
```

#### 5.1.2.4 LMAXSIZE

```
#define LMAXSIZE 64 /* max allowed line length */
```

#### 5.1.2.5 OFS

```
#define OFS ',' /* output field (column) separator */
```

### 5.1.2.6 ORS

```
#define ORS '\n' /* output record (row) separator */
```

### 5.1.2.7 RMAX

```
#define RMAX 16 /* max allowed number of records (rows) in a file */
```

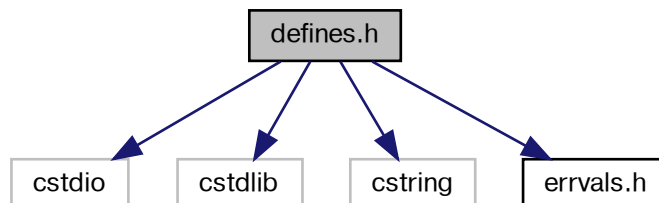
### 5.1.2.8 RS

```
#define RS '\n' /* (input) record (row) separator */
```

## 5.2 defines.h File Reference

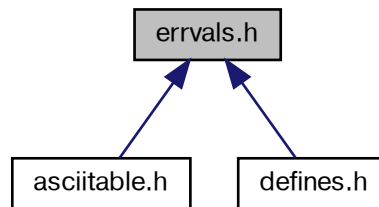
```
#include <stdio>
#include <stdlib>
#include <string>
#include "errvals.h"
```

Include dependency graph for defines.h:



## 5.3 errvals.h File Reference

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



### Macros

- `#define EX_OK 0` /\*\* successful termination \*/
- `#define EX_SYNERR 2` /\*\* syntax error \*/
- `#define EX_BASE 64` /\*\* base value for error messages \*/
- `#define EX_USAGE 64` /\*\* command line usage error \*/
- `#define EX_DATAERR 65` /\*\* data format error \*/
- `#define EX_NOINPUT 66` /\*\* cannot open input \*/
- `#define EX_NOUSER 67` /\*\* addressee unknown \*/
- `#define EX_NOHOST 68` /\*\* host name unknown \*/
- `#define EX_UNAVAILABLE 69` /\*\* service unavailable \*/
- `#define EX_SOFTWARE 70` /\*\* internal software error \*/
- `#define EX_OSERR 71` /\*\* system error (e.g., can't fork) \*/
- `#define EX_OSFILE 72` /\*\* critical OS file missing \*/
- `#define EX_CANTCREAT 73` /\*\* can't create (user) output file \*/
- `#define EX_IOERR 74` /\*\* input/output error \*/
- `#define EX_TEMPFAIL 75` /\*\* temp failure; user is invited to retry \*/
- `#define EX_PROTOCOL 76` /\*\* remote error in protocol \*/
- `#define EX_NOPERM 77` /\*\* permission denied \*/
- `#define EX_CONFIG 78` /\*\* configuration error \*/
- `#define EX_MAX 79` /\*\* maximum listed value \*/
- `#define EX_BADARGS 85` /\*\* Wrong number of arguments \*/
- `#define EX_ARGSLIMITS 86` /\*\* an argument is out of allowed limits \*/
- `#define EX_UNSUPPORTED 87` /\*\* unsupported system \*/
- `#define EX_DENIED 126` /\*\* permission denied \*/
- `#define EX_NOFILE 127` /\*\* file not present \*/
- `#define EX_SEGFAULT 139` /\*\* access to not allowed memory \*/

### Functions

- void `error_what` (int eid)  
*gives the error message in function of the error code*



### 5.3.1 Macro Definition Documentation

#### 5.3.1.1 EX\_BASE

```
#define EX__BASE 64 /** base value for error messages */
```

#### 5.3.1.2 EX\_MAX

```
#define EX__MAX 79 /** maximum listed value */
```

#### 5.3.1.3 EX\_ARGSLIMITS

