Introduction to C++ for Financial Engineers

1.0

Generated by Doxygen 1.8.16

Chapter 1

Hierarchical Index

1.1 Class Hierarchy

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

Chapter 2

Class Index

2.1 Class List

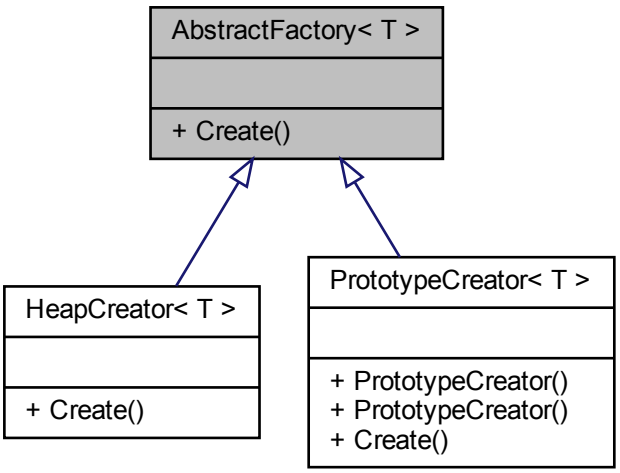
Here are the classes, structs, unions and interfaces with brief descriptions:

Chapter 3

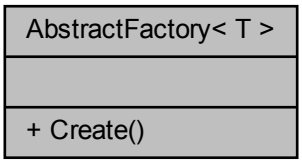
Class Documentation

3.1 AbstractFactory< T > Class Template Reference

Inheritance diagram for AbstractFactory< T >:



Collaboration diagram for AbstractFactory< T >:



Public Member Functions

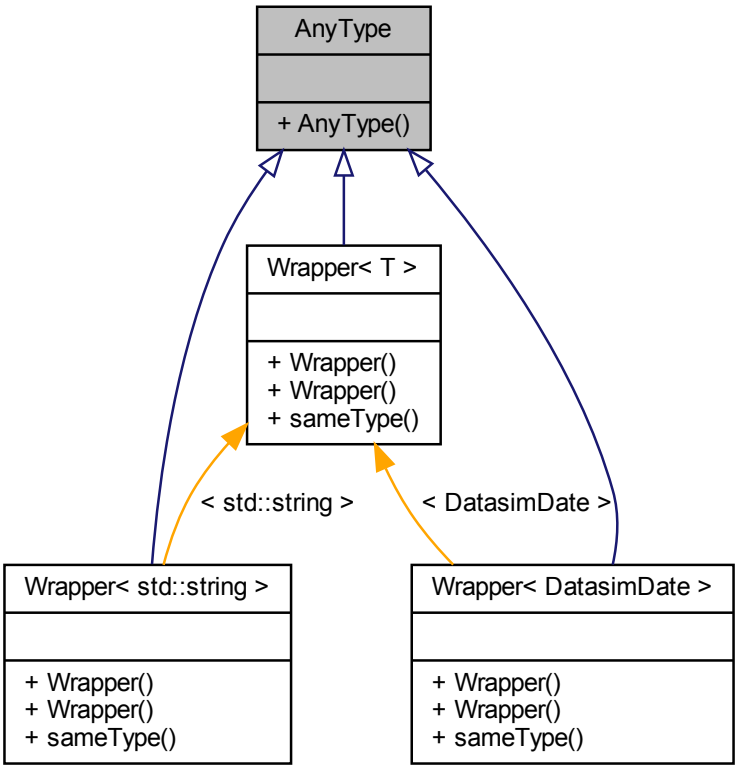
- virtual T * **Create** ()=0

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

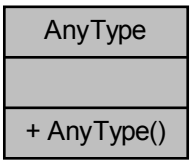
- src/GenericCreator.cc

3.2 AnyType Class Reference

Inheritance diagram for AnyType:



Collaboration diagram for AnyType:

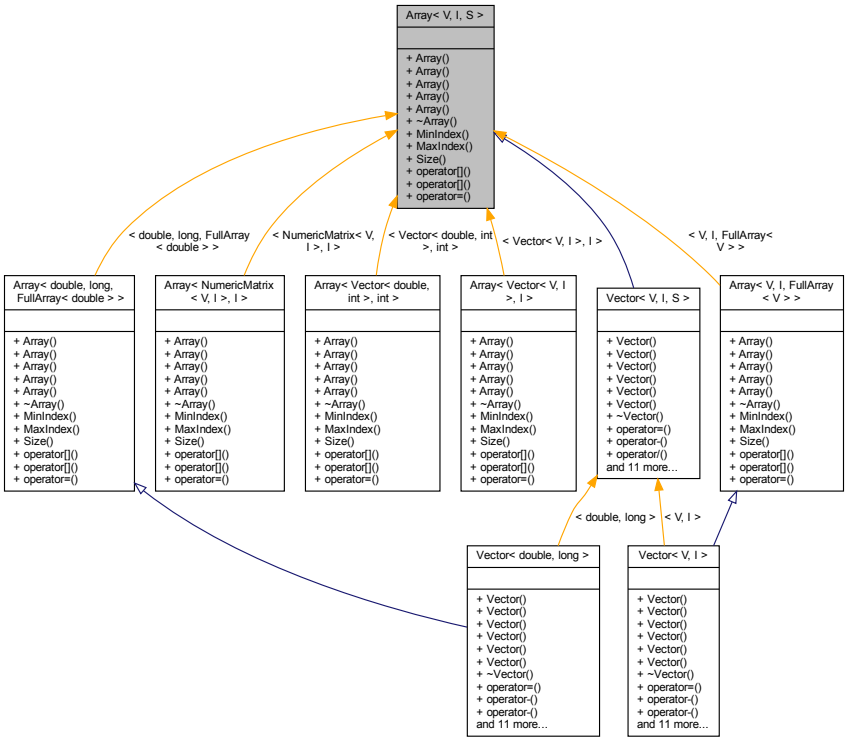


The documentation for this class was generated from the following file:

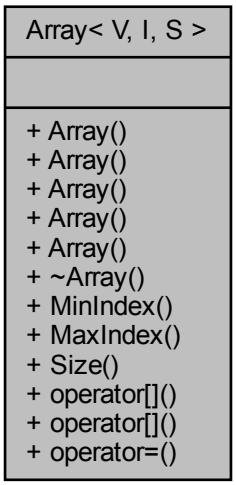
- src/Wrapper.cc

3.3 Array< V, I, S > Class Template Reference

Inheritance diagram for Array< V, I, S >:



Collaboration diagram for Array< V, I, S >:



Public Member Functions

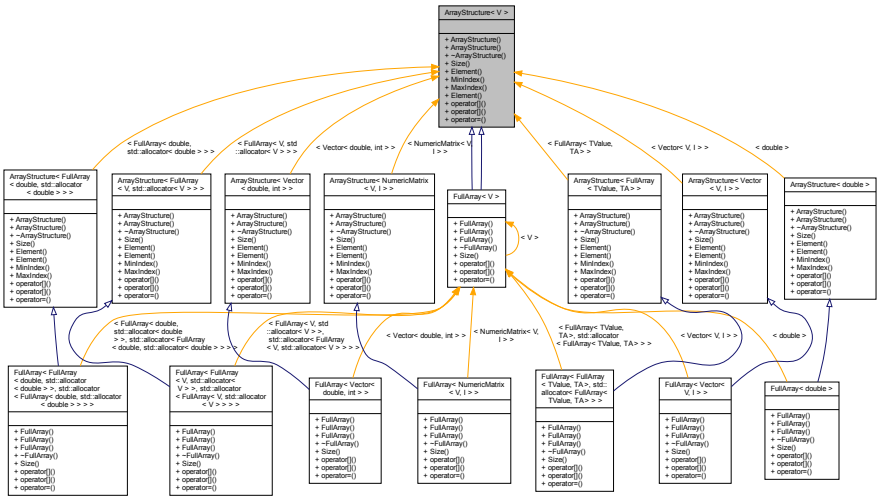
- **Array** (I size)
- **Array** (I size, I start)
- **Array** (I size, I start, const V &value)
- **Array** (const Array< V, I, S > &source)
- I **MinIndex** () const
- I **MaxIndex** () const
- I **Size** () const
- virtual V & **operator[ ]** (I index)
- virtual const V & **operator[ ]** (I index) const
- Array< V, I, S > & **operator=** (const Array< V, I, S > &source)

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

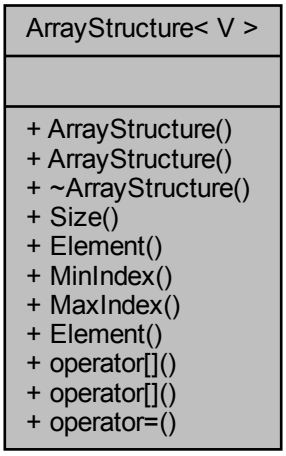
- include/duffy/Array.hh
- src/Array.cc

3.4 ArrayStructure< V > Class Template Reference

Inheritance diagram for ArrayStructure< V >:



Collaboration diagram for ArrayStructure< V >:



Public Member Functions

- **ArrayStructure** (const ArrayStructure< V > &source)
- virtual std::size_t **Size** () const =0
- const V & **Element** (std::size_t index) const
- std::size_t **MinIndex** () const
- std::size_t **MaxIndex** () const

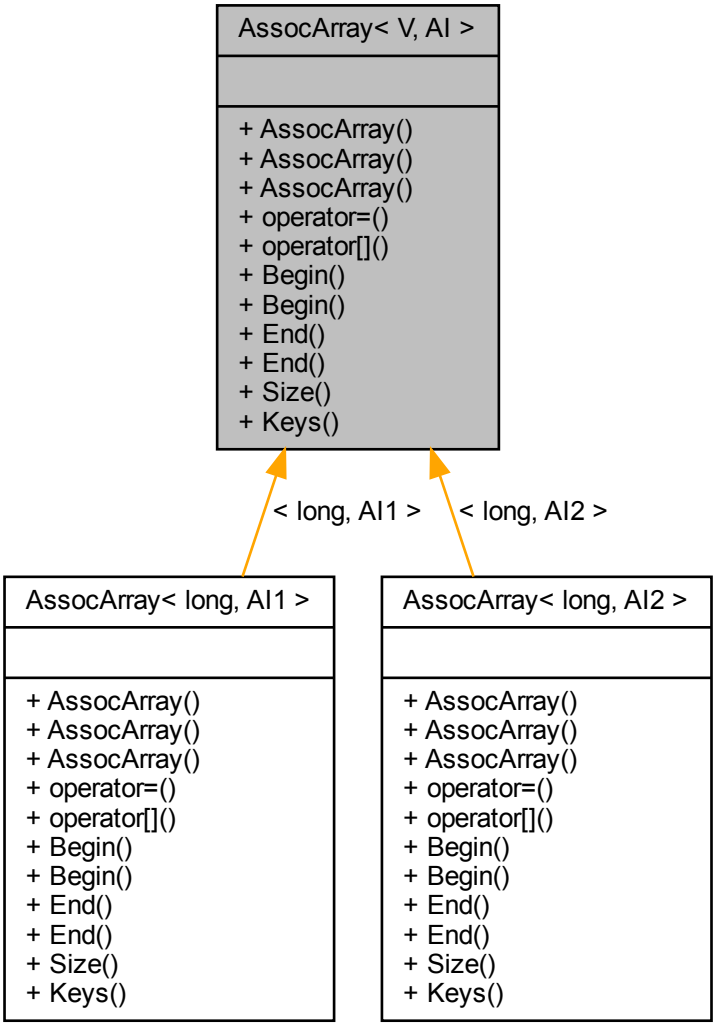
- void **Element** (size_t index, const V &val)
- virtual V & **operator[ ]** (std::size_t index)=0
- virtual const V & **operator[ ]** (std::size_t index) const =0
- ArrayStructure< V > & **operator=** (const ArrayStructure< V > &source)

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

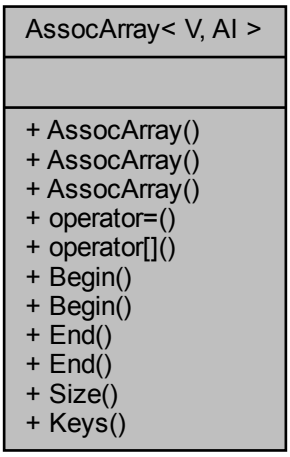
- include/duffy/ArrayStructure.hh
- src/ArrayStructure.cc

3.5 AssocArray< V, AI > Class Template Reference

Inheritance diagram for AssocArray< V, AI >:



Collaboration diagram for AssocArray< V, AI >:



Public Types

- typedef std::map< AI, V >::iterator **iterator**
- typedef std::map< AI, V >::const_iterator **const_iterator**

Public Member Functions

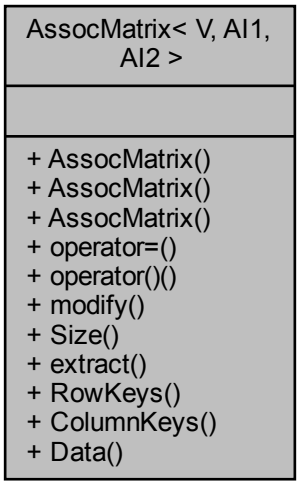
- **AssocArray** (const AssocArray< V, AI > &arr2)
- **AssocArray** (const Set< AI > &names, const V &val)
- AssocArray< V, AI > & **operator=** (const AssocArray< V, AI > &ass2)
- virtual V & **operator[ ]** (const AI &index)
- iterator **Begin** ()
- const_iterator **Begin** () const
- iterator **End** ()
- const_iterator **End** () const
- long **Size** () const
- Set< AI > **Keys** () const

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

- include/duffy/AssocArray.hh
- src/AssocArray.cc

3.6 AssocMatrix< V, AI1, AI2 > Class Template Reference

Collaboration diagram for AssocMatrix< V, AI1, AI2 >:



Public Member Functions

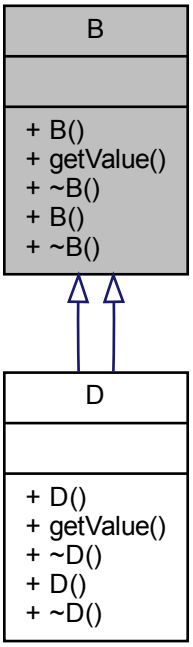
- **AssocMatrix** (const AssocMatrix< V, AI1, AI2 > &arr2)
- **AssocMatrix** (const Set< AI1 > &Rnames, const Set< AI2 > &Cnames, NumericMatrix< V, long > &matrix)
- AssocMatrix< V, AI1, AI2 > & **operator=** (const AssocMatrix< V, AI1, AI2 > &ass2)
- virtual V & **operator()** (const AI1 &index1, const AI2 &index2)
- void **modify** (const SpreadSheetRange< AI1, AI2 > &range, void(*f)(V &cellValue))
- long **Size** () const
- NumericMatrix< V, long > **extract** (const SpreadSheetRange< AI1, AI2 > &range)
- Set< AI1 > **RowKeys** () const
- Set< AI2 > **ColumnKeys** () const
- NumericMatrix< V, long > * **Data** ()

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

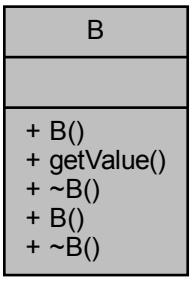
- AssocMatrix.hh
- AssocMatrix.cc

3.7 B Class Reference

Inheritance diagram for B:



Collaboration diagram for B:



Public Member Functions

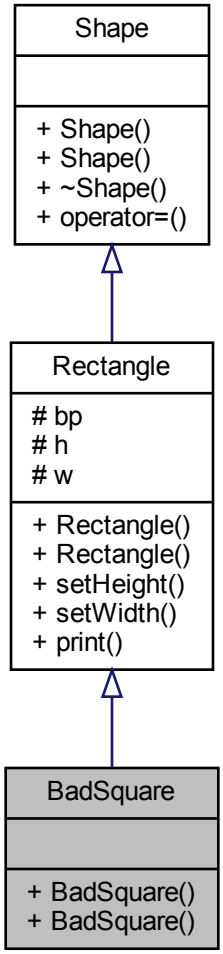
- virtual double **getValue** ()=0

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

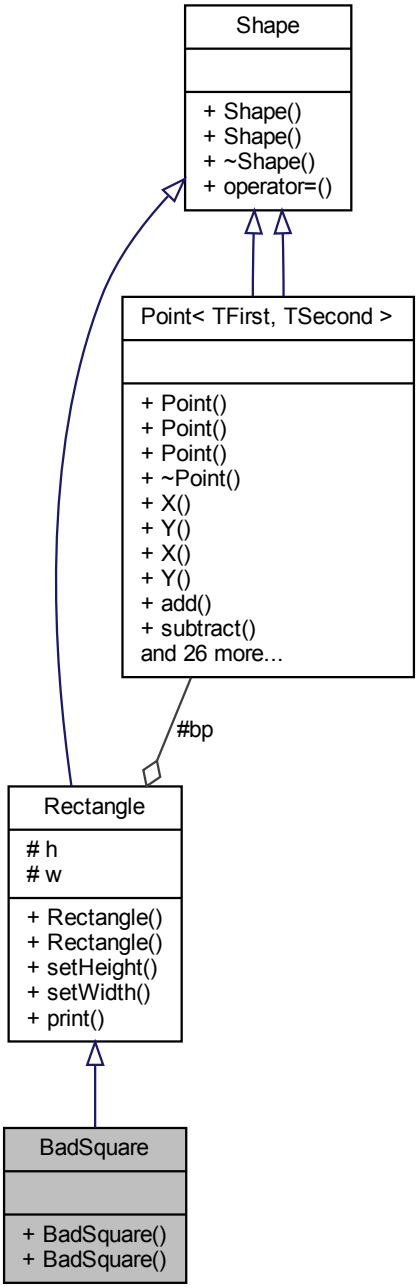
- tests/Delegation.cc
- tests/VirtualDestructors.cc

3.8 BadSquare Class Reference

Inheritance diagram for BadSquare:



Collaboration diagram for BadSquare:



Public Member Functions

- **BadSquare** (const Point &basePoint, double size)

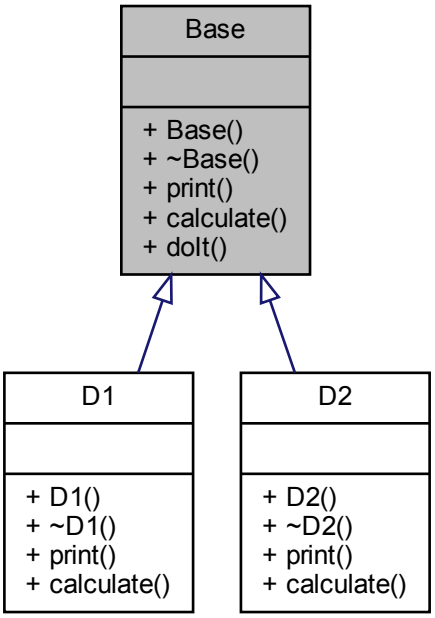
Additional Inherited Members

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

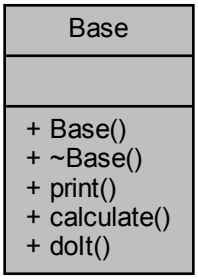
- src/Rectangle.cc

3.9 Base Class Reference

Inheritance diagram for Base:



Collaboration diagram for Base:



Public Member Functions

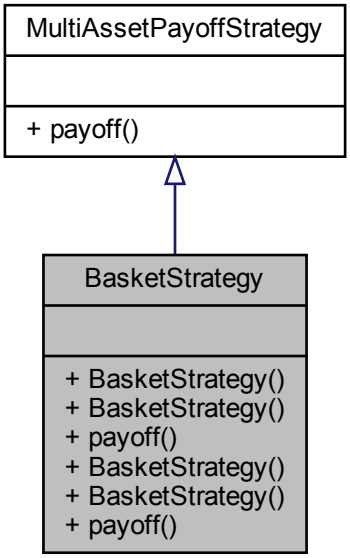
- virtual void **print** () const
- virtual double **calculate** (double d) const =0
- void **doIt** ()

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

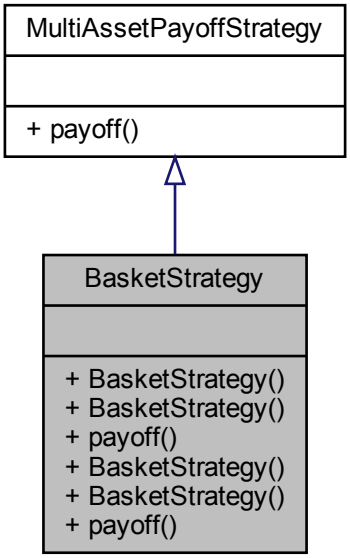
- tests/Example1.cc

3.10 BasketStrategy Class Reference

Inheritance diagram for BasketStrategy:



Collaboration diagram for BasketStrategy:



Public Member Functions

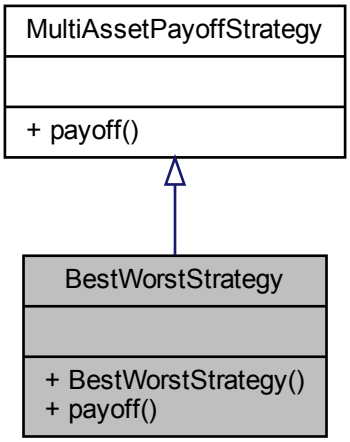
- **BasketStrategy** (double strike, double cp, double weight1, double weight2)
- double **payoff** (double S1, double S2) const
- **BasketStrategy** (double strike, double cp, double weight1, double weight2)
- double **payoff** (double S1, double S2) const

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

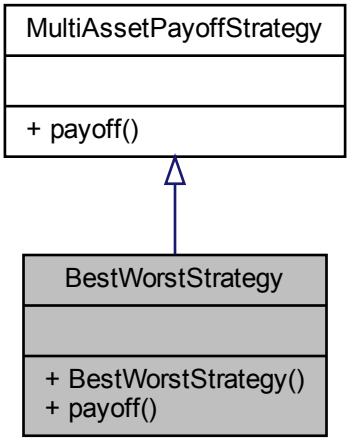
- include/duffy/InstrumentNew.hh
- MultiAssetPayoffStrategy.hh

3.11 BestWorstStrategy Class Reference

Inheritance diagram for BestWorstStrategy:



Collaboration diagram for BestWorstStrategy:



Public Member Functions

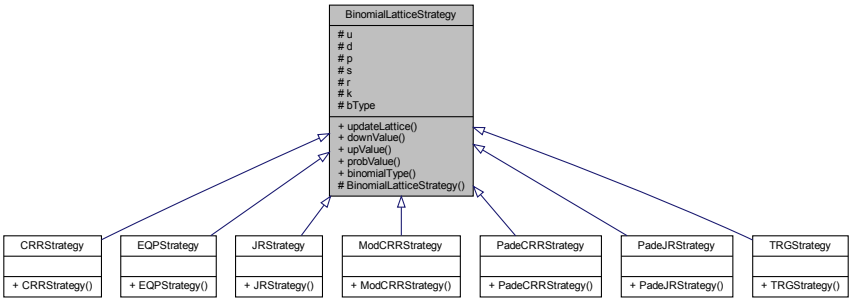
- **BestWorstStrategy** (double cash, double BestWorst)
- double **payoff** (double S1, double S2) const

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

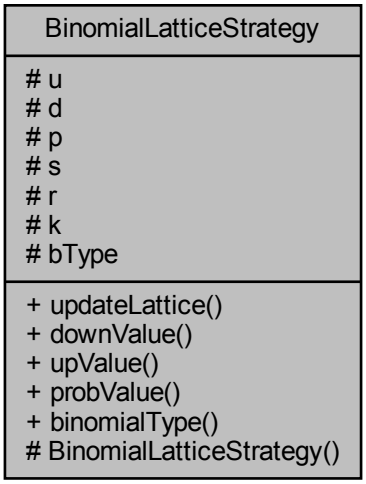
- MultiAssetPayoffStrategy.hh

3.12 BinomialLatticeStrategy Class Reference

Inheritance diagram for BinomialLatticeStrategy:



Collaboration diagram for BinomialLatticeStrategy:



Public Member Functions

- virtual void **updateLattice** (Lattice< double, int, 2 > &source, double rootValue) const
- double **downValue** () const
- double **upValue** () const
- double **probValue** () const
- BinomialType **binomialType** () const

Protected Member Functions

- **BinomialLatticeStrategy** (double vol, double interest, double delta)

Protected Attributes

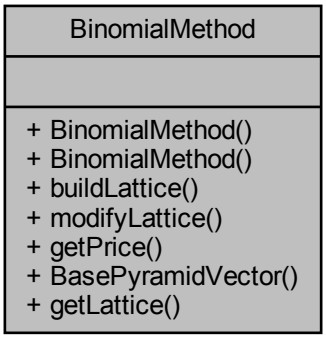
- double **u**
- double **d**
- double **p**
- double **s**
- double **r**
- double **k**
- BinomialType **bType**

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

- include/duffy/BinomialLatticeStrategy.hh
- src/BinomialLatticeStrategy.cc

3.13 BinomialMethod Class Reference

Collaboration diagram for BinomialMethod:



Public Member Functions

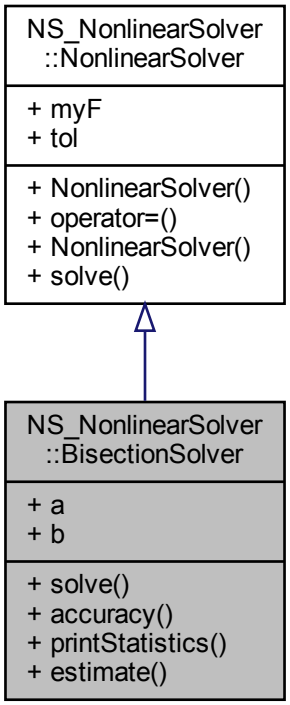
- **BinomialMethod** (double discounting, BinomialLatticeStrategy &strategy, int N)
- void **buildLattice** (int N)
- void **modifyLattice** (double U)
- double **getPrice** (const Vector< double, int > &RHS)
- Vector< double, int > **BasePyramidVector** () const
- const Lattice< double, int, 2 > & **getLattice** () const

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

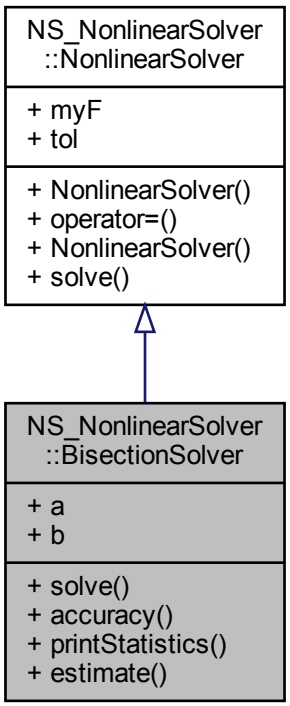
- include/duffy/BinomialMethod.hh
- src/BinomialMethod.cc

3.14 NS_NonlinearSolver::BisectionSolver Class Reference

Inheritance diagram for NS_NonlinearSolver::BisectionSolver:



Collaboration diagram for NS_NonlinearSolver::BisectionSolver:



Public Member Functions

- double **solve** ()
- double **accuracy** () const
- void **printStatistics** ()
- long **estimate** () const

Public Attributes

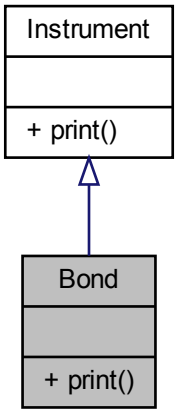
- double **a**
- double **b**

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

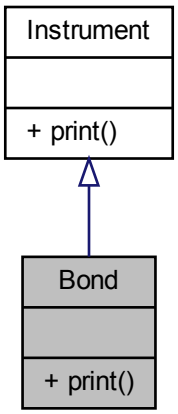
- include/duffy/NonlinearSolver.hh

3.15 Bond Class Reference

Inheritance diagram for Bond:



Collaboration diagram for Bond:



Public Member Functions

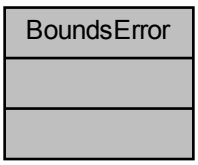
- void **print** () const

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

- include/duffy/InstrumentOld.hh

3.16 BoundsError Class Reference

Collaboration diagram for BoundsError:

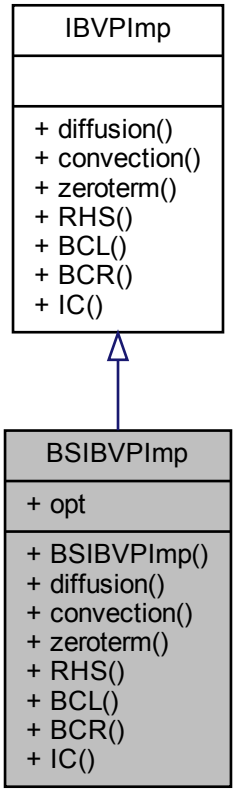


The documentation for this class was generated from the following file:

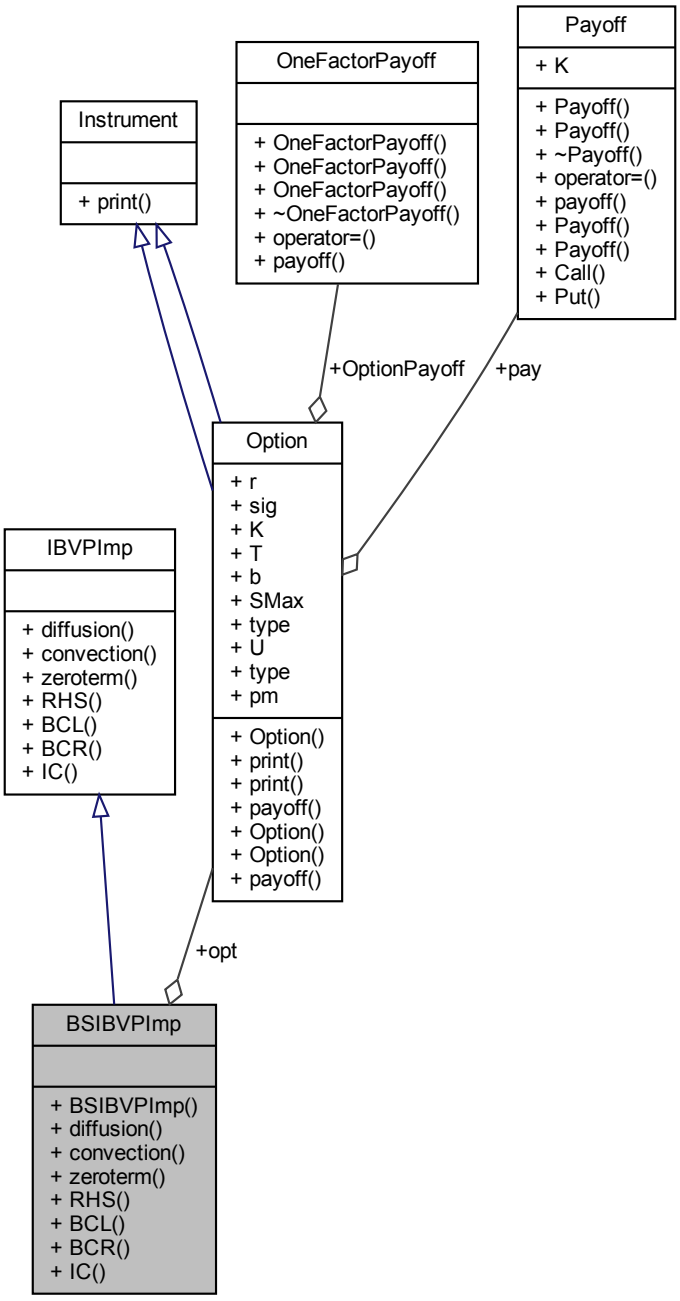
- tests/TestOtherExceptions.cc

3.17 BSIBVPImp Class Reference

Inheritance diagram for BSIBVPImp:



Collaboration diagram for BSIBVPImp:



Public Member Functions

- **BSIBVPImp** (Option &option)
- double **diffusion** (double x, double t) const
- double **convection** (double x, double t) const
- double **zeroterm** (double x, double t) const
- double **RHS** (double x, double t) const

- double **BCL** (double t) const
- double **BCR** (double t) const
- double **IC** (double x) const

Public Attributes

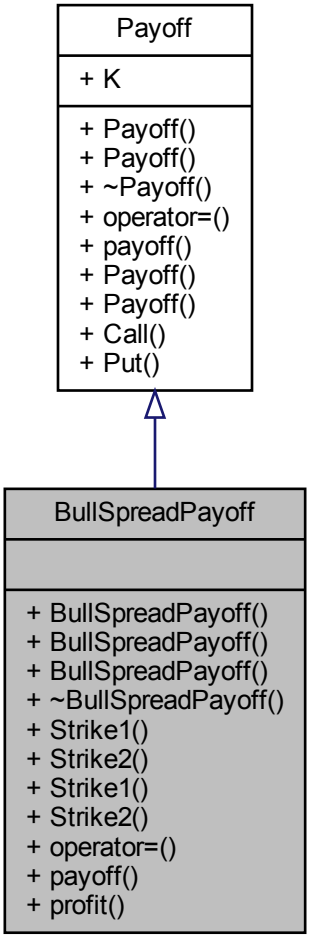
- Option ∗ **opt**

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

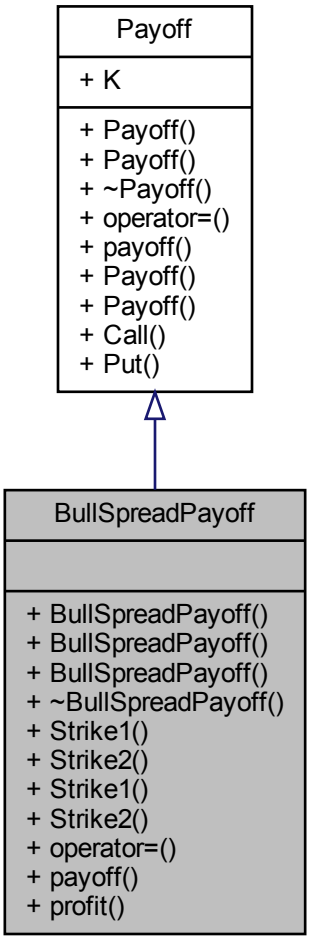
- include/duffy/BSIBVPImp.hh
- src/BSIBVPImp.cc

3.18 BullSpreadPayoff Class Reference

Inheritance diagram for BullSpreadPayoff:



Collaboration diagram for BullSpreadPayoff:



Public Member Functions

- **BullSpreadPayoff** (double strike1, double strike2, double BuyVal, double SellVal)
- **BullSpreadPayoff** (const BullSpreadPayoff &source)
- double **Strike1** () const
- double **Strike2** () const
- void **Strike1** (double NewStrike1)
- void **Strike2** (double NewStrike2)
- BullSpreadPayoff & **operator=** (const BullSpreadPayoff &source)
- double **payoff** (double S) const
- double **profit** (double S) const

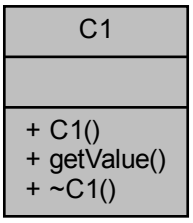
Additional Inherited Members

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

- include/duffy/BullSpreadPayoff.hh
- src/BullSpreadPayoff.cc

3.19 C1 Class Reference

Collaboration diagram for C1:



Public Member Functions

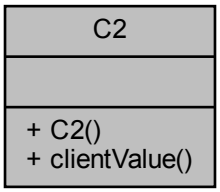
- **C1** (int N)
- double **getValue** () const

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

- tests/Association.cc

3.20 C2 Class Reference

Collaboration diagram for C2:



Public Member Functions

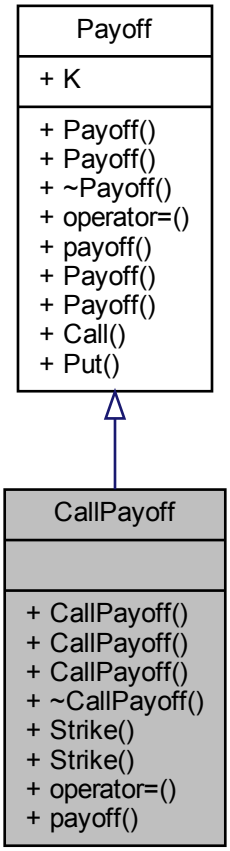
- **C2** (C1 &associate)
- double **clientValue** () const

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

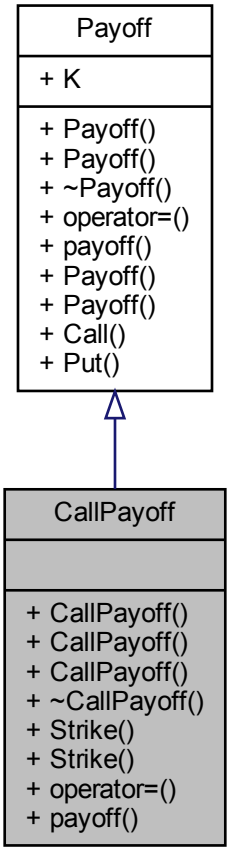
- tests/Association.cc

3.21 CallPayoff Class Reference

Inheritance diagram for CallPayoff:



Collaboration diagram for CallPayoff:



Public Member Functions

- **CallPayoff** (double strike)
- **CallPayoff** (const CallPayoff &source)
- double **Strike** () const
- void **Strike** (double NewStrike)
- CallPayoff & **operator=** (const CallPayoff &source)
- double **payoff** (double S) const

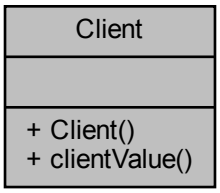
Additional Inherited Members

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

- include/duffy/CallPayoff.hh
- src/CallPayoff.cc

3.22 Client Class Reference

Collaboration diagram for Client:



Public Member Functions

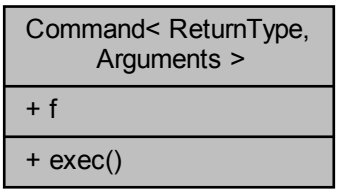
- **Client** (B &delegate)
- double **clientValue** () const

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

- tests/Delegation.cc

3.23 Command< ReturnType, Arguments > Class Template Reference

Collaboration diagram for Command< ReturnType, Arguments >:



Public Member Functions

- ReturnType **exec** (Arguments args)

Public Attributes

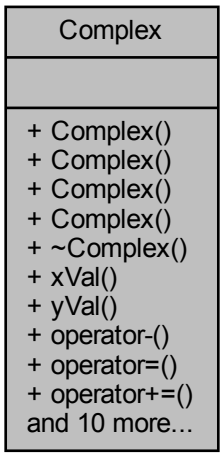
- ReturnType(∗ **f**)(Arguments args)

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

- tests/FunctionWrapper.cc

3.24 Complex Class Reference

Collaboration diagram for Complex:



Public Member Functions

- **Complex** (double real)
- **Complex** (double real, double imag)
- **Complex** (const Complex &p)
- double **xVal** () const
- double **yVal** () const
- Complex **operator-** () const
- Complex & **operator=** (const Complex &c)
- Complex & **operator+=** (const Complex &c)
- Complex & **operator∗=** (const Complex &c)
- Complex & **operator-=** (const Complex &c)
- Complex & **operator/=** (const Complex &c)
- Complex **add** (const Complex &c2) const
- Complex **operator+** (const Complex &c2) const
- Complex **operator-** (const Complex &c2) const
- Complex **operator∗** (const Complex &c2) const
- Complex **operator/** (const Complex &c2) const
- Complex **operator/** (double d) const
- double **distance** (const Complex &c2)

Friends

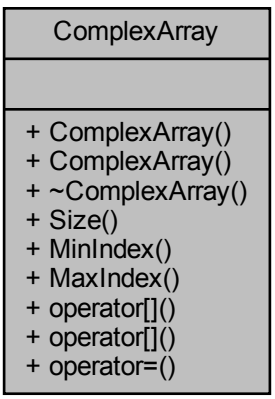
- Complex **mpi** (const Complex &z)
- double **real** (const Complex &c)
- double **imag** (const Complex &c)
- double **rad** (const Complex &c)
- double **modulus** (const Complex &c)
- double **abs** (const Complex &c)
- Complex **operator*** (const Complex &c, double d)
- Complex **operator*** (double d, const Complex &c)
- Complex **operator+** (const Complex &c, double d)
- Complex **operator+** (double d, const Complex &c)
- Complex **operator-** (const Complex &c, double d)
- Complex **operator-** (double d, const Complex &c)
- Complex **conjugate** (const Complex &c)
- Complex **inverse** (const Complex &c)
- Complex **exp** (const Complex &c)
- Complex **cos** (const Complex &c)
- Complex **sin** (const Complex &c)
- Complex **cosh** (const Complex &c)
- Complex **sinh** (const Complex &c)
- Complex **tanh** (const Complex &c)
- Complex **sech** (const Complex &c)
- Complex **csch** (const Complex &c)
- Complex **coth** (const Complex &c)
- Complex **tan** (const Complex &c)
- Complex **cgt** (const Complex &c)
- std::ostream & **operator<<** (std::ostream &os, const Complex &cmp)

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

- include/duffy/Complex.hh
- src/Complex.cc

3.25 ComplexArray Class Reference

Collaboration diagram for ComplexArray:



Public Member Functions

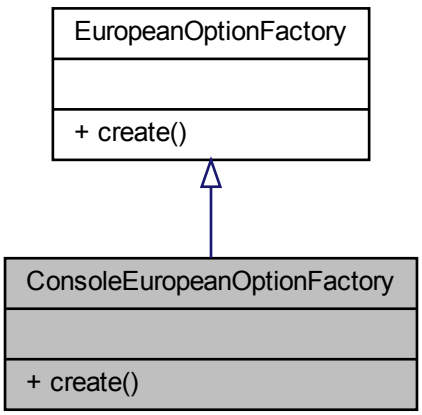
- **ComplexArray** (int size)
- **ComplexArray** (const ComplexArray &source)
- int **Size** () const
- int **MinIndex** () const
- int **MaxIndex** () const
- const Complex & **operator[ ]** (int index) const
- Complex & **operator[ ]** (int index)
- ComplexArray & **operator=** (const ComplexArray &source)

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

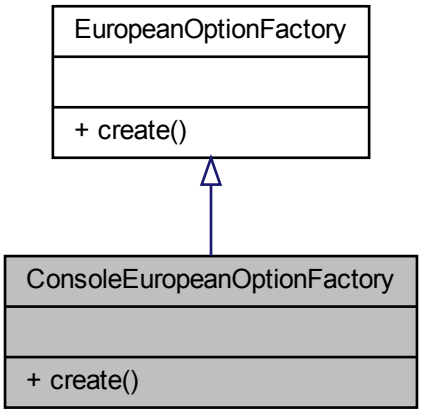
- include/duffy/ComplexArray.hh
- src/ComplexArray.cc

3.26 ConsoleEuropeanOptionFactory Class Reference

Inheritance diagram for ConsoleEuropeanOptionFactory:



Collaboration diagram for ConsoleEuropeanOptionFactory:



Public Member Functions

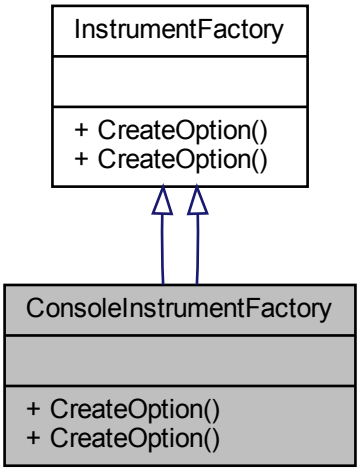
- Option * **create** () const

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

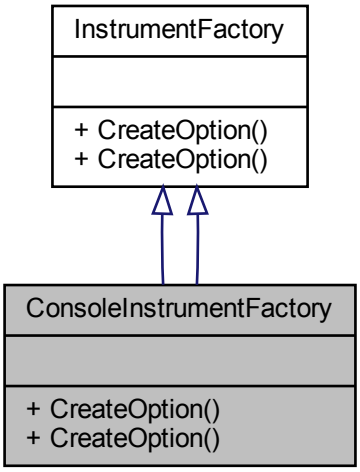
- include/duffy/EuropeanOptionFactory.hh

3.27 ConsoleInstrumentFactory Class Reference

Inheritance diagram for ConsoleInstrumentFactory:



Collaboration diagram for ConsoleInstrumentFactory:



Public Member Functions

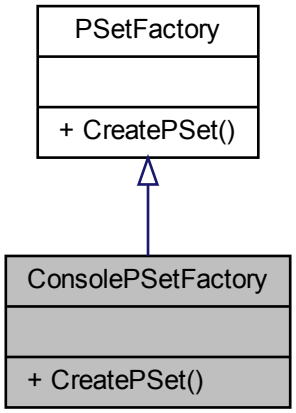
- Option * **CreateOption** () const
- TwoFactorOptionData * **CreateOption** () const

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

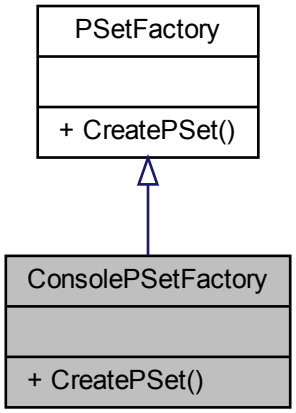
- include/duffy/Instrument.hh
- include/duffy/InstrumentNew.hh

3.28 ConsolePSetFactory Class Reference

Inheritance diagram for ConsolePSetFactory:



Collaboration diagram for ConsolePSetFactory:



Public Member Functions

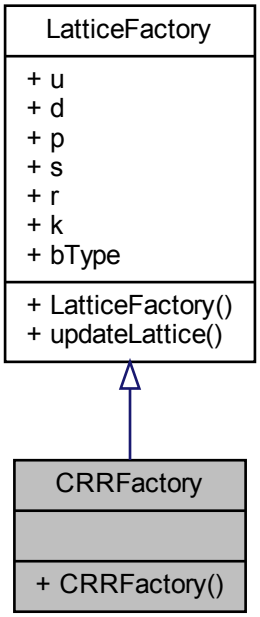
- PSet * **CreatePSet** () const

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

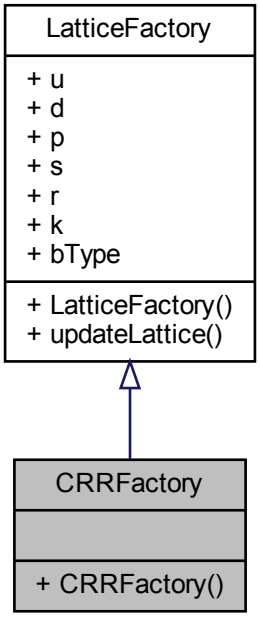
- include/duffy/PSetCreators.hh

3.29 CRRFactory Class Reference

Inheritance diagram for CRRFactory:



Collaboration diagram for CRRFactory:



Public Member Functions

- **CRRFactory** (double vol, double interest, double delta)

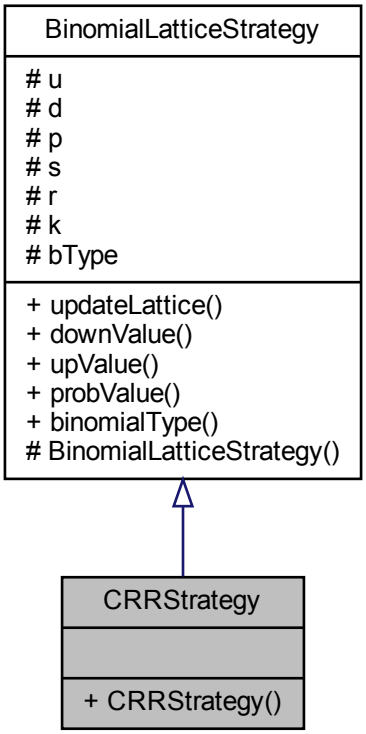
Additional Inherited Members

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

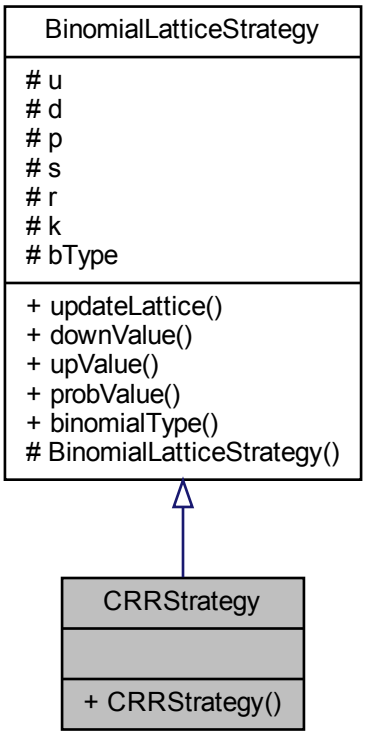
- include/duffy/LatticeFactory.hh

3.30 CRRStrategy Class Reference

Inheritance diagram for CRRStrategy:



Collaboration diagram for CRRStrategy:



Public Member Functions

- **CRRStrategy** (double vol, double interest, double delta)

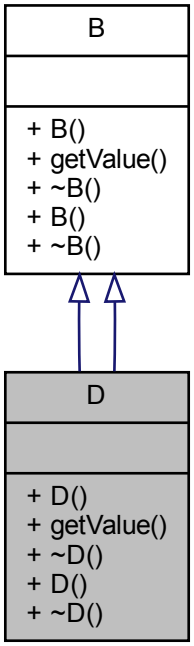
Additional Inherited Members

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

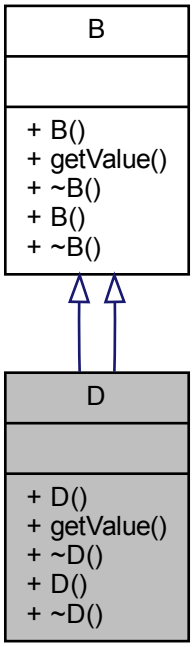
- include/duffy/BinomialLatticeStrategy.hh
- src/BinomialLatticeStrategy.cc

3.31 D Class Reference

Inheritance diagram for D:



Collaboration diagram for D:



Public Member Functions

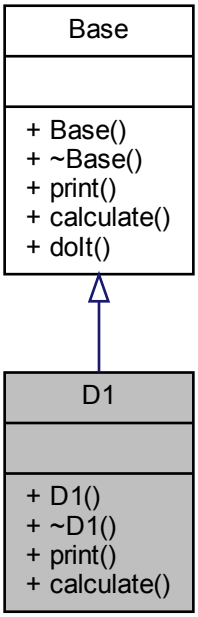
- **D** (int N)
- double **getValue** ()
- **D** (int N)

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

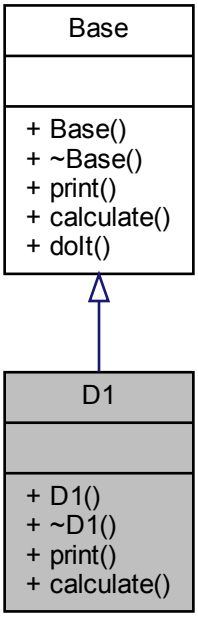
- tests/Delegation.cc
- tests/VirtualDestructors.cc

3.32 D1 Class Reference

Inheritance diagram for D1:



Collaboration diagram for D1:



Public Member Functions

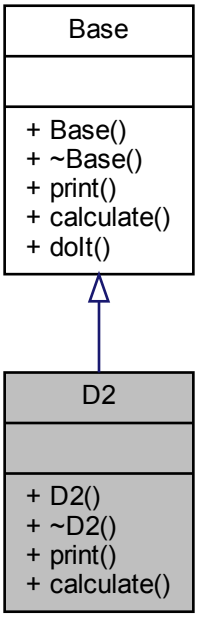
- virtual void **print** () const
- virtual double **calculate** (double d) const

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

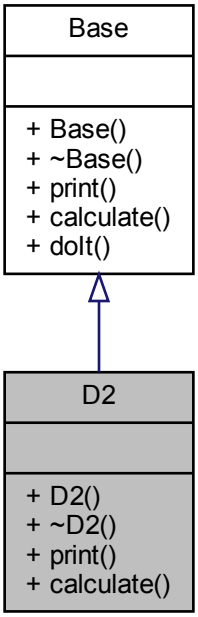
- tests/Example1.cc

3.33 D2 Class Reference

Inheritance diagram for D2:



Collaboration diagram for D2:



Public Member Functions

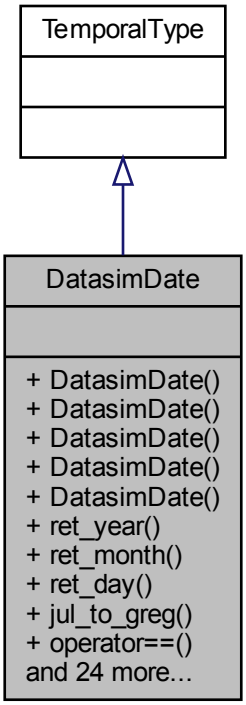
- virtual void **print** () const
- virtual double **calculate** (double d) const

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

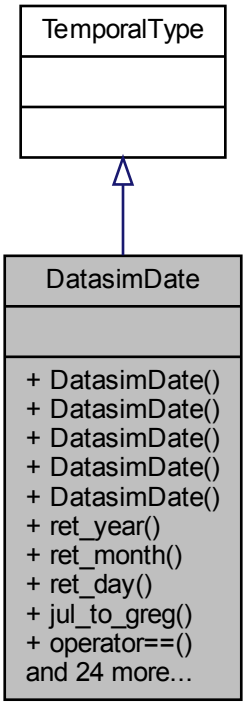
- tests/Example1.cc

3.34 DatasimDate Class Reference

Inheritance diagram for DatasimDate:



Collaboration diagram for DatasimDate:



Public Member Functions

- **DatasimDate** (const DatasimDate &d2)
- **DatasimDate** (const julTy &days)
- **DatasimDate** (int days)
- **DatasimDate** (int day, int month, int year)
- int **ret_year** () const
- int **ret_month** () const
- int **ret_day** () const
- void **jul_to_greg** (julTy &d, julTy &m, julTy &y) const
- bool **operator==** (const DatasimDate &DatasimDate_2) const
- bool **operator!=** (const DatasimDate &DatasimDate_2) const
- bool **operator**> (const DatasimDate &DatasimDate_2) const
- bool **operator**< (const DatasimDate &DatasimDate_2) const
- bool **operator>=** (const DatasimDate &DatasimDate_2) const
- bool **operator<=** (const DatasimDate &DatasimDate_2) const
- DatasimDate & **operator=** (const DatasimDate &DatasimDate_2)
- DatasimDate **operator+** (int days) const
- DatasimDate **operator-** (int days) const
- DatasimDate **operator++** ()
- DatasimDate **operator--** ()
- DatasimDate **operator+=** (int days)
- DatasimDate **operator-=** (int days)

- DatasimDate **add_months** (long months) const
- DatasimDate **add_quarter** () const
- DatasimDate **add_halfyear** () const
- DatasimDate **add_years** (long years) const
- DatasimDate **sub_months** (long months) const
- DatasimDate **sub_quarter** () const
- DatasimDate **sub_halfyear** () const
- DatasimDate **sub_years** (long years) const
- DatasimDate **add_period** (const julTy &days, const julTy &months=0, const julTy &years=0) const
- DatasimDate **sub_period** (julTy days, julTy months=0, julTy years=0) const
- long **difference** (const DatasimDate &DatasimDate_2) const
- long **operator-** (const DatasimDate &d2) const

Friends

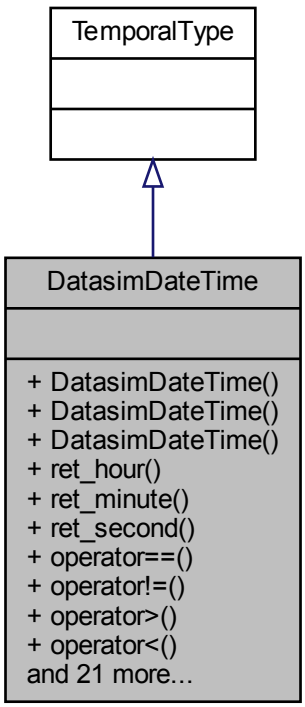
- std::ostream & **operator**<< (std::ostream &os, const DatasimDate &dat)

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

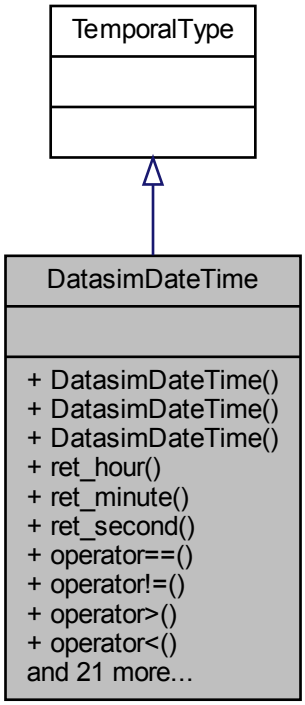
- include/duffy/DatasimDate.hh
- src/DatasimDate.cc

3.35 DatasimDateTime Class Reference

Inheritance diagram for DatasimDateTime:



Collaboration diagram for DatasimDateTime:



Public Member Functions

- **DatasimDateTime** (const DatasimDateTime &)
- **DatasimDateTime** (secTy secs, long *over=0)
- int **ret_hour** ()
- int **ret_minute** ()
- int **ret_second** ()
- bool **operator==** (DatasimDateTime DatasimDateTime_2)
- bool **operator!=** (DatasimDateTime DatasimDateTime_2)
- bool **operator>** (DatasimDateTime DatasimDateTime_2)
- bool **operator<** (DatasimDateTime DatasimDateTime_2)
- bool **operator>=** (DatasimDateTime DatasimDateTime_2)
- bool **operator<=** (DatasimDateTime DatasimDateTime_2)
- DatasimDateTime **operator=** (DatasimDateTime DatasimDateTime_2)
- DatasimDateTime **operator+** (DatasimDateTime DatasimDateTime_2)
- DatasimDateTime **operator+** (long seconds)
- DatasimDateTime **operator-** (DatasimDateTime DatasimDateTime_2)
- DatasimDateTime **operator-** (long seconds)
- DatasimDateTime **operator++** ()
- DatasimDateTime **operator--** ()
- DatasimDateTime **operator+=** (DatasimDateTime DatasimDateTime_2)
- DatasimDateTime **operator+=** (long secs)
- DatasimDateTime **operator-=** (DatasimDateTime DatasimDateTime_2)

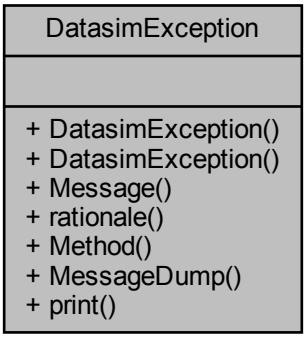
- DatasimDateTime **operator-=** (long secs)
- DatasimDateTime **add_hours** (long hours)
- DatasimDateTime **add_minutes** (long minutes)
- DatasimDateTime **sub_hours** (long hours)
- DatasimDateTime **sub_minutes** (long minutes)
- DatasimDateTime **add_period** (secTy secs, secTy mins=0, secTy hours=0)
- DatasimDateTime **sub_period** (secTy secs, secTy mins=0, secTy hours=0)
- void **print** () const
- void **secs_to_dtime** (int &h, int &m, int &s, long ∗over=0) const

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

- include/duffy/DatesimDateTime.hh
- src/DatesimDateTime.cc

3.36 DatasimException Class Reference

Collaboration diagram for DatasimException:



Public Member Functions

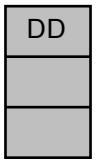
- **DatasimException** (const std::string &message, const std::string &method, const std::string &extraInfo)
- std::string **Message** () const
- std::string **rationale** () const
- std::string **Method** () const
- std::vector< std::string > **MessageDump** () const
- virtual void **print** () const

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

- include/duffy/DatasimException.hh
- src/DatasimException.cc

3.37 DD Class Reference

Collaboration diagram for DD:



Public Types

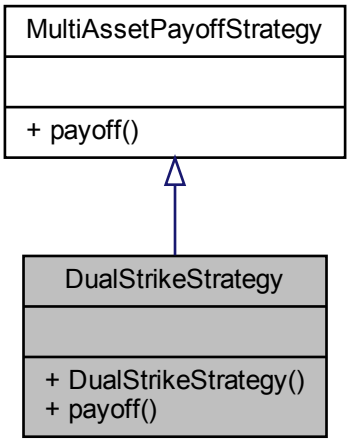
- typedef Array< double > **DArray**

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

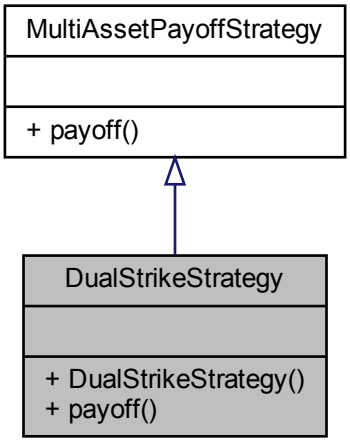
- tests/TestAssocArrayTypedef.cc

3.38 DualStrikeStrategy Class Reference

Inheritance diagram for DualStrikeStrategy:



Collaboration diagram for DualStrikeStrategy:



Public Member Functions

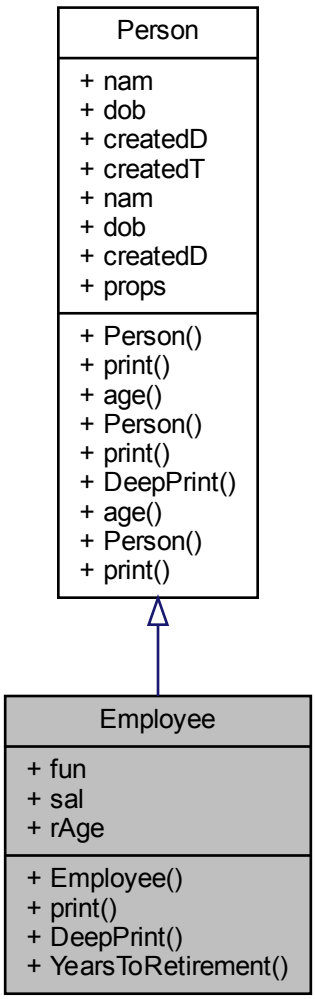
- **DualStrikeStrategy** (double strike1, double strike2, double cp1, double cp2)
- double **payoff** (double S1, double S2) const

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

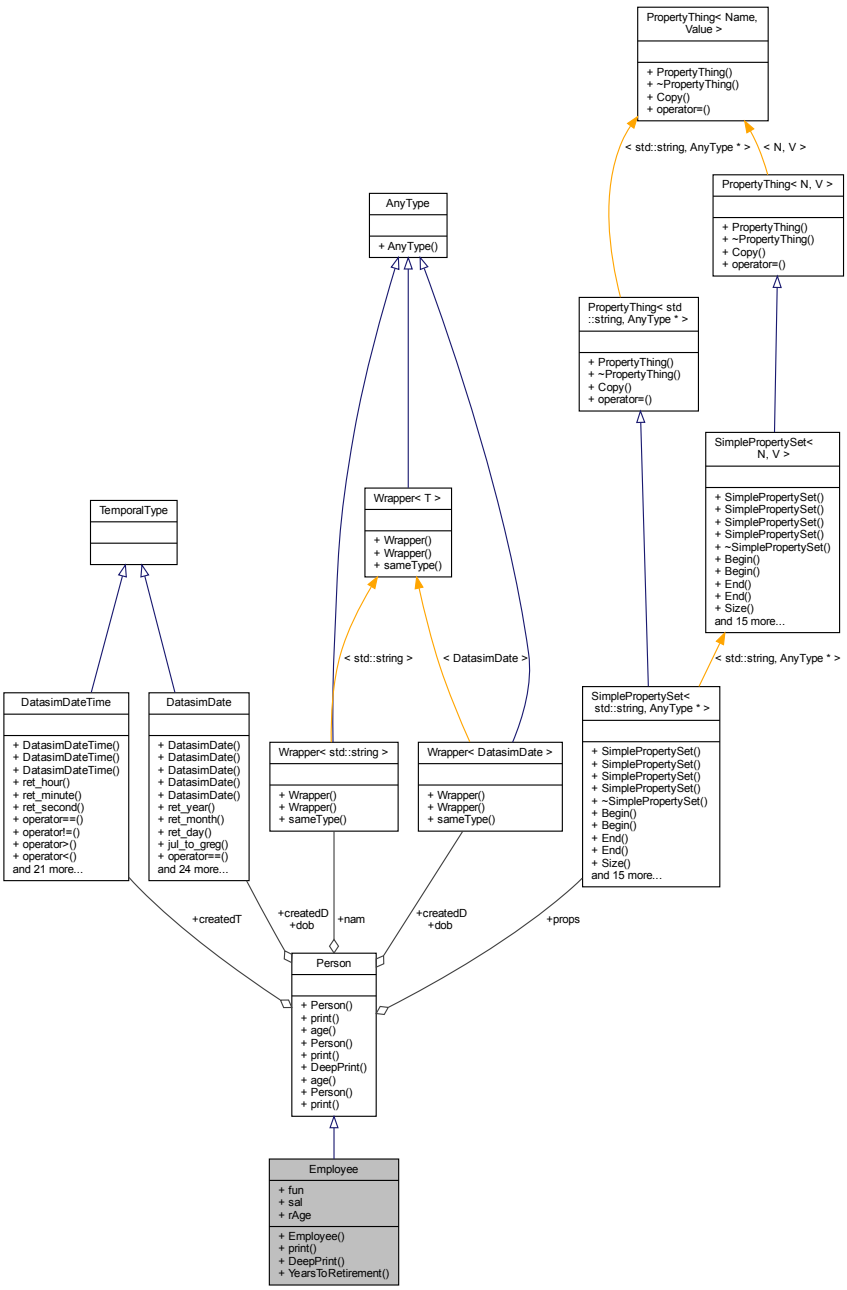
- MultiAssetPayoffStrategy.hh

3.39 Employee Class Reference

Inheritance diagram for Employee:



Collaboration diagram for Employee:



Public Member Functions

- **Employee** (const std::string &name, const DatasimDate &DateofBirth, const std::string &function, double salary, int Retires)
- void **print** () const
- void **DeepPrint** () const
- int **YearsToRetirement** () const

Public Attributes

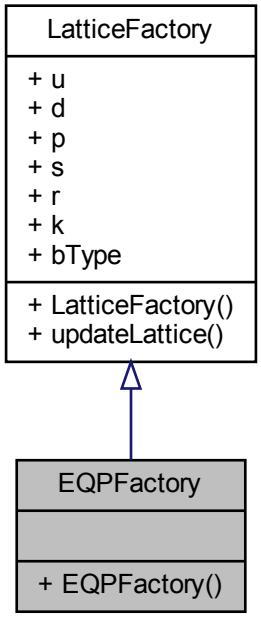
- std::string **fun**
- double **sal**
- int **rAge**

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

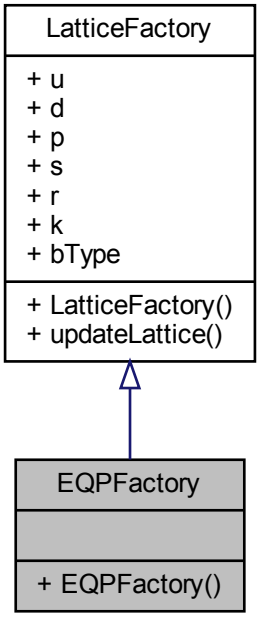
- include/duffy/PersonAndEmployee.hh

3.40 EQPFactory Class Reference

Inheritance diagram for EQPFactory:



Collaboration diagram for EQPFactory:



Public Member Functions

- **EQPFactory** (double s, double r, double k)

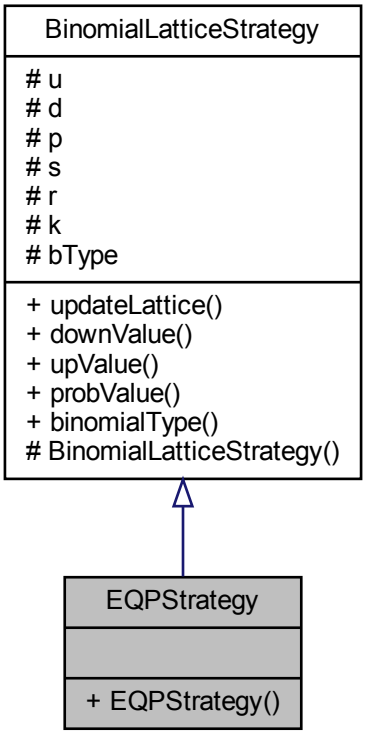
Additional Inherited Members

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

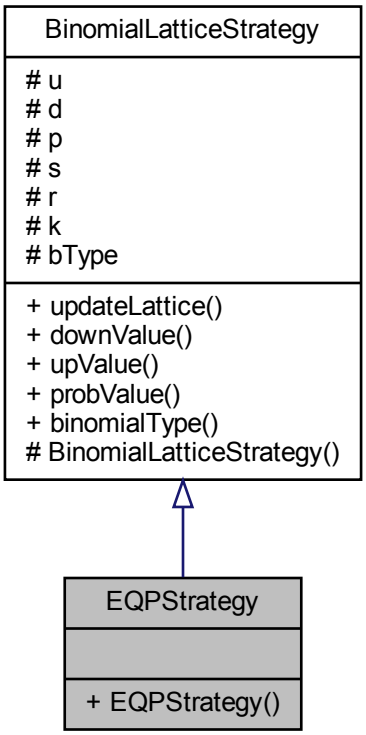
- include/duffy/LatticeFactory.hh

3.41 EQPStrategy Class Reference

Inheritance diagram for EQPStrategy:



Collaboration diagram for EQPStrategy:



Public Member Functions

- **EQPStrategy** (double vol, double interest, double delta)

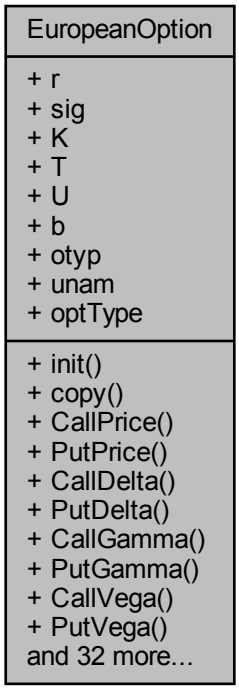
Additional Inherited Members

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

- include/duffy/BinomialLatticeStrategy.hh
- src/BinomialLatticeStrategy.cc

3.42 EuropeanOption Class Reference

Collaboration diagram for EuropeanOption:



Public Member Functions

- void **init** ()
- void **copy** (const EuropeanOption &o2)
- double **CallPrice** () const
- double **PutPrice** () const
- double **CallDelta** () const
- double **PutDelta** () const
- double **CallGamma** () const
- double **PutGamma** () const
- double **CallVega** () const
- double **PutVega** () const
- double **n** (double x) const
- double **N** (double x) const
- **EuropeanOption** (const EuropeanOption &option2)
- **EuropeanOption** (const std::string &optionType)
- EuropeanOption & **operator=** (const EuropeanOption &option2)
- double **Price** () const
- double **Delta** () const
- double **Gamma** () const
- double **Vega** () const

- void **toggle** ()
- void **init** ()
- void **copy** (const EuropeanOption &o2)
- double **CallPrice** () const
- double **PutPrice** () const
- double **CallDelta** () const
- double **PutDelta** () const
- double **CallGamma** () const
- double **PutGamma** () const
- double **CallVega** () const
- double **PutVega** () const
- double **n** (double x) const
- double **N** (double x) const
- **EuropeanOption** (const EuropeanOption &option2)
- **EuropeanOption** (const std::string &optionType)
- EuropeanOption & **operator=** (const EuropeanOption &option2)
- double **Price** () const
- double **Delta** () const
- void **toggle** ()

Public Attributes

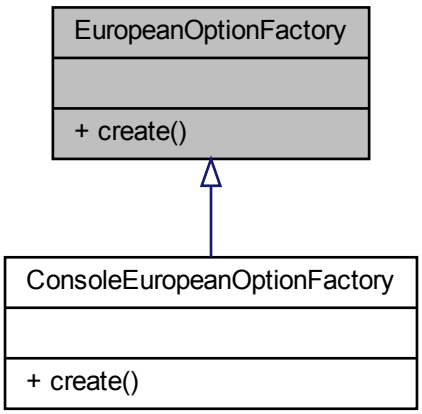
- double **r**
- double **sig**
- double **K**
- double **T**
- double **U**
- double **b**
- std::string **otyp**
- std::string **unam**
- std::string **optType**

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

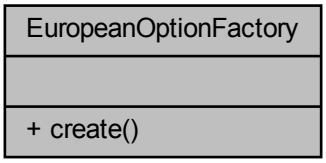
- BackupEuropeanOption2.hh
- include/duffy/EuropeanOption.hh
- BackupEuropeanOption2.cc
- src/EuropeanOption.cc

3.43 EuropeanOptionFactory Class Reference

Inheritance diagram for EuropeanOptionFactory:



Collaboration diagram for EuropeanOptionFactory:



Public Member Functions

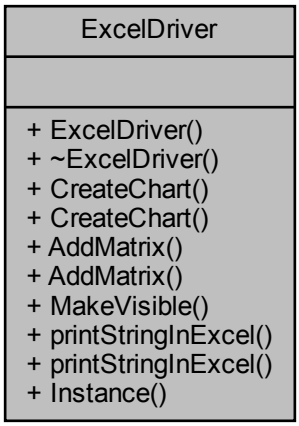
- virtual Option * **create** () const =0

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

- include/duffy/EuropeanOptionFactory.hh

3.44 ExcelDriver Class Reference

Collaboration diagram for ExcelDriver:



Public Member Functions

- void **CreateChart** (const Vector< double, long > &x, const std::list< std::string > &labels, const std::list< Vector< double, long > > &vectorList, const std::string &chartTitle, const std::string &xTitle="X", const std::string &yTitle="Y")
- void **CreateChart** (const Vector< double, long > &x, const Vector< double, long > &y, const std::string &chartTitle, const std::string &xTitle="X", const std::string &yTitle="Y")
- void **AddMatrix** (const std::string &sheetName, const NumericMatrix< double, long > &matrix, const std::list< std::string > &rowLabels, const std::list< std::string > &columnLabels)
- void **AddMatrix** (const NumericMatrix< double, long > &matrix, const std::string &SheetName="Matrix")
- void **MakeVisible** (bool b)
- void **printStringInExcel** (const std::string &s, long rowNumber, long colNumber, const std::string &sheetName)
- void **printStringInExcel** (const std::list< std::string > &s, long rowNumber, long colNumber, const std::string &sheetName)

Static Public Member Functions

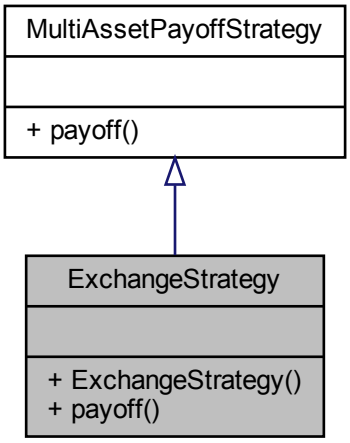
- static ExcelDriver & **Instance** ()

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

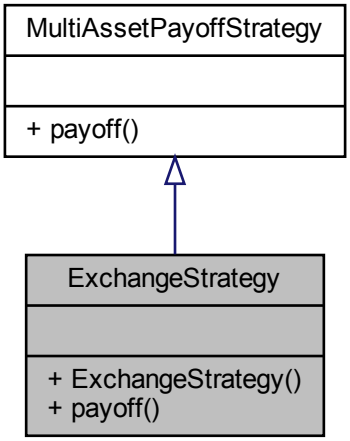
- include/duffy/ExcelDriver.hh
- src/ExcelDriver.cc

3.45 ExchangeStrategy Class Reference

Inheritance diagram for ExchangeStrategy:



Collaboration diagram for ExchangeStrategy:



Public Member Functions

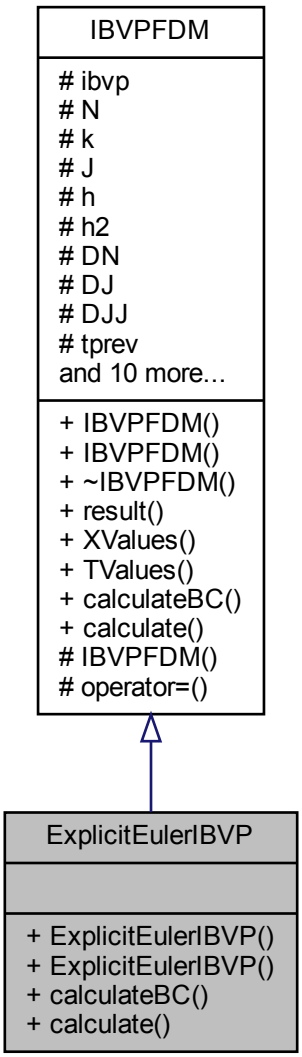
- double **payoff** (double S1, double S2) const

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

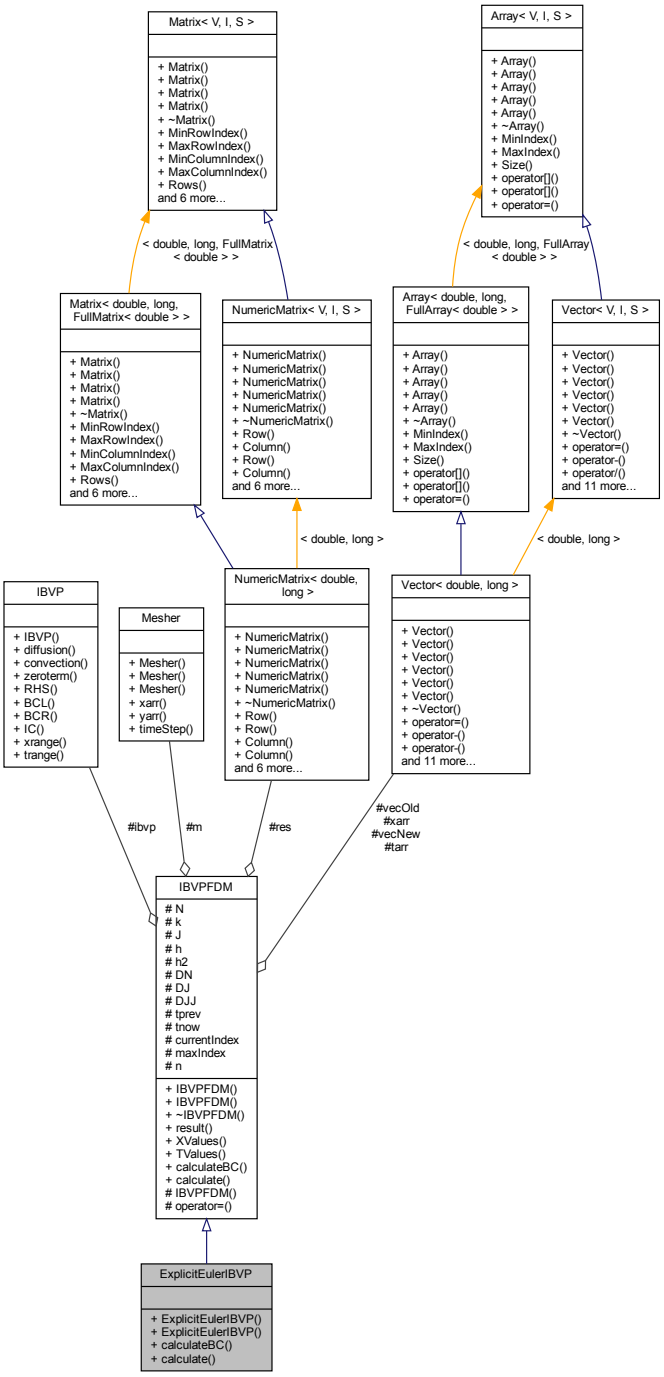
- MultiAssetPayoffStrategy.hh

3.46 ExplicitEulerIBVP Class Reference

Inheritance diagram for ExplicitEulerIBVP:



Collaboration diagram for ExplicitEulerIBVP:



Public Member Functions

- **ExplicitEulerIBVP** (IBVP &source, long NSteps, long JSteps)
- void **calculateBC** ()
- void **calculate** ()

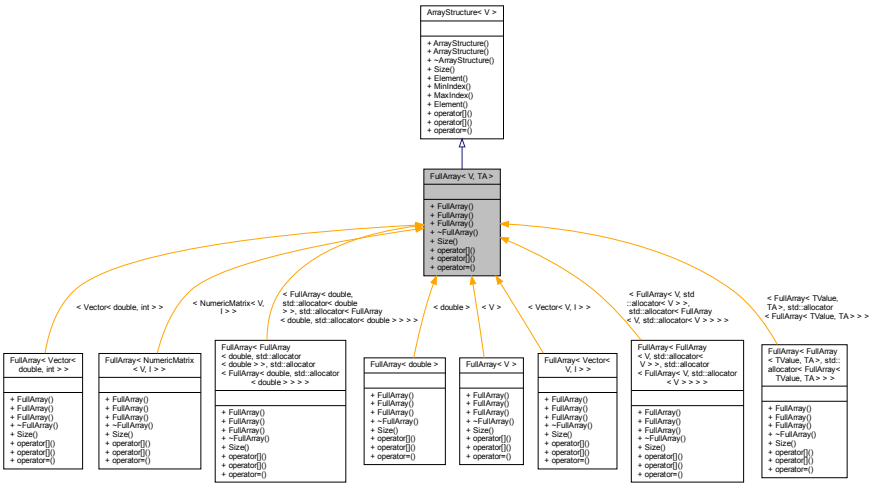
Additional Inherited Members

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

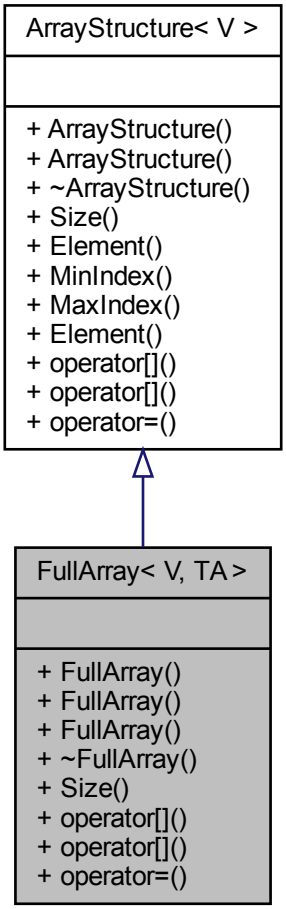
- include/duffy/EEulerIBVPSolver.hh
- src/EEulerIBVPSolver.cc

3.47 FullArray< V, TA > Class Template Reference

Inheritance diagram for FullArray< V, TA >:



Collaboration diagram for FullArray< V, TA >:



Public Member Functions

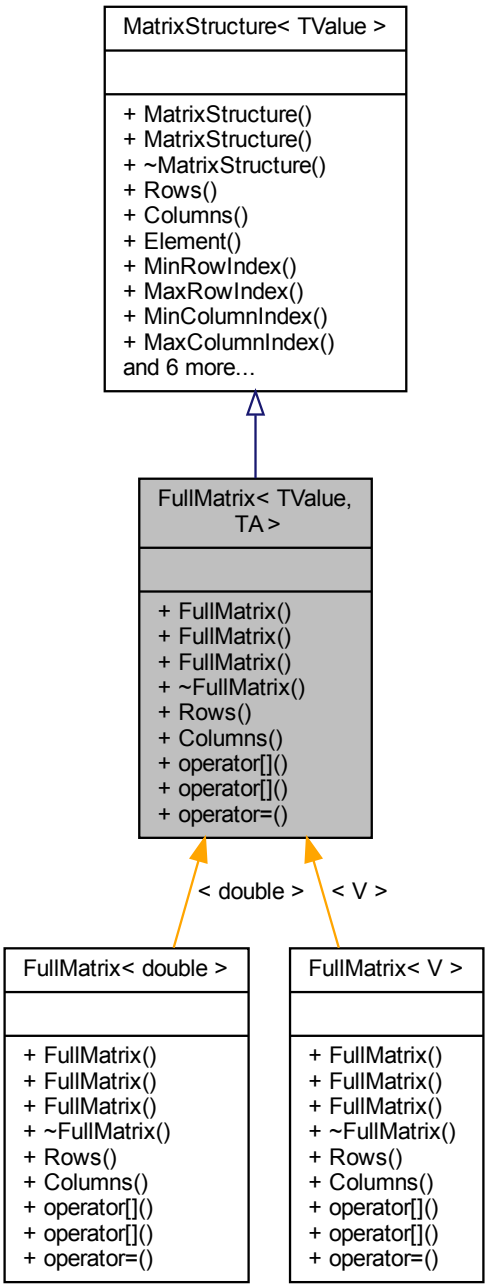
- **FullArray** (std::size_t size)
- **FullArray** (const FullArray< V, TA > &source)
- virtual std::size_t **Size** () const
- V & **operator[ ]** (std::size_t index)
- const V & **operator[ ]** (std::size_t index) const
- FullArray< V, TA > & **operator=** (const FullArray< V, TA > &source)

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

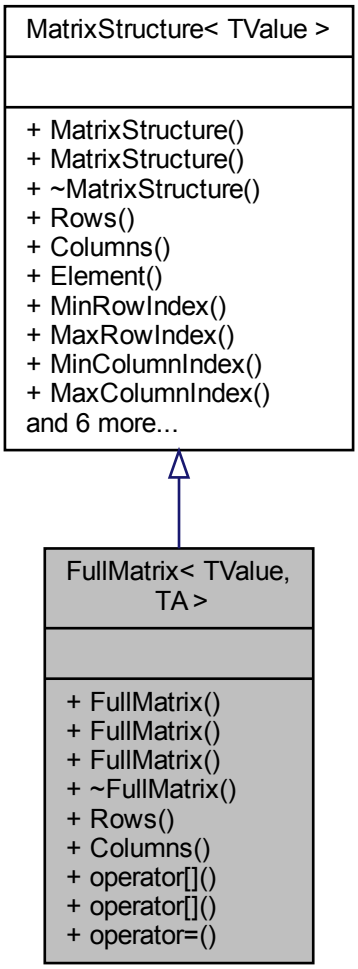
- include/duffy/FullArray.hh
- src/FullArray.cc

3.48 FullMatrix< TValue, TA > Class Template Reference

Inheritance diagram for FullMatrix< TValue, TA >:



Collaboration diagram for FullMatrix< TValue, TA >:



Public Member Functions

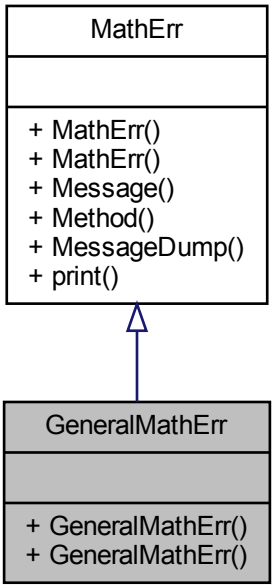
- **FullMatrix** (std::size_t rows, std::size_t columns)
- **FullMatrix** (const FullMatrix< TValue, TA > &source)
- virtual std::size_t **Rows** () const
- virtual std::size_t **Columns** () const
- virtual ArrayStructure< TValue > & **operator[ ]** (std::size_t index)
- virtual const ArrayStructure< TValue > & **operator[ ]** (std::size_t index) const
- FullMatrix< TValue, TA > & **operator=** (const FullMatrix< TValue, TA > &source)

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

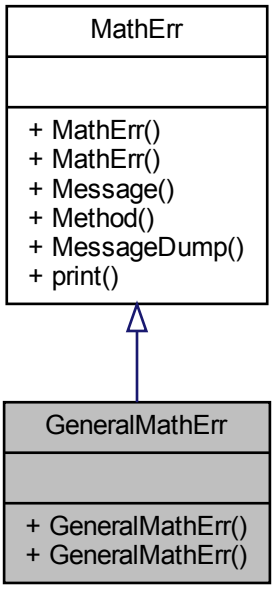
- include/duffy/FullMatrix.hh
- src/FullMatrix.cc

3.49 GeneralMathErr Class Reference

Inheritance diagram for GeneralMathErr:



Collaboration diagram for GeneralMathErr:



Public Member Functions

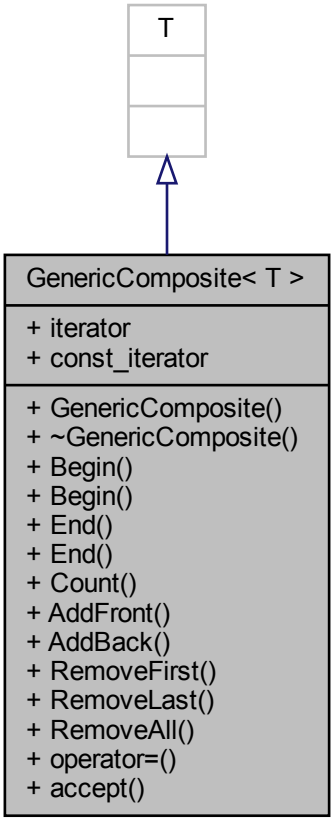
- **GeneralMathErr** (const std::string &message, const std::string &method)

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

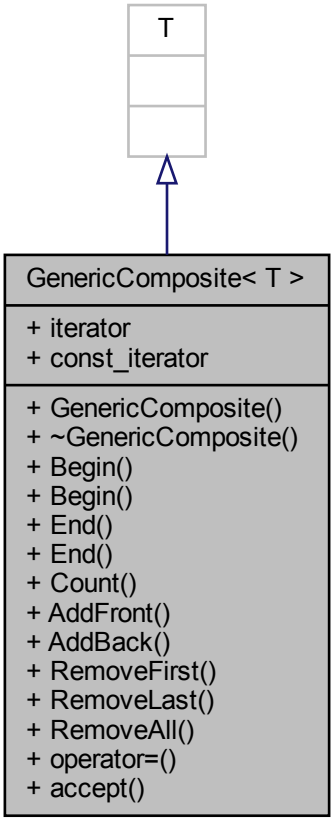
- src/MathErr.cc

3.50 GenericComposite< T > Class Template Reference

Inheritance diagram for GenericComposite< T >:



Collaboration diagram for GenericComposite< T >:



Public Member Functions

- std::iterator **Begin** ()
- const_iterator **Begin** () const
- std::iterator **End** ()
- const_iterator **End** () const
- int **Count** () const
- void **AddFront** (T &s)
- void **AddBack** (T &s)
- void **RemoveFirst** ()
- void **RemoveLast** ()
- void **RemoveAll** ()
- GenericComposite & **operator=** (const GenericComposite &source)
- template<class S >
  void **accept** (S &v)

Public Attributes

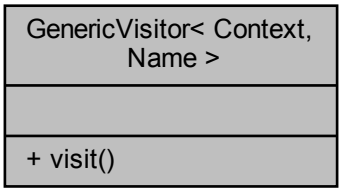
- std::list< T * >::iterator **iterator**
- std::list< T * >::const_iterator **const_iterator**

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

- include/duffy/GenericComposite.hh
- src/GenericComposite.cc

3.51 GenericVisitor< Context, Name > Class Template Reference

Collaboration diagram for GenericVisitor< Context, Name >:



Public Member Functions

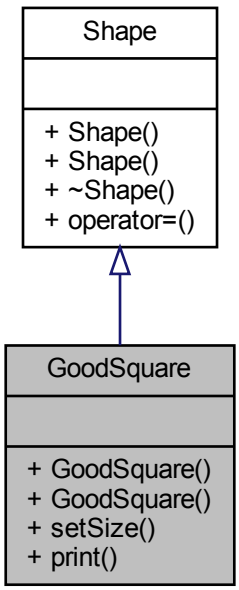
- void **visit** (GenericComposite< Context > &context)

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

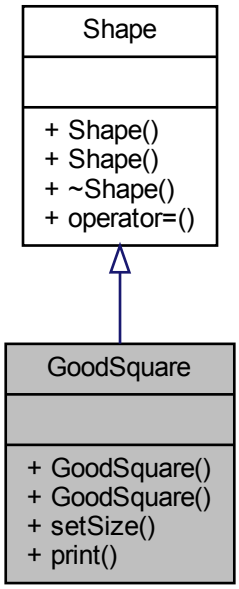
- include/duffy/GenericVisitor.hh

3.52 GoodSquare Class Reference

Inheritance diagram for GoodSquare:



Collaboration diagram for GoodSquare:



Public Member Functions

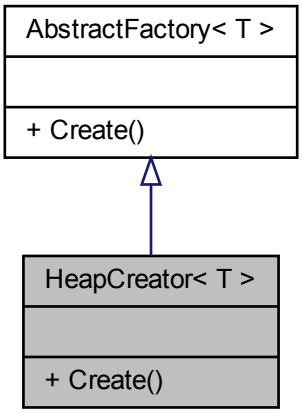
- **GoodSquare** (const Point &basePoint, double size)
- void **setSize** (double newSize)
- void **print** () const

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

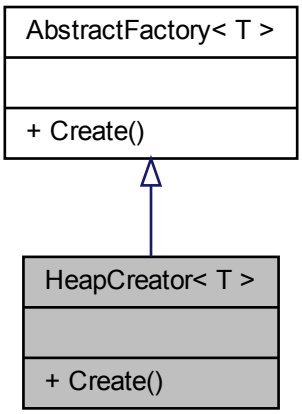
- src/Rectangle.cc

3.53 HeapCreator< T > Class Template Reference

Inheritance diagram for HeapCreator< T >:



Collaboration diagram for HeapCreator< T >:



Public Member Functions

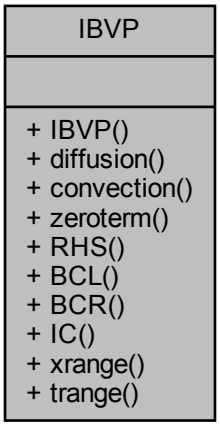
- virtual T * **Create** ()

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

- src/GenericCreator.cc

3.54 IBVP Class Reference

Collaboration diagram for IBVP:



Public Member Functions

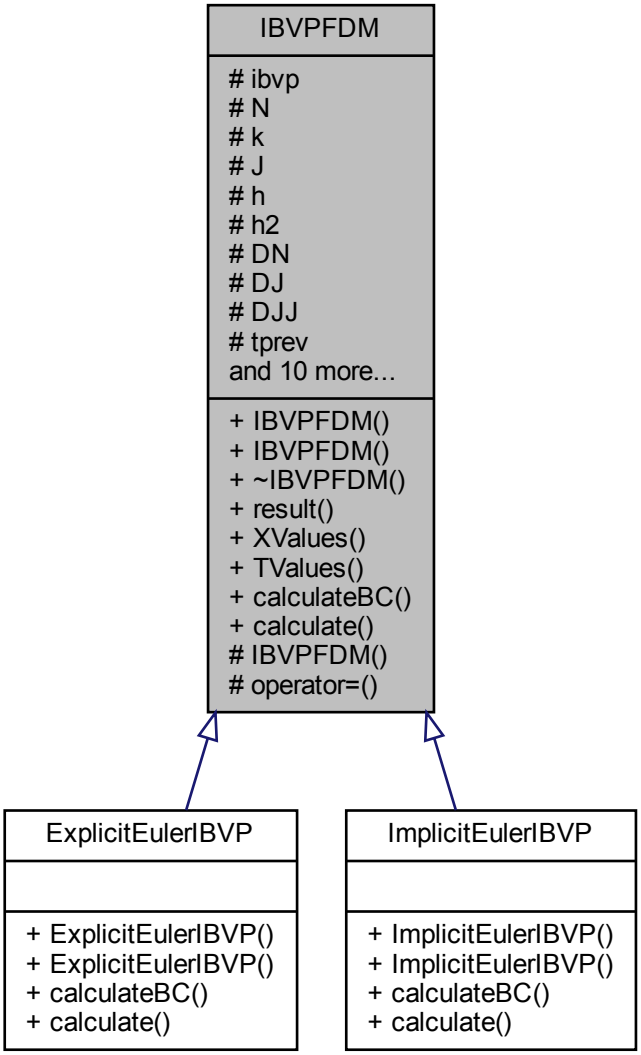
- **IBVP** (IBVPImp &executor, const Range< double > &xrange, const Range< double > &trange)
- double **diffusion** (double x, double t) const
- double **convection** (double x, double t) const
- double **zeroterm** (double x, double t) const
- double **RHS** (double x, double t) const
- double **BCL** (double t) const
- double **BCR** (double t) const
- double **IC** (double x) const
- Range< double > & **xrange** ()
- Range< double > & **trange** ()

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

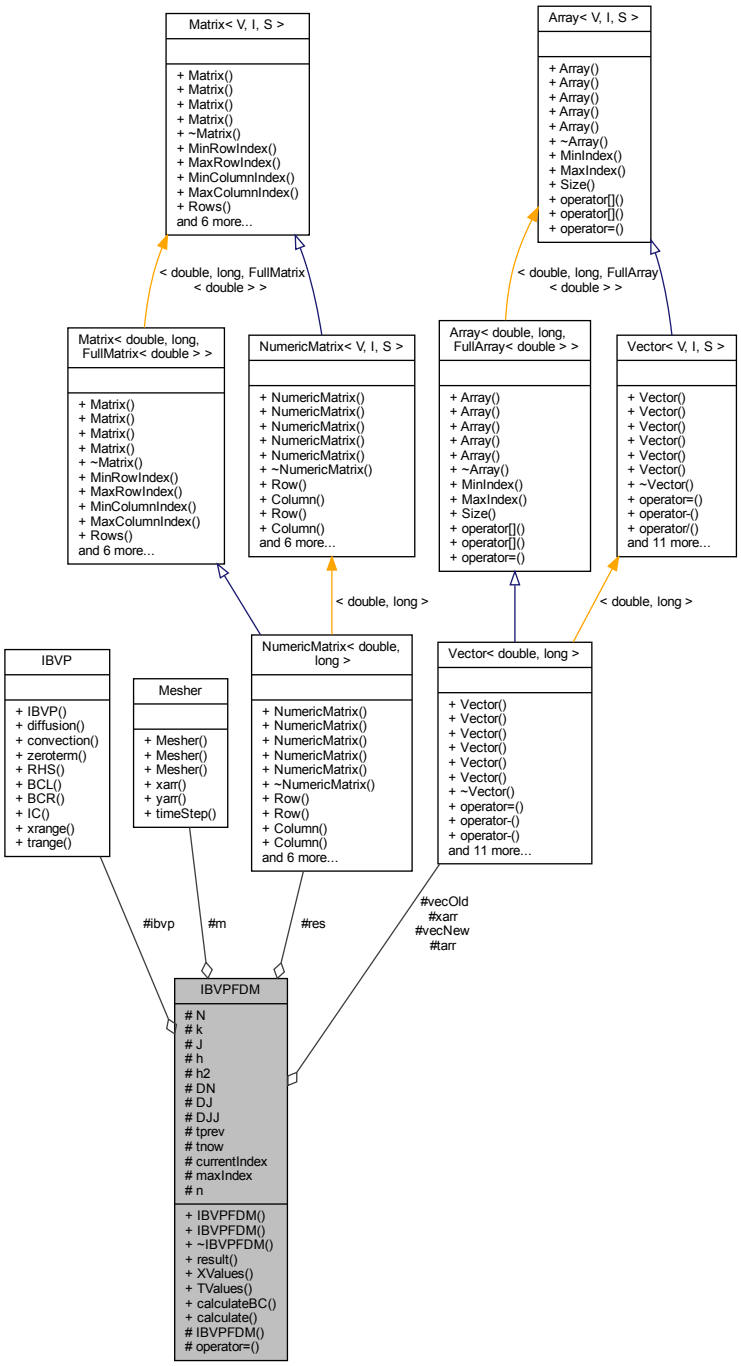
- include/duffy/IBVP.hh
- src/IBVP.cc

3.55 IBVPFDM Class Reference

Inheritance diagram for IBVPFDM:



Collaboration diagram for IBVPFDM:



Public Member Functions

- **IBVPFDM** (IBVP &source, long NSteps, long JSteps)
- NumericMatrix< double, long > & **result** ()
- Vector< double, long > **XValues** () const
- Vector< double, long > **TValues** () const
- virtual void **calculateBC** ()=0
- virtual void **calculate** ()=0

Protected Member Functions

- **IBVPFDM** (const IBVPFDM &source)
- IBVPFDM & **operator=** (const IBVPFDM &source)

Protected Attributes

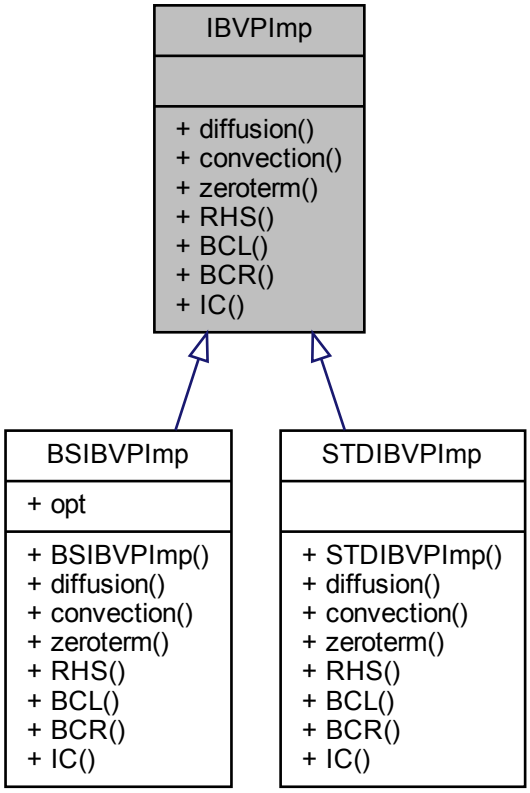
- IBVP * **ibvp**
- long **N**
- double **k**
- long **J**
- double **h**
- double **h2**
- double **DN**
- double **DJ**
- double **DJJ**
- double **tprev**
- double **tnow**
- long **currentIndex**
- long **maxIndex**
- Mesher **m**
- Vector< double, long > **xarr**
- Vector< double, long > **tarr**
- NumericMatrix< double, long > **res**
- long **n**
- Vector< double, long > **vecOld**
- Vector< double, long > **vecNew**

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

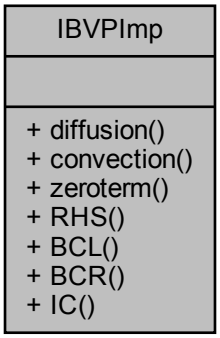
- include/duffy/IBVPSolver.hh
- src/IBVPSolver.cc

3.56 IBVPImp Class Reference

Inheritance diagram for IBVPImp:



Collaboration diagram for IBVPImp:



Public Member Functions

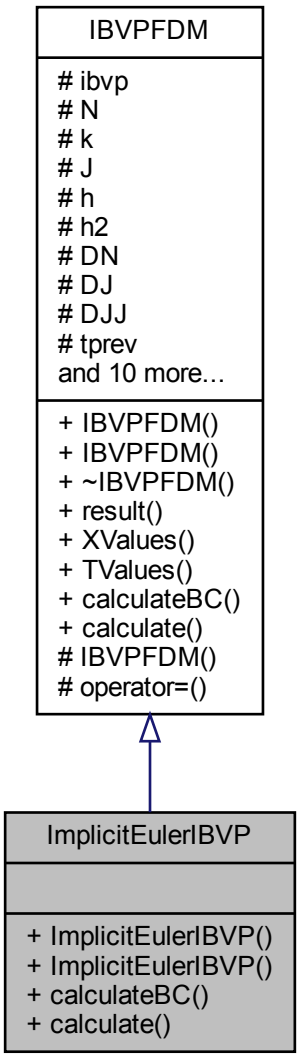
- virtual double **diffusion** (double x, double t) const =0
- virtual double **convection** (double x, double t) const =0
- virtual double **zeroterm** (double x, double t) const =0
- virtual double **RHS** (double x, double t) const =0
- virtual double **BCL** (double t) const =0
- virtual double **BCR** (double t) const =0
- virtual double **IC** (double x) const =0

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

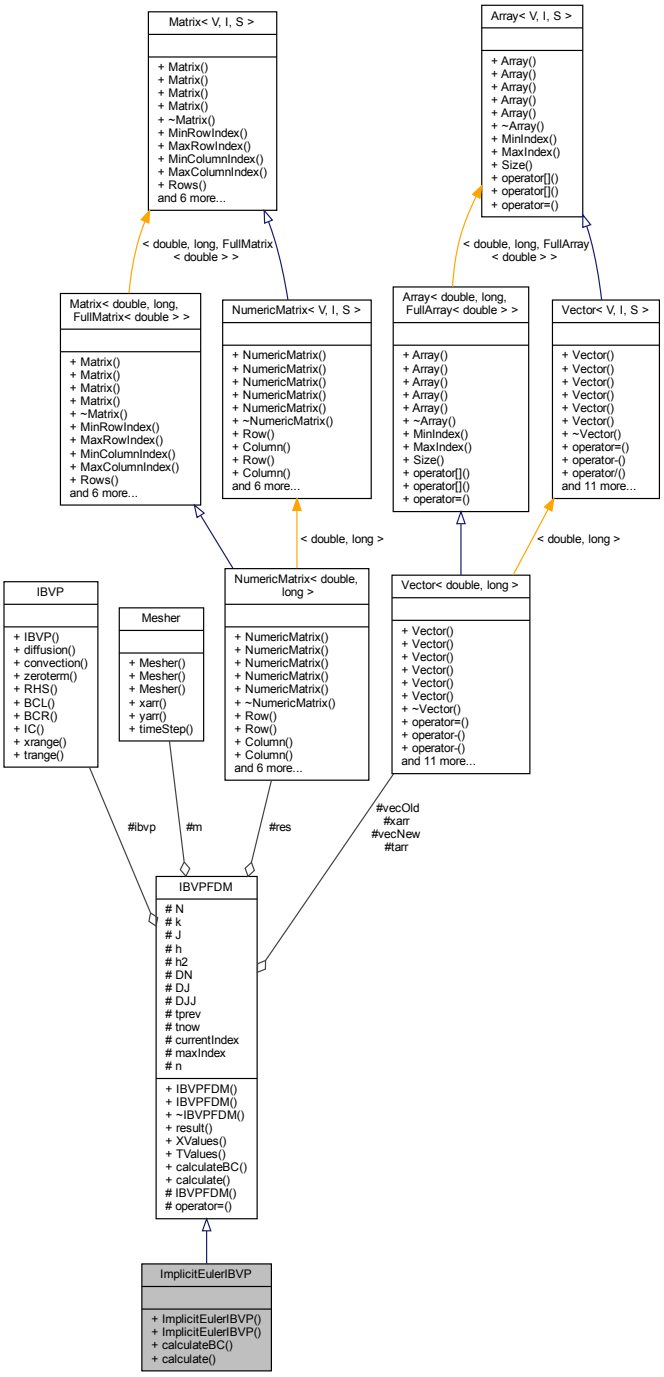
- include/duffy/IBVPImp.hh

3.57 ImplicitEulerIBVP Class Reference

Inheritance diagram for ImplicitEulerIBVP:



Collaboration diagram for ImplicitEulerIBVP:



Public Member Functions

- **ImplicitEulerIBVP** (IBVP &source, long NSteps, long JSteps)
- void **calculateBC** ()
- void **calculate** ()

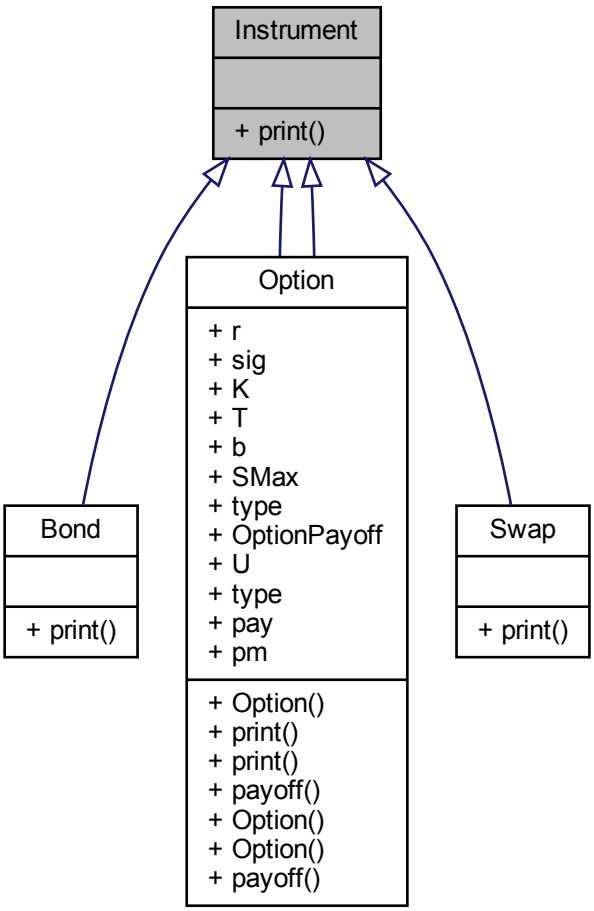
Additional Inherited Members

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

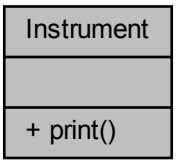
- include/duffy/IEulerIBVPSolver.hh
- src/IEulerIBVPSolver.cc

3.58 Instrument Class Reference

Inheritance diagram for Instrument:



Collaboration diagram for Instrument:



Public Member Functions

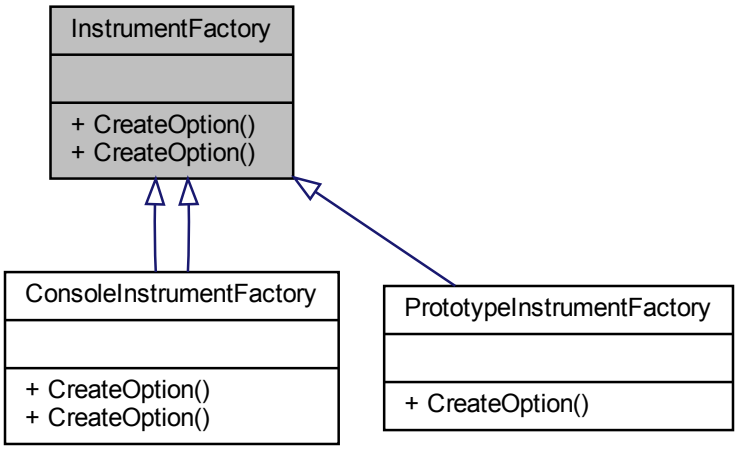
- virtual void **print** () const =0

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

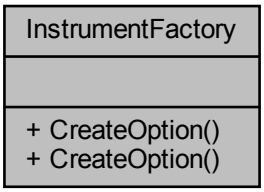
- include/duffy/Instrument.hh
- include/duffy/InstrumentOld.hh

3.59 InstrumentFactory Class Reference

Inheritance diagram for InstrumentFactory:



Collaboration diagram for InstrumentFactory:



Public Member Functions

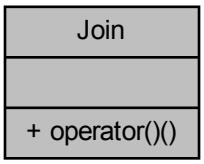
- virtual Option * **CreateOption** () const =0
- virtual TwoFactorOptionData * **CreateOption** () const =0

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

- include/duffy/Instrument.hh
- include/duffy/InstrumentNew.hh

3.60 Join Class Reference

Collaboration diagram for Join:



Public Member Functions

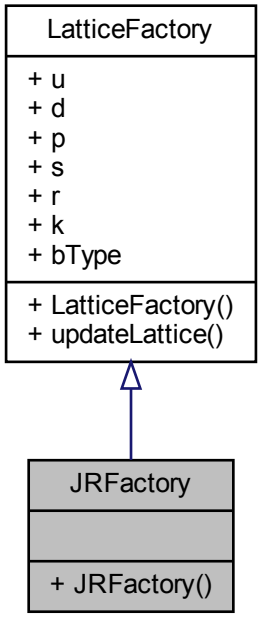
- std::string **operator()** (const std::string &s1, const std::string &s2)

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

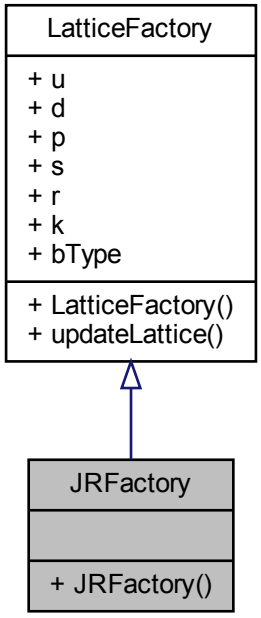
- tests/HelloWorldAlmost.cc

3.61 JRFactory Class Reference

Inheritance diagram for JRFactory:



Collaboration diagram for JRFactory:



Public Member Functions

- **JRFactory** (double s, double r, double k)

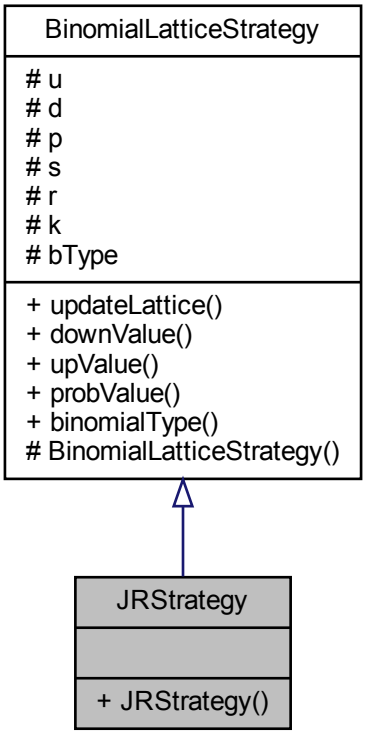
Additional Inherited Members

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

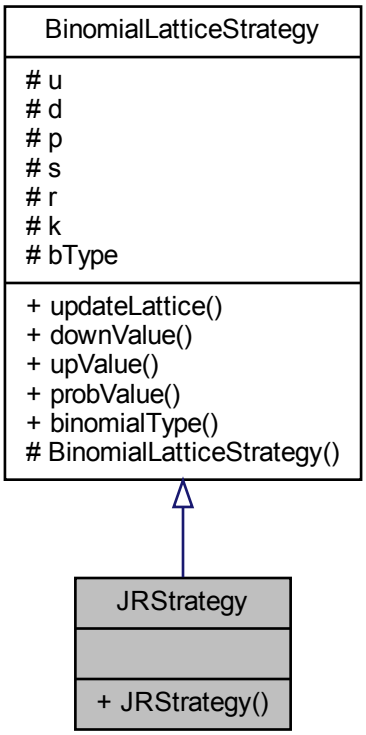
- include/duffy/LatticeFactory.hh

3.62 JRStrategy Class Reference

Inheritance diagram for JRStrategy:



Collaboration diagram for JRStrategy:



Public Member Functions

- **JRStrategy** (double vol, double interest, double delta)

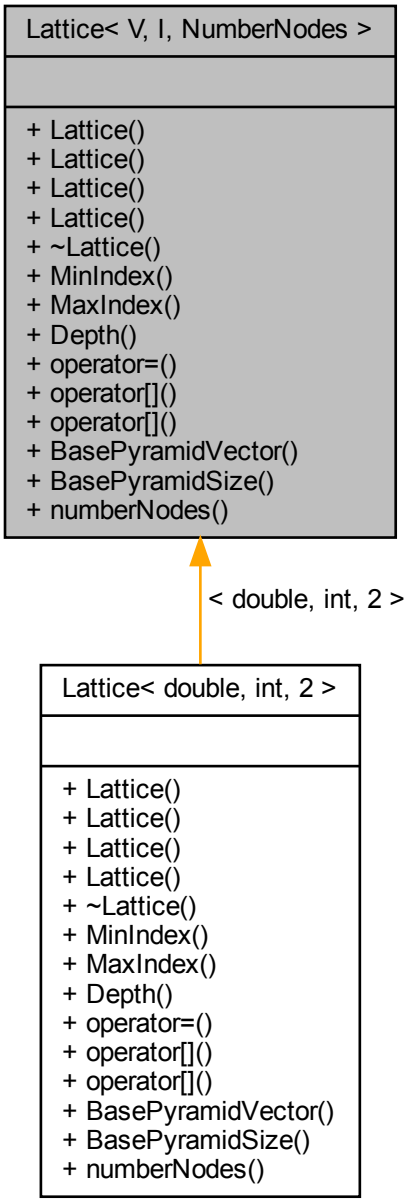
Additional Inherited Members

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

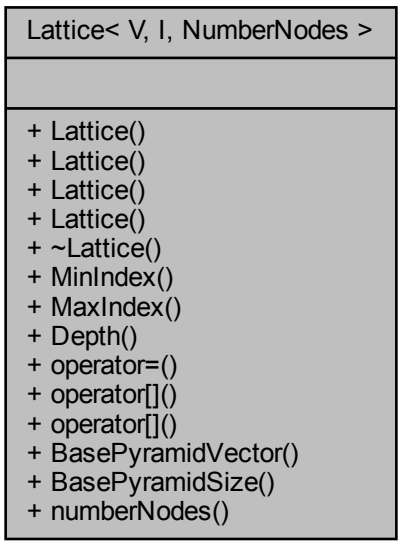
- include/duffy/BinomialLatticeStrategy.hh
- src/BinomialLatticeStrategy.cc

3.63 Lattice< V, I, NumberNodes > Class Template Reference

Inheritance diagram for Lattice< V, I, NumberNodes >:



Collaboration diagram for Lattice< V, I, NumberNodes >:



Public Member Functions

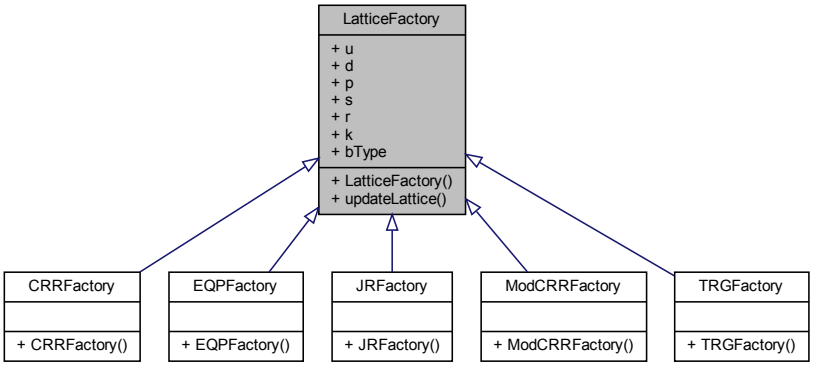
- **Lattice** (const I &Nrows)
- **Lattice** (const I &Nrows, const V &val)
- **Lattice** (const Lattice< V, I, NumberNodes > &source)
- I **MinIndex** () const
- I **MaxIndex** () const
- I **Depth** () const
- Lattice< V, I, NumberNodes > & **operator=** (const Lattice< V, I, NumberNodes > &source)
- Vector< V, I > & **operator[ ]** (const I &nLevel)
- const Vector< V, I > & **operator[ ]** (const I &nLevel) const
- Vector< V, I > **BasePyramidVector** () const
- I **BasePyramidSize** () const
- I **numberNodes** () const

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

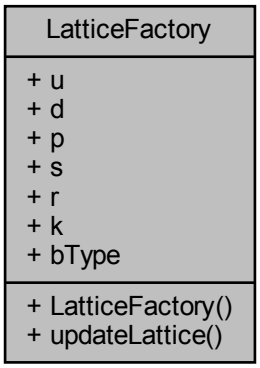
- include/duffy/Lattice.hh
- src/Lattice.cc

3.64 LatticeFactory Class Reference

Inheritance diagram for LatticeFactory:



Collaboration diagram for LatticeFactory:



Public Types

- enum **Type** { **Additive**, **Multiplicative** }

Public Member Functions

- **LatticeFactory** (double vol, double interest, double delta)
- virtual void **updateLattice** (Lattice< double, int, 2 > &source, double rootValue) const

Public Attributes

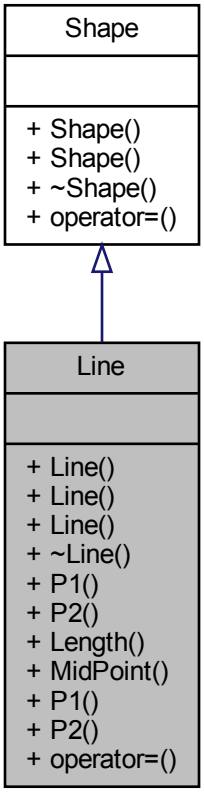
- double **u**
- double **d**
- double **p**
- double **s**
- double **r**
- double **k**
- Type **bType**

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

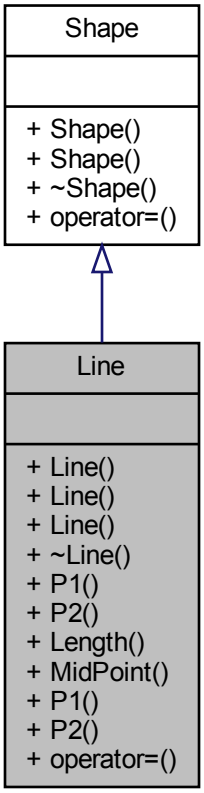
- include/duffy/LatticeFactory.hh

3.65 Line Class Reference

Inheritance diagram for Line:



Collaboration diagram for Line:



Public Member Functions

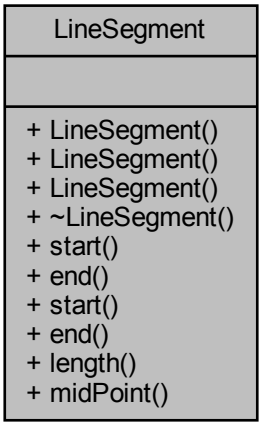
- **Line** (const Point &ps1, const Point &ps2)
- **Line** (const Line &source)
- Point **P1** () const
- Point **P2** () const
- double **Length** () const
- Point **MidPoint** () const
- void **P1** (const Point &NewP1)
- void **P2** (const Point &NewP2)
- Line & **operator=** (const Line &source)

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

- include/duffy/Line.hh
- src/Line.cc

3.66 LineSegment Class Reference

Collaboration diagram for LineSegment:



Public Member Functions

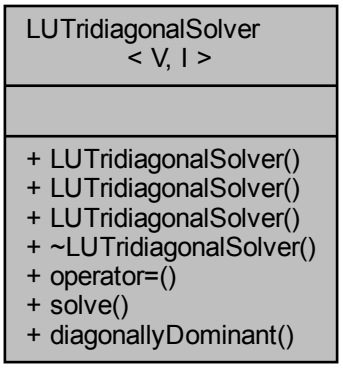
- **LineSegment** (const Point &p1, const Point &p2)
- **LineSegment** (const LineSegment &l)
- Point **start** () const
- Point **end** () const
- void **start** (const Point &pt)
- void **end** (const Point &pt)
- double **length** () const
- Point **midPoint** () const

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

- include/duffy/LineSegment.hh

3.67 LUTridiagonalSolver< V, I > Class Template Reference

Collaboration diagram for LUTridiagonalSolver< V, I >:



Public Member Functions

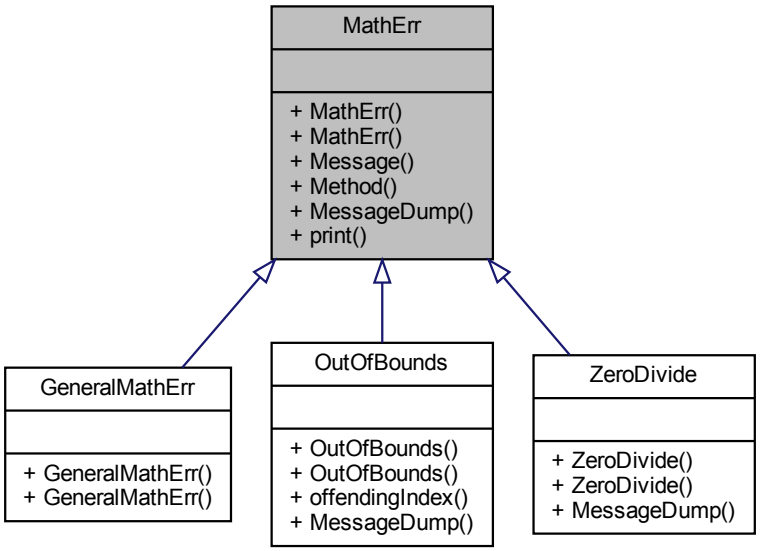
- **LUTridiagonalSolver** (Vector< V, I > &lower_A, Vector< V, I > &diagonal_B, Vector< V, I > &upper_C, Vector< V, I > &rhs_R)
- **LUTridiagonalSolver** (const LUTridiagonalSolver< V, I > &source)
- LUTridiagonalSolver< V, I > & **operator=** (const LUTridiagonalSolver< V, I > &source)
- Vector< V, I > **solve** ()
- bool **diagonallyDominant** () const

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

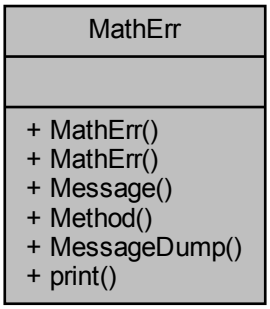
- include/duffy/LUSolver.hh
- src/LUSolver.cc

3.68 MathErr Class Reference

Inheritance diagram for MathErr:



Collaboration diagram for MathErr:



Public Member Functions

- **MathErr** (const std::string &message, const std::string &method)
- std::string **Message** () const
- std::string **Method** () const
- virtual std::vector< std::string > **MessageDump** () const =0

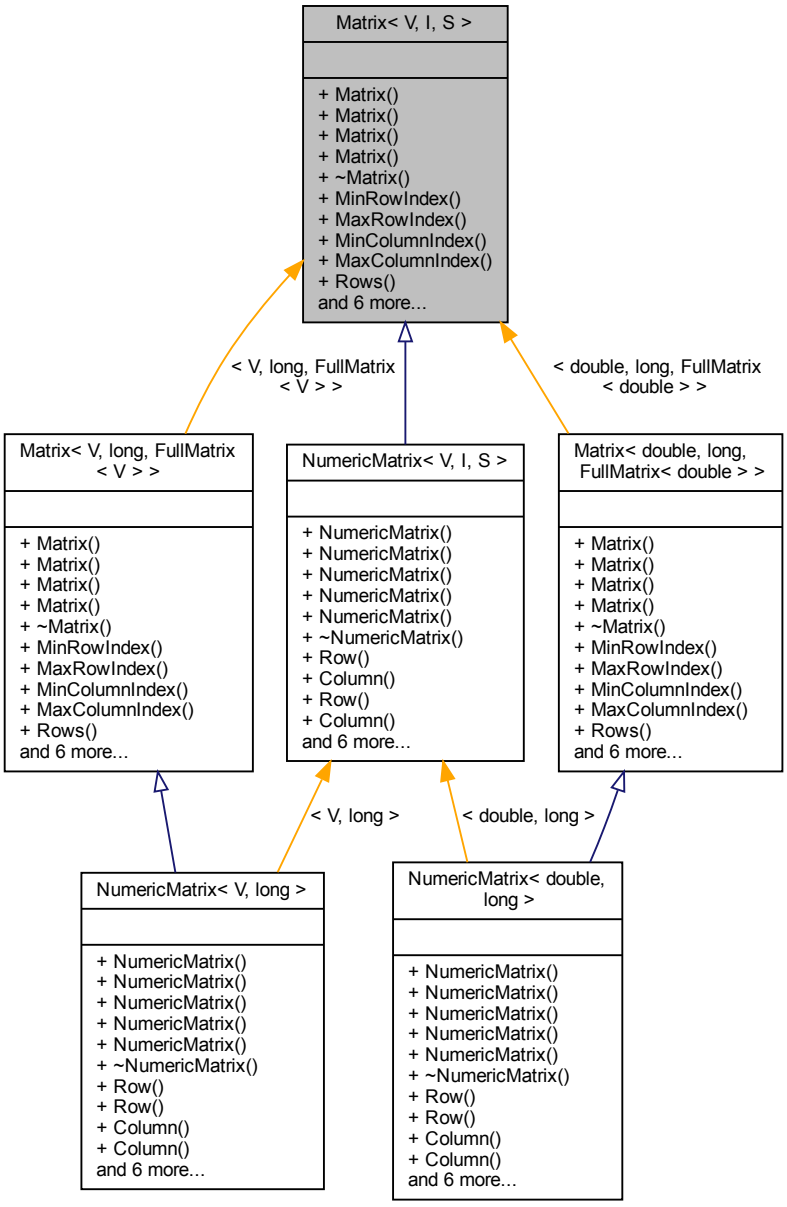
- virtual void **print** () const

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

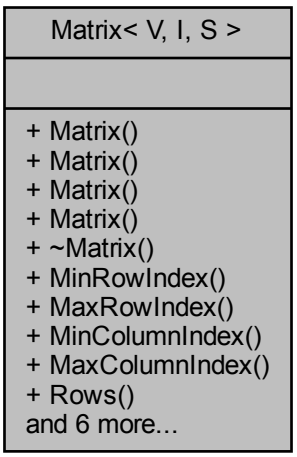
- src/MathErr.cc

3.69 Matrix< V, I, S > Class Template Reference

Inheritance diagram for Matrix< V, I, S >:



Collaboration diagram for Matrix< V, I, S >:



Public Member Functions

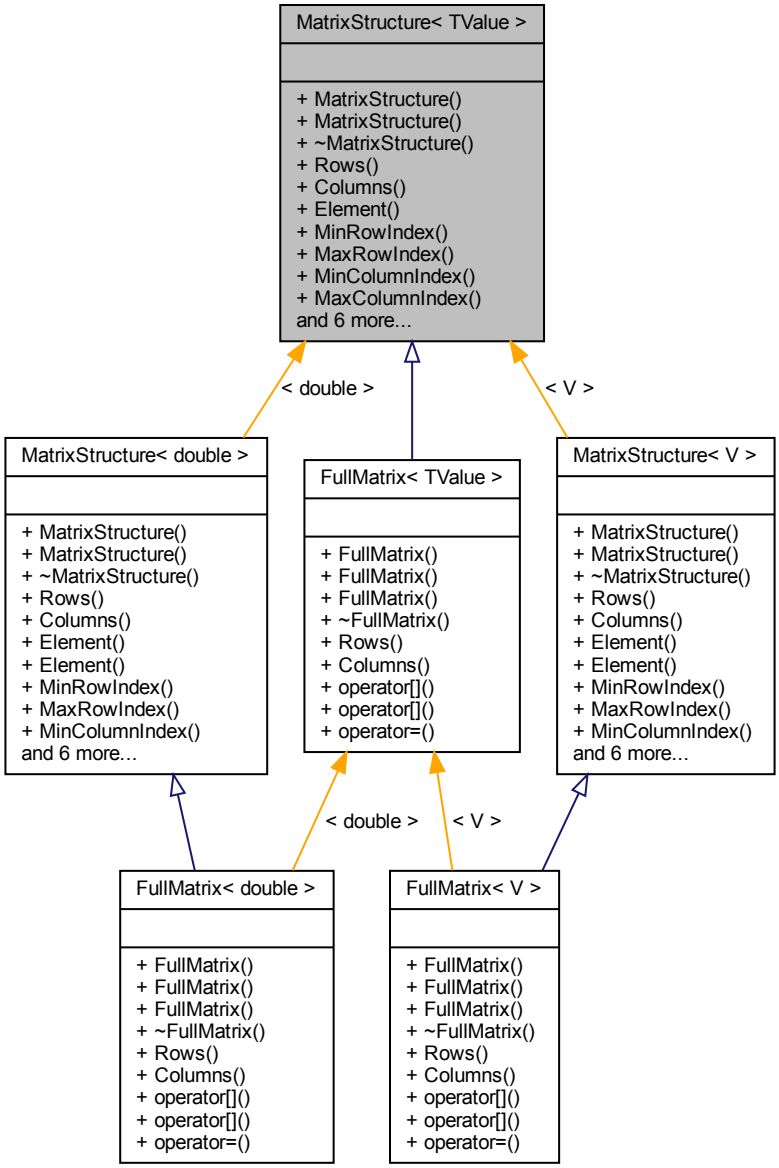
- **Matrix** (I rows, I columns)
- **Matrix** (I rows, I columns, I rowStart, I columnStart)
- **Matrix** (const Matrix< V, I, S > &source)
- I **MinRowIndex** () const
- I **MaxRowIndex** () const
- I **MinColumnIndex** () const
- I **MaxColumnIndex** () const
- I **Rows** () const
- I **Columns** () const
- void **Row** (I row, const Array< V, I > &val)
- void **Column** (I column, const Array< V, I > &val)
- const V & **operator()** (I row, I column) const
- V & **operator()** (I row, I column)
- Matrix< V, I, S > & **operator=** (const Matrix< V, I, S > &source)

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

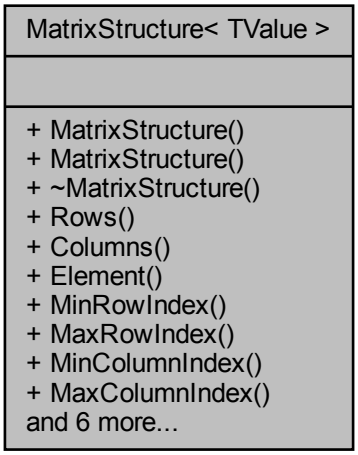
- include/duffy/Matrix.hh
- src/Matrix.cc

3.70 MatrixStructure< TValue > Class Template Reference

Inheritance diagram for MatrixStructure< TValue >:



Collaboration diagram for MatrixStructure< TValue >:



Public Member Functions

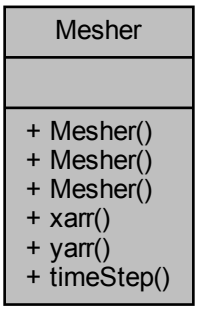
- **MatrixStructure** (const MatrixStructure< TValue > &source)
- virtual size_t **Rows** () const =0
- virtual size_t **Columns** () const =0
- const TValue & **Element** (size_t row, size_t column) const
- size_t **MinRowIndex** () const
- size_t **MaxRowIndex** () const
- size_t **MinColumnIndex** () const
- size_t **MaxColumnIndex** () const
- void **Element** (size_t row, size_t column, const TValue &val)
- virtual ArrayStructure< TValue > & **operator[ ]** (size_t index)=0
- virtual const ArrayStructure< TValue > & **operator[ ]** (size_t index) const =0
- const TValue & **operator()** (size_t row, size_t column) const
- TValue & **operator()** (size_t row, size_t column)
- MatrixStructure< TValue > & **operator=** (const MatrixStructure< TValue > &source)

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

- include/duffy/MatrixStructure.hh

3.71 Mesher Class Reference

Collaboration diagram for Mesher:



Public Member Functions

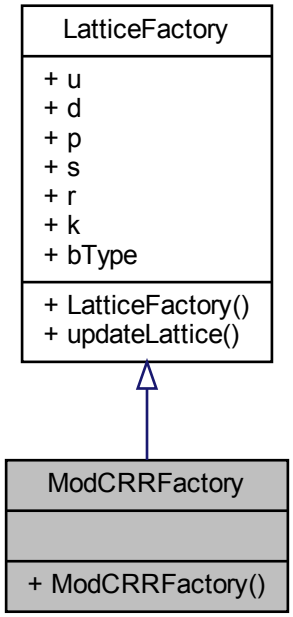
- **Mesher** (double A, double B, double t, double T)
- **Mesher** (const Range< double > &rX, const Range< double > &rT)
- Vector< double, long > **xarr** (int J)
- Vector< double, long > **yarr** (int N)
- double **timeStep** (int N)

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

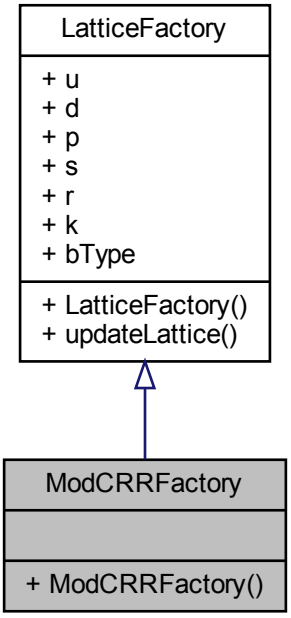
- include/duffy/Mesher.hh
- src/Mesher.cc

3.72 ModCRRFactory Class Reference

Inheritance diagram for ModCRRFactory:



Collaboration diagram for ModCRRFactory:



Public Member Functions

- **ModCRRFactory** (double s, double r, double k, double S, double K, int N)

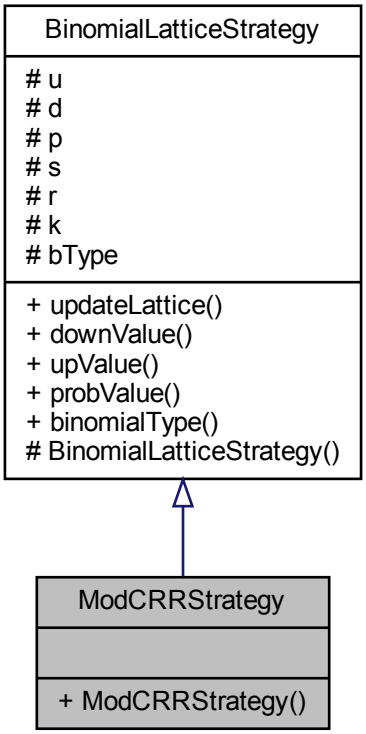
Additional Inherited Members

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

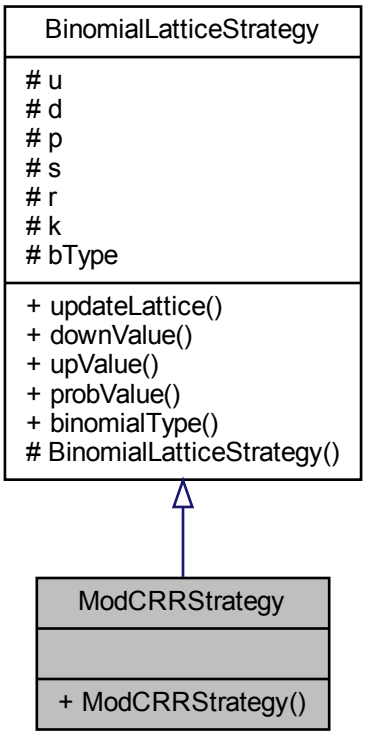
- include/duffy/LatticeFactory.hh

3.73 ModCRRStrategy Class Reference

Inheritance diagram for ModCRRStrategy:



Collaboration diagram for ModCRRStrategy:



Public Member Functions

- **ModCRRStrategy** (double vol, double interest, double delta, double S, double K, int N)

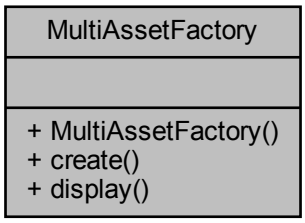
Additional Inherited Members

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

- include/duffy/BinomialLatticeStrategy.hh
- src/BinomialLatticeStrategy.cc

3.74 MultiAssetFactory Class Reference

Collaboration diagram for MultiAssetFactory:



Public Member Functions

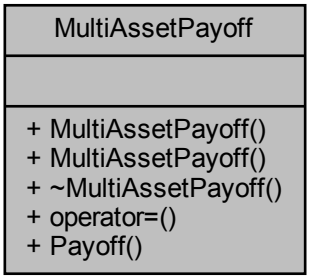
- virtual MultiAssetPayoffStrategy * **create** (int N)
- void **display** ()

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

- MultiAssetFactory.hh

3.75 MultiAssetPayoff Class Reference

Collaboration diagram for MultiAssetPayoff:



Public Member Functions

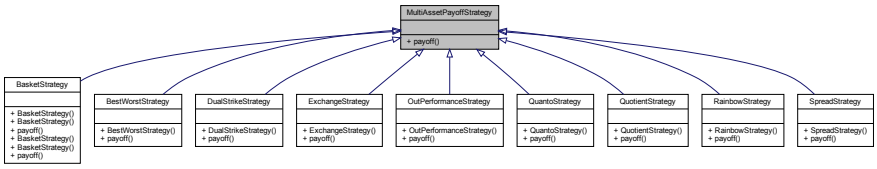
- **MultiAssetPayoff** (MultiAssetPayoffStrategy &pstrat)
- **MultiAssetPayoff** (const MultiAssetPayoff &source)
- MultiAssetPayoff & **operator=** (const MultiAssetPayoff &source)
- virtual double **Payoff** (double S1, double S2) const

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

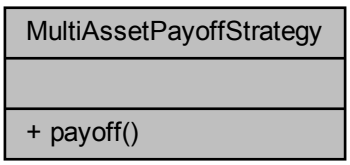
- MultiAssetPayoff.hh
- MultiAssetPayoff.cc

3.76 MultiAssetPayoffStrategy Class Reference

Inheritance diagram for MultiAssetPayoffStrategy:



Collaboration diagram for MultiAssetPayoffStrategy:



Public Member Functions

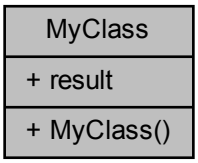
- virtual double **payoff** (double S1, double S2) const =0

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

- MultiAssetPayoffStrategy.hh

3.77 MyClass Class Reference

Collaboration diagram for MyClass:



Public Attributes

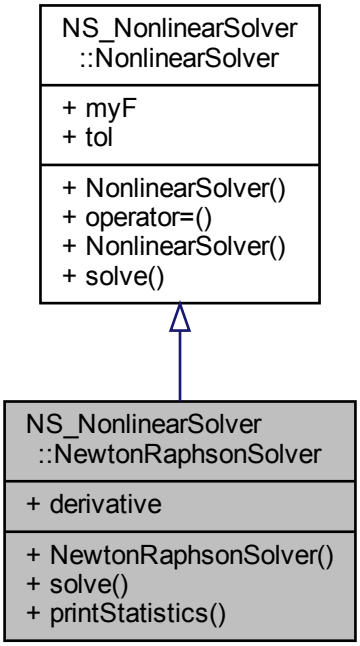
- double **result**

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

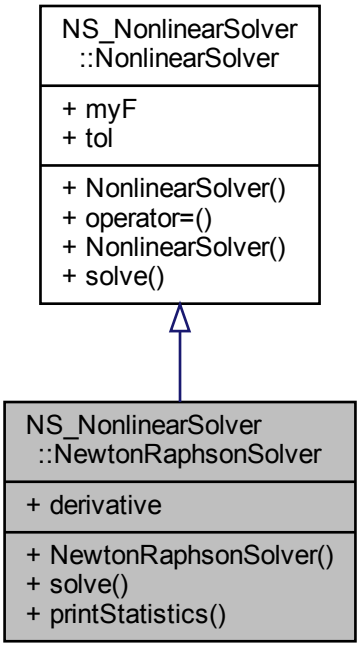
- tests/TestAlias.cc

3.78 NS_NonlinearSolver::NewtonRaphsonSolver Class Reference

Inheritance diagram for NS_NonlinearSolver::NewtonRaphsonSolver:



Collaboration diagram for NS_NonlinearSolver::NewtonRaphsonSolver:



Public Member Functions

- **NewtonRaphsonSolver** (double guess)
- double **solve** ()
- void **printStatistics** () const

Public Attributes

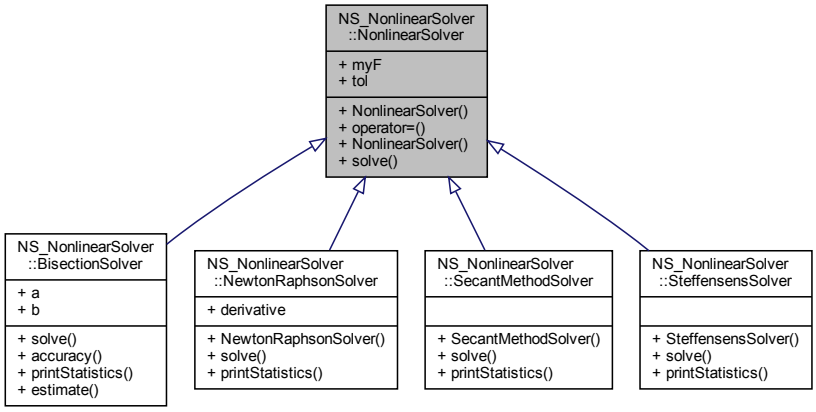
- double(∗ **derivative**)(double x)

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

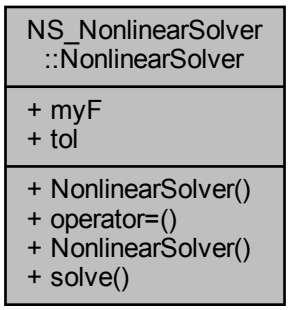
- include/duffy/NonlinearSolver.hh

3.79 NS_NonlinearSolver::NonlinearSolver Class Reference

Inheritance diagram for NS_NonlinearSolver::NonlinearSolver:



Collaboration diagram for NS_NonlinearSolver::NonlinearSolver:



Public Member Functions

- NonlinearSolver & **operator=** (const NonlinearSolver &n2)
- **NonlinearSolver** (double(∗function)(double))
- virtual double **solve** ()=0

Public Attributes

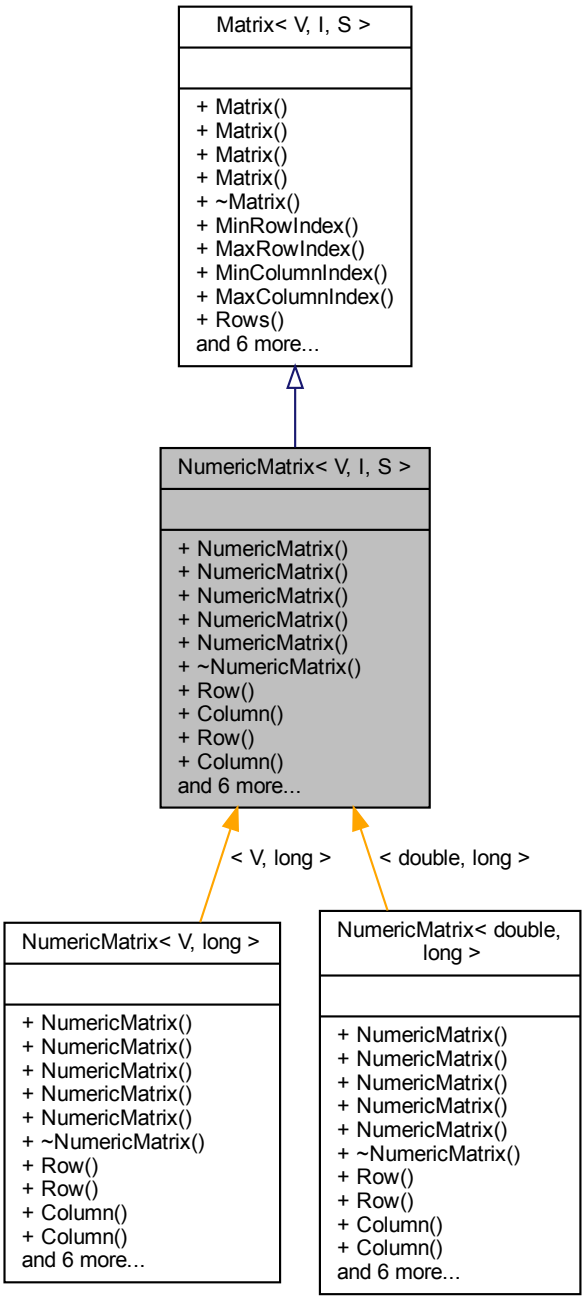
- double(∗ **myF**)(double x)
- double **tol**

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

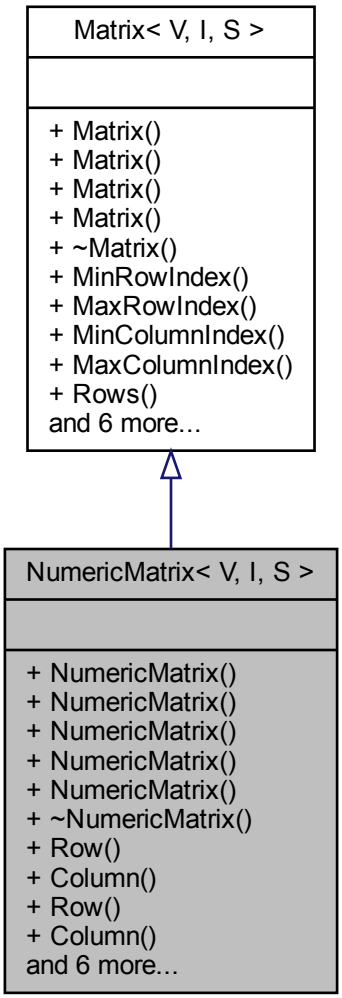
- include/duffy/NonlinearSolver.hh

3.80 NumericMatrix< V, I, S > Class Template Reference

Inheritance diagram for NumericMatrix< V, I, S >:



Collaboration diagram for NumericMatrix< V, I, S >:



Public Member Functions

- **NumericMatrix** (I rows, I columns)
- **NumericMatrix** (I rows, I columns, I rowStart, I columnStart)
- **NumericMatrix** (const Matrix< V, I, S > &source)
- **NumericMatrix** (const NumericMatrix< V, I, S > &source)
- Vector< V, I > **Row** (I row) const
- Vector< V, I > **Column** (I column) const
- void **Row** (I row, const Array< V, I > &val)
- void **Column** (I column, const Array< V, I > &val)
- NumericMatrix< V, I, S > & **operator=** (const NumericMatrix< V, I, S > &source)
- NumericMatrix< V, I, S > **operator-** () const
- NumericMatrix< V, I, S > **operator+** (const NumericMatrix< V, I, S > &m) const
- NumericMatrix< V, I, S > **operator-** (const NumericMatrix< V, I, S > &m) const

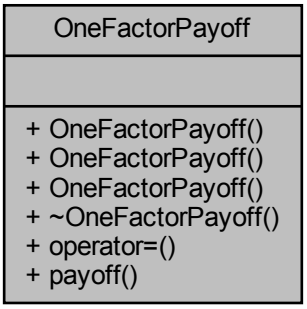
- NumericMatrix< V, I, S > **operator*** (const NumericMatrix< V, I, S > &m) const
- Vector< V, I > **operator*** (const Vector< V, I > &v) const

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

- include/duffy/NumericMatrix.hh
- src/NumericMatrix.cc

3.81 OneFactorPayoff Class Reference

Collaboration diagram for OneFactorPayoff:



Public Member Functions

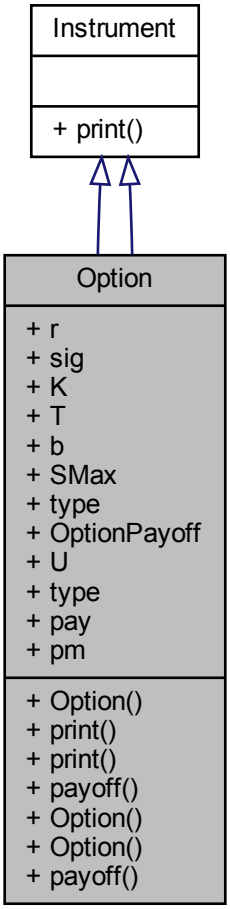
- **OneFactorPayoff** (double strike, double(*pay)(double K, double S))
- **OneFactorPayoff** (const OneFactorPayoff &source)
- OneFactorPayoff & **operator=** (const OneFactorPayoff &source)
- double **payoff** (double S) const

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

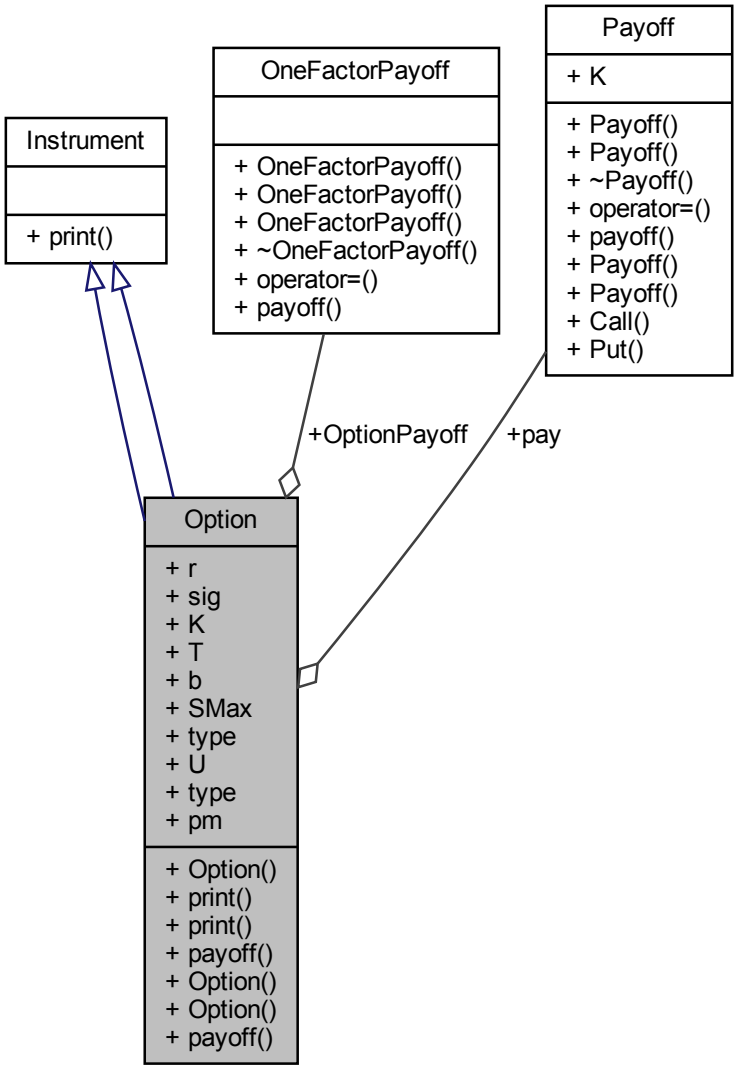
- include/duffy/OneFactorPayoff.hh
- src/OneFactorPayoff.cc

3.82 Option Class Reference

Inheritance diagram for Option:



Collaboration diagram for Option:



Public Member Functions

- void **print** ()
- void **print** () const
- double **payoff** (double S) const
- **Option** (PMember func)
- double **payoff** (double S)

Public Attributes

- double **r**
- double **sig**

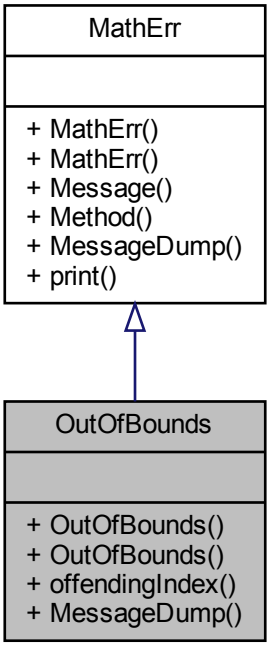
- double **K**
- double **T**
- double **b**
- double **SMax**
- char **type**
- OneFactorPayoff **OptionPayoff**
- double **U**
- int **type**
- Payoff **pay**
- PMember **pm**

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

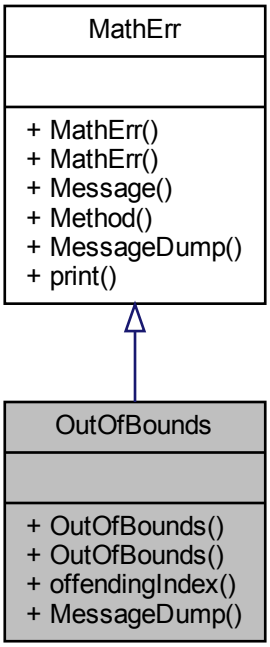
- include/duffy/Instrument.hh
- include/duffy/Option.hh
- tests/TestPointerToMemberFunction.cc
- include/duffy/InstrumentOld.hh

3.83 OutOfBounds Class Reference

Inheritance diagram for OutOfBounds:



Collaboration diagram for OutOfBounds:



Public Member Functions

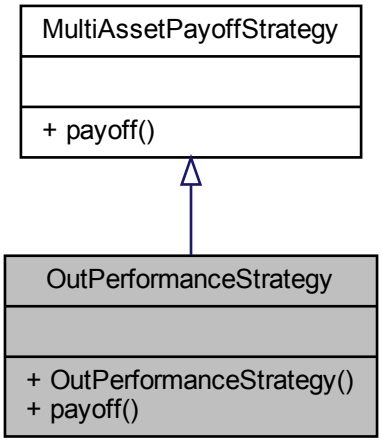
- **OutOfBounds** (const std::string &message, const std::string &method, int index)
- int **offendingIndex** () const
- std::vector< std::string > **MessageDump** () const

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

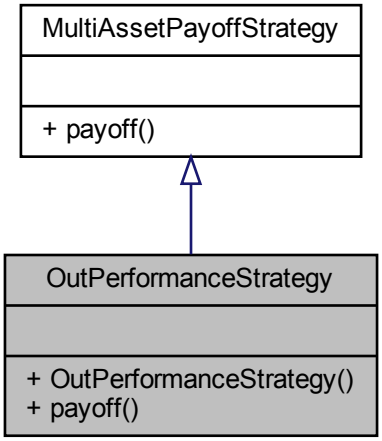
- src/MathErr.cc

3.84 OutPerformanceStrategy Class Reference

Inheritance diagram for OutPerformanceStrategy:



Collaboration diagram for OutPerformanceStrategy:



Public Member Functions

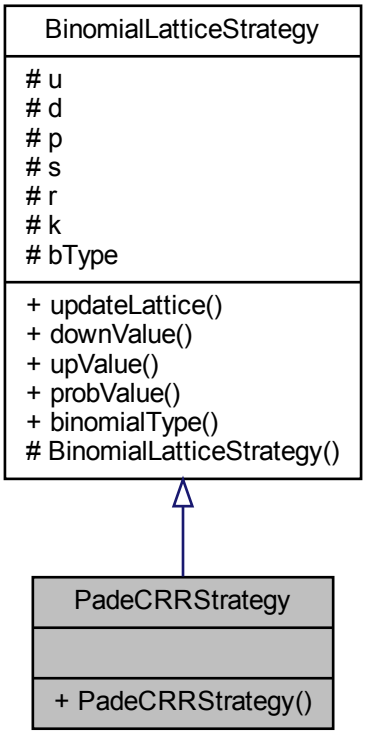
- **OutPerformanceStrategy** (double currentRate1, double currentRate2, double cp, double strikeRate)
- double **payoff** (double S1, double S2) const

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

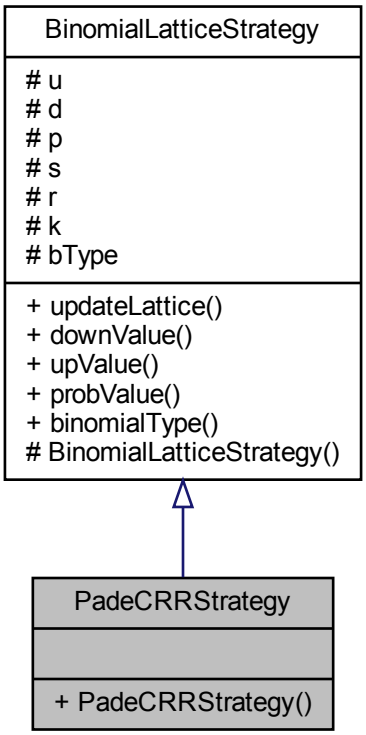
- MultiAssetPayoffStrategy.hh

3.85 PadeCRRStrategy Class Reference

Inheritance diagram for PadeCRRStrategy:



Collaboration diagram for PadeCRRStrategy:



Public Member Functions

- **PadeCRRStrategy** (double vol, double interest, double delta)

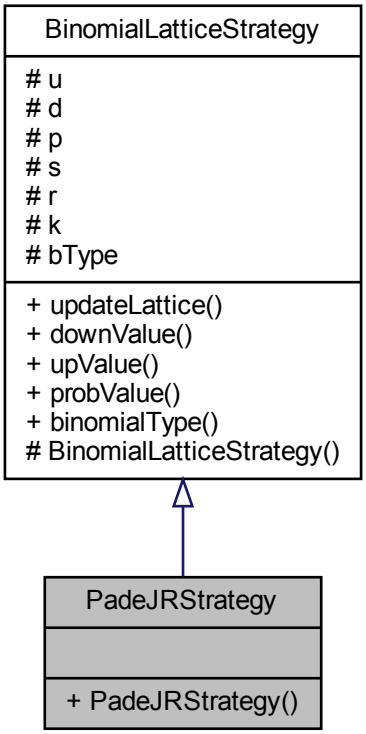
Additional Inherited Members

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

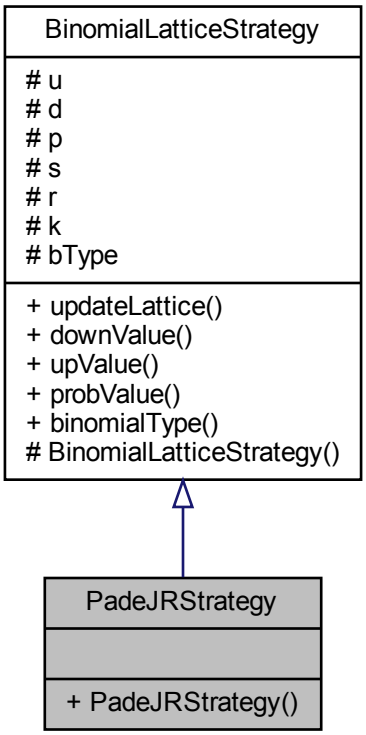
- include/duffy/BinomialLatticeStrategy.hh
- src/BinomialLatticeStrategy.cc

3.86 PadeJRStrategy Class Reference

Inheritance diagram for PadeJRStrategy:



Collaboration diagram for PadeJRStrategy:



Public Member Functions

- **PadeJRStrategy** (double vol, double interest, double delta)

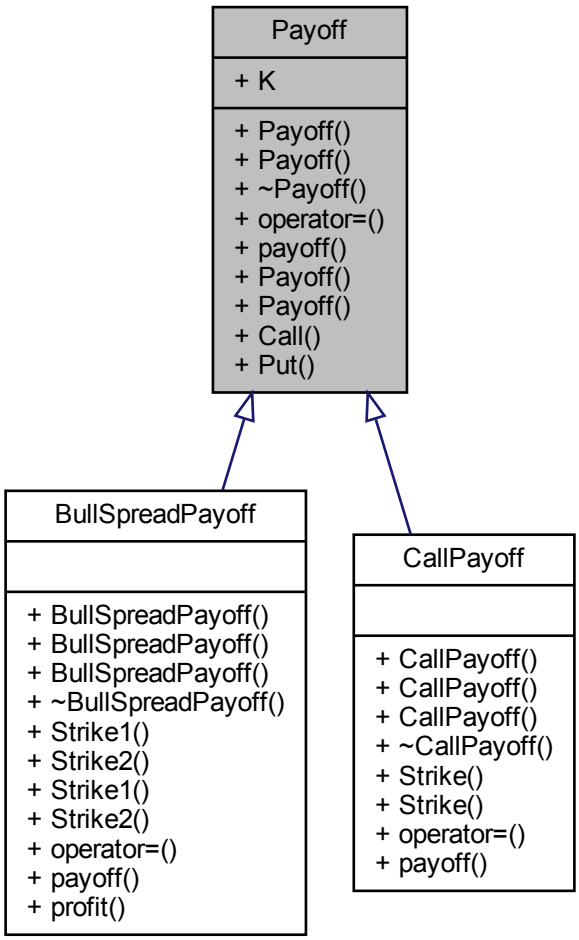
Additional Inherited Members

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

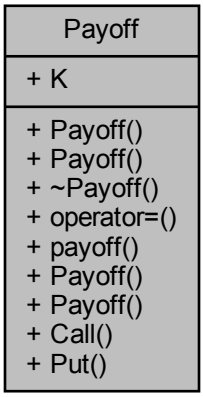
- include/duffy/BinomialLatticeStrategy.hh
- src/BinomialLatticeStrategy.cc

3.87 Payoff Class Reference

Inheritance diagram for Payoff:



Collaboration diagram for Payoff:



Public Member Functions

- **Payoff** (const Payoff &source)
- Payoff & **operator=** (const Payoff &source)
- virtual double **payoff** (double S) const =0
- **Payoff** (double strike)
- double **Call** (double S)
- double **Put** (double S)

Public Attributes

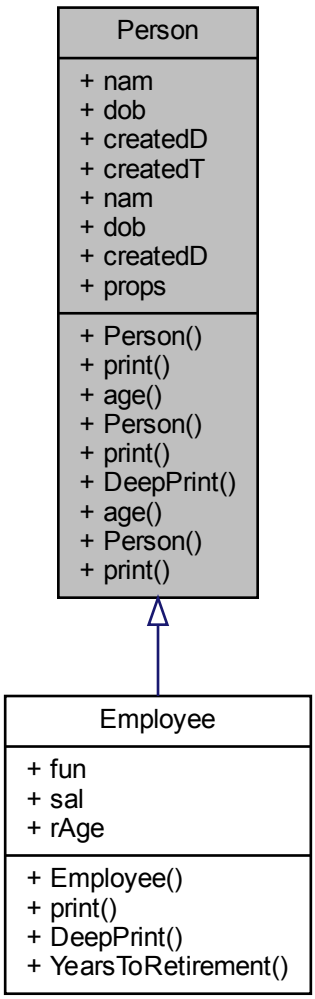
- double **K**

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

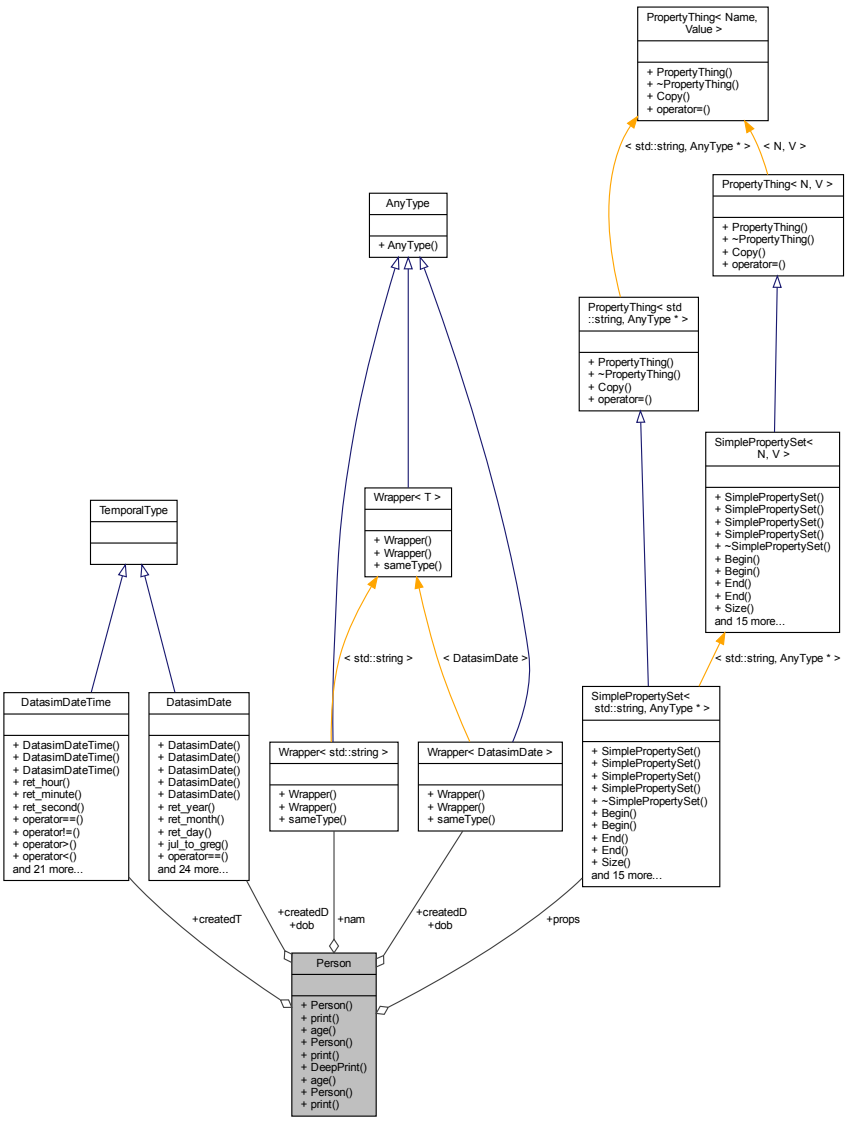
- include/duffy/Payoff.hh
- src/PayoffNew.cc
- src/Payoff.cc

3.88 Person Class Reference

Inheritance diagram for Person:



Collaboration diagram for Person:



Public Member Functions

- **Person** (const std::string &name, const DatasimDate &DateofBirth)
- void **print** () const
- int **age** () const
- **Person** (const std::string &name, const DatasimDate &DateofBirth)
- void **print** () const
- virtual void **DeepPrint** () const
- int **age** () const
- **Person** (const std::string &name, const DatasimDate &DateofBirth)
- void **print** () const

Public Attributes

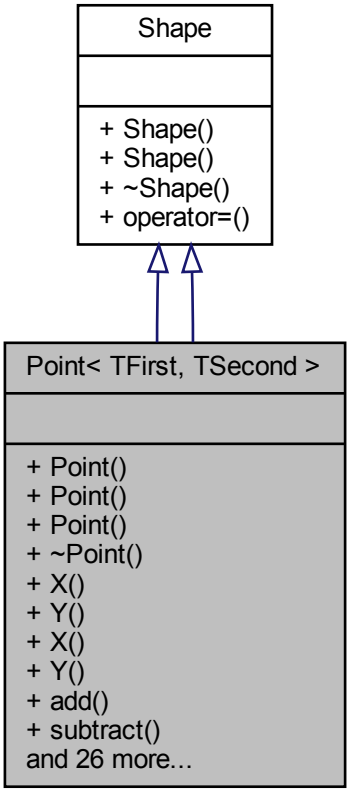
- std::string **nam**
- DatasimDate **dob**
- DatasimDate **createdD**
- DatasimDateTime **createdT**
- Wrapper< std::string > **nam**
- Wrapper< DatasimDate > **dob**
- Wrapper< DatasimDate > **createdD**
- SimplePropertySet< std::string, AnyType * > **props**

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

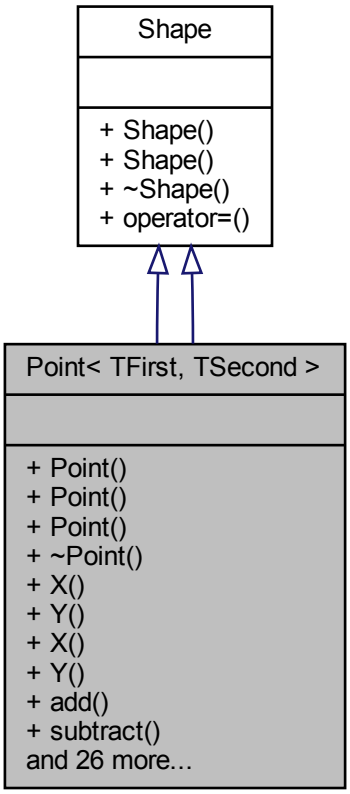
- include/duffy/Person.hh
- include/duffy/PersonAndEmployee.hh
- tests/TestWrapper.cc
- src/Person.cc

3.89 Point< TFirst, TSecond > Class Template Reference

Inheritance diagram for Point< TFirst, TSecond >:



Collaboration diagram for Point< TFirst, TSecond >:



Public Member Functions

- **Point** (double xval, double yval)
- **Point** (const Point &pt)
- double **X** () const
- double **Y** () const
- void **X** (double NewX)
- void **Y** (double NewY)
- Point **add** (const Point &p) const
- Point **subtract** (const Point &p) const
- Point **scale** (const Point &pt) const
- Point **MidPoint** (const Point &pt) const
- Point & **copy** (const Point &p)
- **Point** (double xs, double ys)
- **Point** (const Point &source)
- double **X** () const
- double **Y** () const
- double **Distance** (const Point &p2) const
- Point **MidPoint** (const Point &p2) const
- void **X** (double NewX)

- void **Y** (double NewY)
- bool **operator==** (const Point &p2) const
- bool **operator!=** (const Point &p2) const
- Point & **operator=** (const Point &source)
- **Point** (TFirst first, TSecond second)
- **Point** (const Point< TFirst, TSecond > &source)
- TFirst **First** () const
- TSecond **Second** () const
- void **First** (const TFirst &val)
- void **Second** (const TSecond &val)
- double **Distance** (const Point< TFirst, TSecond > &p) const
- Point< TFirst, TSecond > & **operator=** (const Point< TFirst, TSecond > &source)

Friends

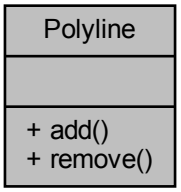
- std::ostream & **operator**<< (std::ostream &os, const Point< TFirst, TSecond > &p)

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

- include/duffy/Point.hh
- include/duffy/PointNew.hpp
- include/duffy/PointTemplate.hh
- src/Point.cc
- src/PointNew.cc
- src/PointTemplate.cc

3.90 Polyline Class Reference

Collaboration diagram for Polyline:



Public Member Functions

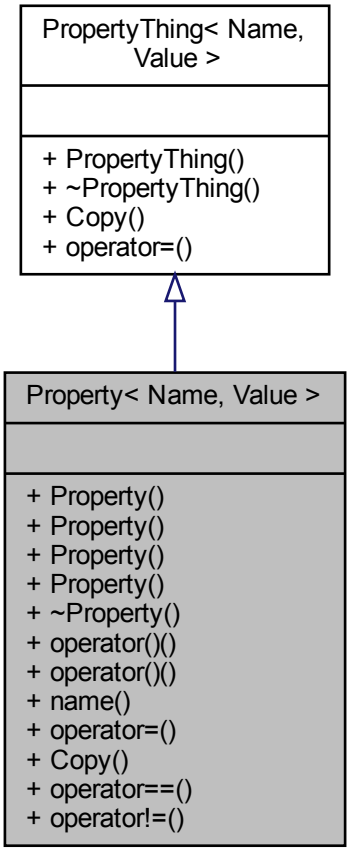
- void **add** (Point *pt)
- void **remove** (Point *pt)

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

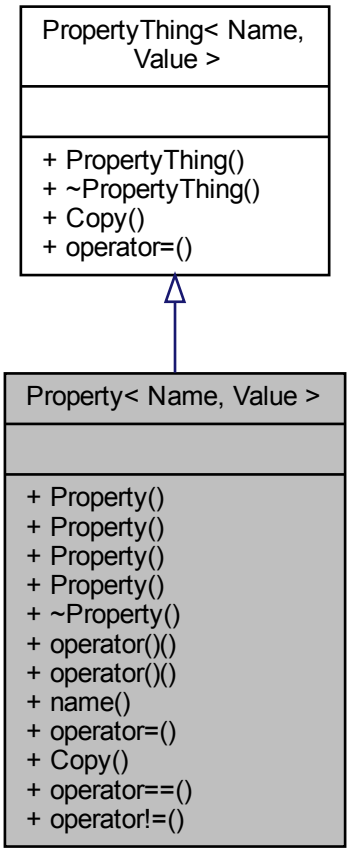
- include/duffy/Polyline.hh

3.91 Property< