Package ‘clpAPI’

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Description

A low level interface to COIN-OR Clp (COIN Linear Program code).

Details

The package clpAPI provides access to the callable library of COIN-OR Clp from within R.

Author(s)

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Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

Examples

```r
# load package
library(clpAPI)

# preparing the model
lp <- initProbCLP()

nrows <- 5
ncols <- 8

# objective function
obj <- c(1, 0, 0, 0, 2, 0, 0, -1)

# upper and lower bounds of the rows
rlower <- c(2.5, -1000, 4, 1.8, 3)
rupper <- c(1000, 2.1, 4, 5, 15)

# upper and lower bounds of the columns
clower <- c(2.5, 0, 0, 0, 0.5, 0, 0, 0)
cupper <- c(1000, 4.1, 1, 1, 4, 1000, 1000, 4.3)

# constraint matrix
ia <- c(0, 4, 0, 1, 1, 2, 0, 3, 0, 4, 2, 3, 0, 4)
ja <- c(0, 2, 4, 6, 8, 10, 11, 12, 14)
ar <- c(3.0, 5.6, 1.0, 2.0, 1.1, 1.0, -2.0, 2.8,
       -1.0, 1.0, 1.0, -1.2, -1.0, 1.9)

# direction of optimization
```
addColsCLP

Description

Low level interface function to the COIN-OR Clp function Clp_addColumns. Consult the COIN-OR Clp documentation for more detailed information.

Usage

addColsCLP(lp, ncols, lb, ub, obj, colst, rows, val)

Arguments

- **lp**: An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.
- **ncols**: Number of columns to add.
- **lb**: Lower bounds of the new columns.
- **ub**: Upper bounds of the new columns.
- **obj**: Objective coefficients of the new columns.
- **colst**: Vector containing the starting indices of new rows (Arguments rows and val must be in column major order). The first element of colst must be 0, the last element must be length(val)+1.
- **rows**: Row indices of the non zero elements in the new columns.
- **val**: Numerical values of the new non zero elements.

Details

Interface to the C function addRows which calls the COIN-OR Clp function Clp_addRows.
addRowsCLP

Value

NULL

Author(s)

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References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

---

addRowsCLP | Add Rows
-----------|---------

Description

Low level interface function to the COIN-OR Clp function clp_addrows. Consult the COIN-OR Clp documentation for more detailed information.

Usage

addRowsCLP(lp, nrows, lb, ub, rowst, cols, val)

Arguments

- **lp**: An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.
- **nrows**: Number of rows to add.
- **lb**: Lower bounds of the new rows.
- **ub**: Upper bounds of the new rows.
- **rowst**: Vector containing the starting indices of new rows (Arguments cols and val must be in row major order). The first element of rowst must be 0, the last element must be length(val)+1.
- **cols**: Column indices of the non-zero elements in the new rows.
- **val**: Numerical values of the new non-zero elements.

Details

Interface to the C function addRows which calls the COIN-OR Clp function clp_addRows.

Value

NULL
chgColLowerCLP

Set/Change Column Lower Bounds

Description

Low level interface function to the COIN-OR Clp function `clp_chgColumnLower`. Consult the COIN-OR Clp documentation for more detailed information.

Usage

```r
cchgColLowerCLP(lp, lb)
```

Arguments

- `lp` An object of class "clpPtr" as returned by `initProbCLP`. This is basically a pointer to a COIN-OR Clp problem object.
- `lb` Numeric vector containing the lower bounds of the columns of the model.

Details

Interface to the C function `chgColLower` which calls the COIN-OR Clp function `clp_chgColumnLower`.

Value

`NULL`

Author(s)

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References

The COIN-OR Clp home page at [http://www.coin-or.org/projects/Clp.xml](http://www.coin-or.org/projects/Clp.xml)
### chgColUpperCLP

| chgColUpperCLP          | Set/Change Column Upper Bounds |

#### Description

Low level interface function to the COIN-OR Clp function clp_chgColumnUpper. Consult the COIN-OR Clp documentation for more detailed information.

#### Usage

```r
chgColUpperCLP(lp, ub)
```

#### Arguments

- **lp**: An object of class "clpPtr" as returned by `initProbCLP`. This is basically a pointer to a COIN-OR Clp problem object.
- **ub**: Numeric vector containing the upper bounds of the columns of the model.

#### Details

Interface to the C function `chgColUpper` which calls the COIN-OR Clp function `Clp_chgColumnUpper`.

#### Value

NULL

#### Author(s)

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

#### References

The COIN-OR Clp home page at [http://www.coin-or.org/projects/Clp.xml](http://www.coin-or.org/projects/Clp.xml)

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### chgObjCoefsCLP

| chgObjCoefsCLP          | Set/Change Objective Coefficients |

#### Description

Low level interface function to the COIN-OR Clp function `clp_chgObjCoefficients`. Consult the COIN-OR Clp documentation for more detailed information.

#### Usage

```r
chgObjCoefsCLP(lp, objCoef)
```
Arguments
lp An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.
objCoef Numeric vector containing the objective coefficients of the model.

Details
Interface to the C function chgObjCoefs which calls the COIN-OR Clp function Clp_chgObjCoefficients.

Value
NULL

Author(s)
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References
The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

Description
Low level interface function to the COIN-OR Clp function Clp_chgRowLower. Consult the COIN-OR Clp documentation for more detailed information.

Usage
chgRowLowerCLP(lp, rlb)

Arguments
lp An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.
rlb Numeric vector containing the lower bounds of the rows of the model.

Details
Interface to the C function chgColLower which calls the COIN-OR Clp function Clp_chgRowLower.

Value
NULL
chgRowUpperCLP

Author(s)

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References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

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cchgRowUpperCLP  Set/Change Row Upper Bounds
------------------------

Description

Low level interface function to the COIN-OR Clp function Clp_chgRowUpper. Consult the COIN-OR Clp documentation for more detailed information.

Usage

chgRowUpperCLP(lp, rub)

Arguments

lp  An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

rub  Numeric vector containing the upper bounds of the rows of the model.

Details

Interface to the C function chgRowUpper which calls the COIN-OR Clp function Clp_chgRowUpper.

Value

NULL

Author(s)

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Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml
Description

Structure of the class "clpPtr". Objects of that class are used to hold pointers to C structures used by COIN-OR Clp.

Objects from the Class

Objects can be created by calls of the form
test <- initProbCLP().

Slots

- clpPtrType: Object of class "character" giving the pointer type.
- clpPointer: Object of class "externalptr" containing the pointer to a C structure.

Methods

- isCLPpointer signature(object = "clpPtr"): returns TRUE if clpPointer(object) is a pointer to a COIN-OR Clp problem object, otherwise FALSE.
- isNULLpointerCLP signature(object = "clpPtr"): returns TRUE if clpPointer(object) is a NULL pointer, otherwise FALSE.
- clpPointer signature(object = "clpPtr"): gets the clpPointer slot.
- clpPtrType signature(object = "clpPtr"): gets the clpPtrType slot.
- clpPtrType<- signature(object = "clpPtr"): sets the clpPtrType slot.

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References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

See Also

initProbCLP

Examples

showClass("clpPtr")
Copy Column and Row Names in the Model

Description

Low level interface function to the COIN-OR Clp function Clp_copyNames. Consult the COIN-OR Clp documentation for more detailed information.

Usage

```r
copyNamesCLP(lp, cnames, rnames)
```

Arguments

- **lp**: An object of class "clpPtr" as returned by `initProbCLP`. This is basically a pointer to a COIN-OR Clp problem object.
- **cnames**: Character vector, containing the column names, must not be longer than the number of columns in the model.
- **rnames**: Character vector, containing the row names, must not be longer than the number of rows in the model.

Details

Interface to the C function `copyNames` which calls the COIN-OR Clp function Clp_copyNames.

Value

NULL

Author(s)

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References

The COIN-OR Clp home page at `http://www.coin-or.org/projects/Clp.xml`
Delete Columns in the Model

Description

Low level interface function to the COIN-OR Clp function Clp_deleteColumns. Consult the COIN-OR Clp documentation for more detailed information.

Usage

delColsCLP(lp, num, j)

Arguments

lp       An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.
num      Number of columns to delete.
j        Integer vector, containing the indices of columns to delete (the first column has index 0).

Details

Interface to the C function delCols which calls the COIN-OR Clp function Clp_deleteColumns.

Value

NULL

Author(s)

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References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml
**delProbCLP**  
*Delete Problem Object*

**Description**
Low level interface function to the COIN-OR Clp function `clp_deleteModel`. Consult the COIN-OR Clp documentation for more detailed information.

**Usage**
```
delProbCLP(lp)
```

**Arguments**
- `lp` An object of class "clpPtr" as returned by `initProbCLP`. This is basically a pointer to a COIN-OR Clp problem object.

**Details**
Interface to the C function `delProb` which calls the COIN-OR Clp function `clp_deleteModel`.

**Value**
NULL

**Author(s)**
Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

**References**
The COIN-OR Clp home page at [http://www.coin-or.org/projects/Clp.xml](http://www.coin-or.org/projects/Clp.xml)

---

**delRowsCLP**  
*Delete Rows in the Model*

**Description**
Low level interface function to the COIN-OR Clp function `clp_deleteRows`. Consult the COIN-OR Clp documentation for more detailed information.

**Usage**
```
delRowsCLP(lp, num, i)
```
**Arguments**

lp
An object of class "clpPtr" as returned by `initProbCLP`. This is basically a pointer to a COIN-OR Clp problem object.

num
Number of rows to delete.

i
Integer vector, containing the indices of rows to delete (the first row has index 0).

**Details**

Interface to the C function `delRows` which calls the COIN-OR Clp function `clp_deleteRows`.

**Value**

NULL

**Author(s)**

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
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**References**

The COIN-OR Clp home page at [http://www.coin-or.org/projects/Clp.xml](http://www.coin-or.org/projects/Clp.xml)

---

**dropNamesCLP**  
*Drop Names in the Model*

**Description**

Low level interface function to the COIN-OR Clp function `Clp_dropNames`. Consult the COIN-OR Clp documentation for more detailed information.

**Usage**

`dropNamesCLP(lp)`

**Arguments**

lp
An object of class "clpPtr" as returned by `initProbCLP`. This is basically a pointer to a COIN-OR Clp problem object.

**Details**

Interface to the C function `dropNames` which calls the COIN-OR Clp function `Clp_dropNames`.

**Value**

NULL
dualCLP

Author(s)
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References
The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

dualCLP

Solve LP Problem with the Dual Simplex Method

Description
Low level interface function to the COIN-OR Clp function Clp_dual. Consult the COIN-OR Clp documentation for more detailed information.

Usage
dualCLP(lp, ifValP = 0)

Arguments
lp An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.
ifValP An integer value.

Details
Interface to the C function dual which calls the COIN-OR Clp function Clp_dual.

Value
A return code.

Author(s)
Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
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References
The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml
getColDualCLP

Retrieve all Column Dual Values

Description
Low level interface function to the COIN-OR Clp function Clp_dualColumnSolution. Consult the COIN-OR Clp documentation for more detailed information.

Usage
getColDualCLP(lp)

Arguments
lp
An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details
Interface to the C function getColDual which calls the COIN-OR Clp functions Clp_numberColumns and Clp_dualColumnSolution.

Value
Returns all dual values of the structural variables as a numeric vector.

Author(s)
Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References
The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

getColLowerCLP

Retrieve Column Lower Bound

Description
Low level interface function to the COIN-OR Clp function Clp_columnLower. Consult the COIN-OR Clp documentation for more detailed information.

Usage
getColLowerCLP(lp)
getColPrimCLP

Arguments

lp

An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details

Interface to the C function getColLower which calls the COIN-OR Clp functions clp_numberColumns and Clp_columnLower.

Value

The lower bounds of the models columns (the corresponding structural variables) are returned.

Author(s)

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

Description

Low level interface function to the COIN-OR Clp function Clp_primalColumnsSolution. Consult the COIN-OR Clp documentation for more detailed information.

Usage

getColPrimCLP(lp)

Arguments

lp

An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details

Interface to the C function getColPrim which calls the COIN-OR Clp functions clp_numberColumns and Clp_primalColumnsSolution.

Value

Returns all primal values of the stuctural variables as a numeric vector.
getColUpperCLP

Author(s)
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References
The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

getColUpperCLP
Retrieve Column Upper Bounds

Description
Low level interface function to the COIN-OR Clp function clp_columnUpper. Consult the COIN-OR Clp documentation for more detailed information.

Usage
getColUpperCLP(lp)

Arguments
lp An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details
Interface to the C function getColLower which calls the COIN-OR Clp functions Clp_numberColumns and Clp_columnUpper.

Value
The upper bounds of the models columns (the corresponding structural variables) are returned.

Author(s)
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References
The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml
getIndCLP

Retrieve Row Indices of the Non Zero Elements in the Constraint Matrix

Description

Low level interface function to the COIN-OR Clp function clp_getIndices. Consult the COIN-OR Clp documentation for more detailed information.

Usage

getIndCLP(lp)

Arguments

lp An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details

Interface to the C function getInd which calls the COIN-OR Clp functions Clp_numberColumns and Clp_getIndices.

Value

An integer vector containing the row Indices of the non zero elements in the constraint matrix.

Author(s)

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Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml
**getLogLevelCLP**  
Retrieves the Log Level Flag

**Description**

Low level interface function to the COIN-OR Clp function `Clp_logLevel`. Consult the COIN-OR Clp documentation for more detailed information.

**Usage**

```
getLogLevelCLP(lp)
```

**Arguments**

- `lp`  
  An object of class "clpPtr" as returned by `initProbCLP`. This is basically a pointer to a COIN-OR Clp problem object.

**Details**

Interface to the C function `getLogLevel` which calls the COIN-OR Clp function `Clp_logLevel`.

**Value**

Returns the log level flag: 0: nothing, 1: just final, 2: just factorizations, 3: as 2 plus a bit more, 4: verbose.

**Author(s)**

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>

Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

**References**

The COIN-OR Clp home page at [http://www.coin-or.org/projects/Clp.xml](http://www.coin-or.org/projects/Clp.xml)

**getNnzCLP**  
Retrieve the Non Zero Elements of the Constraint Matrix in Column Major Order.

**Description**

Low level interface function to the COIN-OR Clp function `Clp_getElements`. Consult the COIN-OR Clp documentation for more detailed information.
getNnzCLP

Usage

getNnzCLP(lp)

Arguments

lp An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details

Interface to the C function getNnz which calls the COIN-OR Clp functions Clp_getNumElements and Clp_getElements.

Value

A numeric vector containing the non zero elements of the constraint matrix in column major order.

Author(s)

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

getNumColsCLP

Retrieve the Current Number of Columns in the Model

Description

Low level interface function to the COIN-OR Clp function Clp_numberColumns. Consult the COIN-OR Clp documentation for more detailed information.

Usage

getNumColsCLP(lp)

Arguments

lp An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details

Interface to the C function getNumCols which calls the COIN-OR Clp function Clp_numberColumns.
**Value**

The current number of columns in the model.

**Author(s)**

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

**References**

The COIN-OR Clp home page at [http://www.coin-or.org/projects/Clp.xml](http://www.coin-or.org/projects/Clp.xml)

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**getDescriptionCLP**

Retrieve the Current Number of Non Zero Elements in the Model

---

**Description**

Low level interface function to the COIN-OR Clp function `clp_getnumelements`. Consult the COIN-OR Clp documentation for more detailed information.

**Usage**

`getNumNnzCLP(lp)`

**Arguments**

- `lp` An object of class "clpPtr" as returned by `initProbCLP`. This is basically a pointer to a COIN-OR Clp problem object.

**Details**

Interface to the C function `getNumNnz` which calls the COIN-OR Clp function `clp_getNumElements`.

**Value**

Returns the current number of non zero elements in the model.

**Author(s)**

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

**References**

The COIN-OR Clp home page at [http://www.coin-or.org/projects/Clp.xml](http://www.coin-or.org/projects/Clp.xml)
getNumRowsCLP

Retrieve the Current Number of Rows in the Model

Description

Low level interface function to the COIN-OR Clp function clp_numberRows. Consult the COIN-OR Clp documentation for more detailed information.

Usage

getNumRowsCLP(lp)

Arguments

lp 
An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details

Interface to the C function getNumRows which calls the COIN-OR Clp function clp_numberRows.

Value

The current number of rows in the model.

Author(s)

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

getObjCoefsCLP

Retrieve Objective Coefficients

Description

Low level interface function to the COIN-OR Clp function clp_objective. Consult the COIN-OR Clp documentation for more detailed information.

Usage

getObjCoefsCLP(lp)
getObjDirCLP

Arguments

lp

An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details

Interface to the C function getObjCoefs which calls the COIN-OR Clp functions Clp_numberColumns and Clp_objective.

Value

A numeric vector containing the objective coefficients.

Author(s)

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

getObjDirCLP 

Retrieve Optimization Direction Flag

Description

Low level interface function to the COIN-OR Clp function Clp_optimizationDirection. Consult the COIN-OR Clp documentation for more detailed information.

Usage

getObjDirCLP(lp)

Arguments

lp

An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details

Interface to the C function getObjDir which calls the COIN-OR Clp function Clp_optimizationDirection.

Value

Returns the optimization direction flag: 1: minimize, -1: maximize, 0: ignore.
getObjValCLP

Author(s)

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

getObjValCLP Retrieve the Value of the Objective Function After Optimization

Description

Low level interface function to the COIN-OR Clp function Clp_objectiveValue. Consult the
COIN-OR Clp documentation for more detailed information.

Usage

getObjValCLP(lp)

Arguments

lp An object of class "clpPtr" as returned by initProbCLP. This is basically a
pointer to a COIN-OR Clp problem object.

Details

Interface to the C function getObjVal which calls the COIN-OR Clp function Clp_objectiveValue.

Value

Returns the value of the objective function after optimization.

Author(s)

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml
getRowDualCLP | Retrieve all Row Dual Values

**Description**

Low level interface function to the COIN-OR Clp function Clp_dualRowSolution. Consult the COIN-OR Clp documentation for more detailed information.

**Usage**

getRowDualCLP(lp)

**Arguments**

lp  
An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

**Details**

Interface to the C function getRowDual which calls the COIN-OR Clp functions Clp_numberRows and Clp_dualRowSolution.

**Value**

Returns all dual values of the auxiliary variables as a numeric vector.

**Author(s)**

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>

Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

**References**

The COIN-OR Clp home page at [http://www.coin-or.org/projects/Clp.xml](http://www.coin-or.org/projects/Clp.xml)

getRowLowerCLP | Retrieve Row Lower Bound

**Description**

Low level interface function to the COIN-OR Clp function Clp_rowLower. Consult the COIN-OR Clp documentation for more detailed information.

**Usage**

getRowLowerCLP(lp)
getRowPrimCLP

Arguments
lp
An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details
Interface to the C function getRowLower which calls the COIN-OR Clp functions Clp_numberRows and Clp_rowLower.

Value
The lower bounds of the models rows are returned.

Author(s)
Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References
The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

ggetRowPrimCLP Retrieve all Row Primal Values

Description
Low level interface function to the COIN-OR Clp function Clp_primalRowSolution. Consult the COIN-OR Clp documentation for more detailed information.

Usage
ggetRowPrimCLP(lp)

Arguments
lp
An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details
Interface to the C function getRowPrim which calls the COIN-OR Clp functions Clp_numberRows and Clp_primalRowSolution.

Value
Returns all primal values of the auxiliary variables as a numeric vector.
Author(s)
Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References
The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

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**getRowUpperCLP**  
*Retrieve Row Upper Bound*

Description
Low level interface function to the COIN-OR Clp function clp_rowupper. Consult the COIN-OR Clp documentation for more detailed information.

Usage
getRowUpperCLP(lp)

Arguments
lp  
An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details
Interface to the C function getRowUpper which calls the COIN-OR Clp functions Clp_numberRows and Clp_rowUpper.

Value
The upper bounds of the models rows are returned.

Author(s)
Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References
The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml
**getScaleFlagCLP**

*Retrieve the Scale Flag*

**Description**

Low level interface function to the COIN-OR Clp function clp_scalingFlag. Consult the COIN-OR Clp documentation for more detailed information.

**Usage**

getScaleFlagCLP(lp)

**Arguments**

- **lp**
  
  An object of class “clpPtr” as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

**Details**

Interface to the C function getScaleFlag which calls the COIN-OR Clp function clp_scalingFlag.

**Value**

Returns the scaling flag: 0: off, 1: equilibrium, 2: geometric, 3: auto, 4: dynamic (later - maybe not implemented in CLP?).

**Author(s)**

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

**References**

The COIN-OR Clp home page at [http://www.coin-or.org/projects/Clp.xml](http://www.coin-or.org/projects/Clp.xml)

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**getSolStatusCLP**

*Retrieve the Solution Status*

**Description**

Low level interface function to the COIN-OR Clp function clp_status. Consult the COIN-OR Clp documentation for more detailed information.

**Usage**

getSolStatusCLP(lp)
getVecLenCLP

Retrieve the Number of Non Zero Elements per Column

Description

Low level interface function to the COIN-OR Clp function Clp_getVectorLengths. Consult the COIN-OR Clp documentation for more detailed information.

Usage

getVecLenCLP(lp)

Arguments

lp An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details

Interface to the C function getSolStatus which calls the COIN-OR Clp function Clp_status.

Value

The solution status: 0: optimal, 1: primal infeasible, 2: dual infeasible, 3: stopped on iterations etc, 4: stopped due to errors.

Author(s)

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml
getVecStartCLP

Author(s)
Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References
The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

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getVecStartCLP Retrieve Column Starts in Constraint Matrix

Description
Low level interface function to the COIN-OR Clp function Clp_getVectorStarts. Consult the COIN-OR Clp documentation for more detailed information.

Usage
getVecStartCLP(lp)

Arguments
lp An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details
Interface to the C function getVecStart which calls the COIN-OR Clp functions Clp_numberColumns and Clp_getVectorStarts.

Value
An integer vector containing the column starts in the constraint matrix.

Author(s)
Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References
The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml
idiotCLP  
_Solve LP Problem with the idiot Code_

**Description**

Low level interface function to the COIN-OR Clp function `clp_idiot`. Consult the COIN-OR Clp documentation for more detailed information.

**Usage**

```
idiotCLP(lp, thd = 0)
```

**Arguments**

- `lp` An object of class "clpPtr" as returned by `initProbCLP`. This is basically a pointer to a COIN-OR Clp problem object.
- `thd` An integer value.

**Details**

Interface to the C function `idiot` which calls the COIN-OR Clp function `clp_idiot`.

**Value**

NULL

**Author(s)**

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

**References**

The COIN-OR Clp home page at [http://www.coin-or.org/projects/Clp.xml](http://www.coin-or.org/projects/Clp.xml)

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**initProbCLP**  
_Create a COIN-OR Clp Problem Object_

**Description**

Low level interface function to the COIN-OR Clp function `clp_newModel`. Consult the COIN-OR Clp documentation for more detailed information.

**Usage**

```
initProbCLP(ptrtype = "clp_prob")
```
lengthNamesCLP

Arguments

ptrtype A name for the pointer to a COIN-OR Clp problem object.

Details

Interface to the C function initProb which calls the COIN-OR Clp function Clp_newModel.

Value

An instance of class "clpPtr".

Author(s)

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

lengthNamesCLP Length of the Names in the Model

Description

Low level interface function to the COIN-OR Clp function Clp_lengthNames. Consult the COIN-OR Clp documentation for more detailed information.

Usage

lengthNamesCLP(lp)

Arguments

lp An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details

Interface to the C function lengthNames which calls the COIN-OR Clp function Clp_lengthNames.

Value

Number of characters of the longest name in the Model.
loadMatrixCLP

Author(s)
Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References
The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

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Load Constraint Matrix

Description
Low level interface function to the COIN-OR Clp function Clp_loadProblem. Consult the COIN-OR Clp documentation for more detailed information.

Usage
loadMatrixCLP(lp, ncols, nrows, ia, ja, ra)

Arguments

`lp` An object of class "clpPtr" as returned by `initProbCLP`. This is basically a pointer to a COIN-OR Clp problem object.

`ncols` Number of Columns.

`nrows` Number of Rows.

`ia` Row indices in the constraint matrix.

`ja` Column starts in constraint matrix.

`ra` Non zero elements of the constraint matrix.

Details
Interface to the C function `loadMatrix` which calls the COIN-OR Clp function Clp_loadProblem.

Value
NULL

Author(s)
Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References
The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml
Description

Low level interface function to the COIN-OR Clp function Clp_loadProblem. Consult the COIN-OR Clp documentation for more detailed information.

Usage

```c
loadProblemCLP(lp, ncols, nrows, ia, ja, ra,
    lb = NULL, ub = NULL, obj_coef = NULL,
    rlb = NULL, rub = NULL)
```

Arguments

- **lp**: An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.
- **ncols**: Number of Columns.
- **nrows**: Number of Rows.
- **ia**: Row indices in the constraint matrix.
- **ja**: Column starts in constraint matrix.
- **ra**: Non zero elements of the constraint matrix.
- **lb**: Column lower bounds.
- **ub**: Column upper bounds.
- **obj_coef**: Objective coefficients.
- **rlb**: Row lower bounds.
- **rub**: Row upper bounds.

Details

Interface to the C function loadProblem which calls the COIN-OR Clp function Clp_loadProblem.

Value

NULL

Author(s)

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at [http://www.coin-or.org/projects/Clp.xml](http://www.coin-or.org/projects/Clp.xml)
primalCLP \hspace{2cm} \textit{Solve LP Problem with the Primal Simplex Method}

\textbf{Description}

Low level interface function to the COIN-OR Clp function \texttt{Clp\_primal}. Consult the COIN-OR Clp documentation for more detailed information.

\textbf{Usage}

\texttt{primalCLP(lp, ifValP = 0)}

\textbf{Arguments}

- \texttt{lp} An object of class \texttt{"clpPtr"} as returned by \texttt{initProbCLP}. This is basically a pointer to a COIN-OR Clp problem object.
- \texttt{ifValP} An integer value.

\textbf{Details}

Interface to the C function \texttt{primal} which calls the COIN-OR Clp function \texttt{Clp\_primal}.

\textbf{Value}

A return code.

\textbf{Author(s)}

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

\textbf{References}

The COIN-OR Clp home page at \url{http://www.coin-or.org/projects/Clp.xml}

\textbf{printModelCLP} \hspace{2cm} \textit{Print the Model to STDOUT}

\textbf{Description}

Low level interface function to the COIN-OR Clp function \texttt{Clp\_printModel}. Consult the COIN-OR Clp documentation for more detailed information.

\textbf{Usage}

\texttt{printModelCLP(lp, prefix = "CLPmodel")}
probNameCLP

Arguments

lp  An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.
prefix  A character string containing a name for the model.

Details
Interface to the C function printModel which calls the COIN-OR Clp function Clp_printModel.

Value
NULL

Author(s)
Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References
The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

probNameCLP  Set Problem Name

Description
Low level interface function to the COIN-OR Clp function Clp_setProblemName. Consult the COIN-OR Clp documentation for more detailed information.

Usage
probNameCLP(lp, pname)

Arguments
lp  An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.
pname  A single character string containing the problem name.

Details
Interface to the C function probName which calls the COIN-OR Clp function Clp_setProblemName.

Value
NULL
Author(s)
Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References
The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

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readMPSCLP  Read Problem in (Free) MPS Format

Description
Low level interface function to the COIN-OR Clp function clp_readmps. Consult the COIN-OR Clp documentation for more detailed information.

Usage
readMPSCLP(lp, fname, keepNames = TRUE, ignoreErrors = FALSE)

Arguments

lp  An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.
fname  A filename.
keepNames  Boolean, keep variable names.
ignoreErrors  If set to TRUE, errors will be ignored.

Details
Interface to the C function readMPS which calls the COIN-OR Clp function Clp_readMps.

Value
Returns zero on success, otherwise non zero.

Author(s)
Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References
The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml
Description

Low level interface function to the COIN-OR Clp function `clp_resize`. Consult the COIN-OR Clp documentation for more detailed information.

Usage

```
resizeCLP(lp, nrows, ncols)
```

Arguments

- `lp`: An object of class "clpPtr" as returned by `initProbCLP`. This is basically a pointer to a COIN-OR Clp problem object.
- `nrows`: Number of rows.
- `ncols`: Number of columns.

Details

Interface to the C function `resize` which calls the COIN-OR Clp function `clp_resize`.

The function `resize` can produce a larger model. If the current number of rows and columns is `n` and `m` respectively and you set `nrows` to `i` and `ncols` to `j`, the new number of rows and columns will be `i` and `j`. It is not possible to scale down the model. In order to delete rows or columns, use `delRowsCLP` or `delColsCLP`.

Value

`NULL`

Author(s)

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at [http://www.coin-or.org/projects/Clp.xml](http://www.coin-or.org/projects/Clp.xml)

See Also

`delRowsCLP` and `delColsCLP`. 
restoreModelCLP  

 Restore model from file 

Description

Low level interface function to the COIN-OR Clp function Clp_restoreModel. Consult the COIN-OR Clp documentation for more detailed information.

Usage

`restoreModelCLP(lp, fname)`

Arguments

- `lp`  
  An object of class "clpPtr" as returned by `initProbCLP`. This is basically a pointer to a COIN-OR Clp problem object.
- `fname`  
  A filename.

Details

Interface to the C function `restoreModel` which calls the COIN-OR Clp function `Clp_restoreModel`.

Value

Returns zero on success, otherwise non zero.

Author(s)

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at [http://www.coin-or.org/projects/Clp.xml](http://www.coin-or.org/projects/Clp.xml)

return_codeCLP  

 Translates a COIN-OR Clp Return Code into a Human Readable String 

Description

Translates a COIN-OR Clp return code into a human readable string.

Usage

`return_codeCLP(code)`
saveModelCLP

Arguments
  code  Return code from COIN-OR Clp.

Value
  A character string associated with the COIN-OR Clp return code.

Author(s)
  Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
  Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References
  The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

saveModelCLP  Save model to file

Description
  Low level interface function to the COIN-OR Clp function clp_saveModel. Consult the COIN-OR Clp documentation for more detailed information.

Usage
  saveModelCLP(lp, fname)

Arguments
  lp  An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.
  fname  A filename.

Details
  Interface to the C function saveModel which calls the COIN-OR Clp function clp_saveModel.

Value
  Returns zero on success, otherwise non zero.

Author(s)
  Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
  Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>
scaleModelCLP

Set/Unset the Scaling Flag (Method)

Description

Low level interface function to the COIN-OR Clp function clp_scaling. Consult the COIN-OR Clp documentation for more detailed information.

Usage

scaleModelCLP(lp, mode)

Arguments

lp An object of class “clpPtr” as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

mode Scaling flag: 0: off, 1: equilibrium, 2: geometric, 3: auto, 4: dynamic (later - maybe not implemented in CLP?).

Details

Interface to the C function scaleModel which calls the COIN-OR Clp function clp_scaling.

Value

NULL

Author(s)

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>

Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml
setLogLevelCLP

**Set the Amount of Output to STDOUT**

**Description**

Low level interface function to the COIN-OR Clp function Clp_setLogLevel. Consult the COIN-OR Clp documentation for more detailed information.

**Usage**

```c
setLogLevelCLP(lp, amount)
```

**Arguments**

- **lp**
  
  An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

- **amount**

  Log level flag: 0: nothing, 1: just final, 2: just factorizations, 3: as 2 plus a bit more, 4: verbose.

**Details**

Interface to the C function setLogLevel, which calls the COIN-OR Clp function Clp_setLogLevel.

**Value**

NULL

**Author(s)**

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>

Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

**References**

The COIN-OR Clp home page at [http://www.coin-or.org/projects/Clp.xml](http://www.coin-or.org/projects/Clp.xml)
setObjDirCLP  
*Set/Change Optimization Direction Flag*

**Description**

Low level interface function to the COIN-OR Clp function `Clp_setOptimizationDirection`. Consult the COIN-OR Clp documentation for more detailed information.

**Usage**

```c
setObjDirCLP(lp, lpdire)
```

**Arguments**

- **lp**: An object of class "clpPtr" as returned by `initProbCLP`. This is basically a pointer to a COIN-OR Clp problem object.
- **lpdir**: Optimization direction flag: 1: minimize, -1: maximize, 0: ignore.

**Details**

Interface to the C function `setObjDir` which calls the COIN-OR Clp function `Clp_setOptimizationDirection`.

**Value**

NULL

**Author(s)**

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>

Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

**References**

The COIN-OR Clp home page at [http://www.coin-or.org/projects/Clp.xml](http://www.coin-or.org/projects/Clp.xml)

---

solveInitialBarrierCLP  
*Solve LP Problem with the Initial Barrier Method*

**Description**

Low level interface function to the COIN-OR Clp function `Clp_initialBarrierSolve`. Consult the COIN-OR Clp documentation for more detailed information.
Usage

solveInitialBarrierCLP(lp)

Arguments

lp  An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details

Interface to the C function solveInitialBarrier which calls the COIN-OR Clp function Clp_initialBarrierSolve.

Value

A return code.

Author(s)

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

---

**solveInitialBarrierNoCrossCLP**

*Solve LP Problem with the Initial Barrier Method (no Crossover)*

Description

Low level interface function to the COIN-OR Clp function Clp_initialBarrierNoCrossSolve. Consult the COIN-OR Clp documentation for more detailed information.

Usage

solveInitialBarrierNoCrossCLP(lp)

Arguments

lp  An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details

Interface to the C function solveInitialBarrierNoCross which calls the COIN-OR Clp function Clp_initialBarrierNoCrossSolve.
solveInitialCLP

Value

A return code.

Author(s)

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

solveInitialCLP  Solve LP Problem with a General Solve Algorithm

Description

Low level interface function to the COIN-OR Clp function Clp_initialSolve. Consult the COIN-OR Clp documentation for more detailed information.

Usage

solveInitialCLP(lp)

Arguments

lp  An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details

Interface to the C function solveInitial which calls the COIN-OR Clp function Clp_initialSolve.

Value

A return code.

Author(s)

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml
solveInitialDualCLP  Solve LP Problem with the Initial Dual Simplex Method

Description

Low level interface function to the COIN-OR Clp function Clp_initialDualSolve. Consult the COIN-OR Clp documentation for more detailed information.

Usage

solveInitialDualCLP(lp)

Arguments

lp  An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details

Interface to the C function solveInitialDual which calls the COIN-OR Clp function Clp_initialDualSolve.

Value

A return code.

Author(s)

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

solveInitialPrimalCLP  Solve LP Problem with the Initial Primal Simplex Method

Description

Low level interface function to the COIN-OR Clp function Clp_initialPrimalSolve. Consult the COIN-OR Clp documentation for more detailed information.

Usage

solveInitialPrimalCLP(lp)
status_codeCLP

Arguments

lp          An object of class "clpPtr" as returned by initProbCLP. This is basically a pointer to a COIN-OR Clp problem object.

Details

Interface to the C function solveInitialPrimal which calls the COIN-OR Clp function Clp_initialPrimalSolve.

Value

A return code.

Author(s)

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml

---

status_codeCLP     Translates a COIN-OR Clp Status Value into a Human Readable String

Description

Translates a COIN-OR Clp status value into a human readable string.

Usage

status_codeCLP(code)

Arguments

code     Status code from COIN-OR Clp.

Value

A character string associated with the COIN-OR Clp status code.

Author(s)

Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References

The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml
Determine COIN-OR Clp Callable Library Version

Description
Low level interface function to the COIN-OR Clp constant CLP_VERSION. Consult the COIN-OR Clp documentation for more detailed information.

Usage
versionCLP()

Details
Interface to the C function version which returns the COIN-OR Clp version number.

Value
Returns a single character value containing the COIN-OR Clp version number.

Author(s)
Gabriel Gelius-Dietrich <geliudie@uni-duesseldorf.de>
Maintainer: Claus Jonathan Fritzemeier <clausjonathan.fritzemeier@uni-duesseldorf.de>

References
The COIN-OR Clp home page at http://www.coin-or.org/projects/Clp.xml
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