```
#define EX_ARGSLIMITS 86 /** an argument is out of allowed limits */
```

#### 5.3.1.4 EX\_BADARGS

```
#define EX_BADARGS 85 /** Wrong number of arguments */
```

mendel cooper abs guide example exit codes

#### 5.3.1.5 EX\_CANTCREAT

```
#define EX_CANTCREAT 73 /** can't create (user) output file */
```

#### 5.3.1.6 EX\_CONFIG

```
#define EX_CONFIG 78 /** configuration error */
```

#### 5.3.1.7 EX\_DATAERR

```
#define EX_DATAERR 65 /** data format error */
```

#### 5.3.1.8 EX\_DENIED

```
#define EX_DENIED 126 /** permission denied */
```

system exit values

#### 5.3.1.9 EX\_IOERR

```
#define EX_IOERR 74 /** input/output error */
```

#### 5.3.1.10 EX\_NOFILE

```
#define EX_NOFILE 127 /** file not present */
```

#### 5.3.1.11 EX\_NOHOST

```
#define EX_NOHOST 68 /** host name unknown */
```

#### 5.3.1.12 EX\_NOINPUT

```
#define EX_NOINPUT 66 /** cannot open input */
```

#### 5.3.1.13 EX\_NOPERM

```
#define EX_NOPERM 77 /** permission denied */
```

#### 5.3.1.14 EX\_NOUSER

```
#define EX_NOUSER 67 /** addressee unknown */
```

#### 5.3.1.15 EX\_OK

```
#define EX_OK 0 /** successful termination */
```

#### 5.3.1.16 EX\_OSERR

```
#define EX_OSERR 71 /** system error (e.g., can't fork) */
```

#### 5.3.1.17 EX\_OSFILE

```
#define EX_OSFILE 72 /** critical OS file missing */
```

#### 5.3.1.18 EX\_PROTOCOL

```
#define EX_PROTOCOL 76 /** remote error in protocol */
```

#### 5.3.1.19 EX\_SEGFAULT

```
#define EX_SEGFAULT 139 /** access to not allowed memory */
```

#### 5.3.1.20 EX\_SOFTWARE

```
#define EX_SOFTWARE 70 /** internal software error */
```

#### 5.3.1.21 EX\_SYNERR

```
#define EX_SYNERR 2 /** syntax error */
```

#### 5.3.1.22 EX\_TEMPFAIL

```
#define EX_TEMPFAIL 75 /** temp failure; user is invited to retry */
```

#### 5.3.1.23 EX\_UNAVAILABLE

```
#define EX_UNAVAILABLE 69 /** service unavailable */
```

#### 5.3.1.24 EX\_UNSUPPORTED

```
#define EX_UNSUPPORTED 87 /** unsupported system */
```

#### 5.3.1.25 EX\_USAGE

```
#define EX_USAGE 64 /** command line usage error */
```

### 5.3.2 Function Documentation

#### 5.3.2.1 error\_what()

```
void error_what (
    int eid )
```

gives the error message in function of the error code

# Index

~ASCIItable  
ASCIItable, 9

ASCIItable, 7  
~ASCIItable, 9  
ASCIItable, 8  
buffer, 10  
bufsize, 10  
c, 10  
cc, 10  
characters, 10  
colcount, 10  
cols, 10  
data, 10  
dump, 9  
fbuffer, 11  
fcharcount, 11  
ff, 11  
field, 11  
ifname, 11  
ifp, 11  
mptr, 11  
nchar, 12  
nline, 12  
ofname, 12  
parserow, 9  
ptr, 12  
read, 9  
ret, 12  
rowcount, 12  
rows, 12  
temp, 13  
totchars, 13  
totlines, 13  
asciitable.h, 15  
FMAX, 16  
FSIZE, 16  
FS, 16  
LMAXSIZE, 16  
OFS, 16  
ORS, 16  
RMAX, 17  
RS, 17

buffer  
ASCIItable, 10

bufsize  
ASCIItable, 10

c

ASCIItable, 10

cc

ASCIItable, 10

characters

ASCIItable, 10

colcount

ASCIItable, 10

cols

ASCIItable, 10

data

ASCIItable, 10

defines.h, 17

dump

ASCIItable, 9

EX\_\_BASE

errvals.h, 19

EX\_\_MAX

errvals.h, 19

EX\_ARGSLIMITS

errvals.h, 19

EX\_BADARGS

errvals.h, 19

EX\_CANTCREAT

errvals.h, 19

EX\_CONFIG

errvals.h, 19

EX\_DATAERR

errvals.h, 19

EX\_DENIED

errvals.h, 19

EX\_IOERR

errvals.h, 20

EX\_NOFILE

errvals.h, 20

EX\_NOHOST

errvals.h, 20

EX\_NOINPUT

errvals.h, 20

EX\_NOPERM

errvals.h, 20

EX\_NOUSER

errvals.h, 20

EX\_OSERR

errvals.h, 20

EX\_OSFILE

errvals.h, 21

EX\_OK

errvals.h, 20

EX\_PROTOCOL  
     errvals.h, 21  
 EX\_SEGFAULT  
     errvals.h, 21  
 EX\_SOFTWARE  
     errvals.h, 21  
 EX\_SYNERR  
     errvals.h, 21  
 EX\_TEMPFAIL  
     errvals.h, 21  
 EX\_UNAVAILABLE  
     errvals.h, 21  
 EX\_UNSUPPORTED  
     errvals.h, 21  
 EX\_USAGE  
     errvals.h, 22  
 error\_what  
     errvals.h, 22  
 errvals.h, 18  
     EX\_\_BASE, 19  
     EX\_\_MAX, 19  
     EX\_ARGSLIMITS, 19  
     EX\_BADARGS, 19  
     EX\_CANTCREAT, 19  
     EX\_CONFIG, 19  
     EX\_DATAERR, 19  
     EX\_DENIED, 19  
     EX\_IOERR, 20  
     EX\_NOFILE, 20  
     EX\_NOHOST, 20  
     EX\_NOINPUT, 20  
     EX\_NOPERM, 20  
     EX\_NOUSER, 20  
     EX\_OSERR, 20  
     EX\_OSFILE, 21  
     EX\_OK, 20  
     EX\_PROTOCOL, 21  
     EX\_SEGFAULT, 21  
     EX\_SOFTWARE, 21  
     EX\_SYNERR, 21  
     EX\_TEMPFAIL, 21  
     EX\_UNAVAILABLE, 21  
     EX\_UNSUPPORTED, 21  
     EX\_USAGE, 22  
     error\_what, 22  
 FMAX  
     asciitable.h, 16  
 FSIZE  
     asciitable.h, 16  
 fbuffer  
     ASCIITable, 11  
 fcharcount  
     ASCIITable, 11  
 ff  
     ASCIITable, 11  
 field  
     ASCIITable, 11  
 FS  
     asciitable.h, 16  
     ifname  
         ASCIITable, 11  
     ifp  
         ASCIITable, 11  
 LMAXSIZE  
     asciitable.h, 16  
 mptr  
     ASCIITable, 11  
 nchar  
     ASCIITable, 12  
 nline  
     ASCIITable, 12  
 OFS  
     asciitable.h, 16  
 ORS  
     asciitable.h, 16  
 ofname  
     ASCIITable, 12  
 parserow  
     ASCIITable, 9  
 ptr  
     ASCIITable, 12  
 RMAX  
     asciitable.h, 17  
 read  
     ASCIITable, 9  
 ret  
     ASCIITable, 12  
 rowcount  
     ASCIITable, 12  
 rows  
     ASCIITable, 12  
 RS  
     asciitable.h, 17  
 temp  
     ASCIITable, 13  
 totchars  
     ASCIITable, 13  
 totlines  
     ASCIITable, 13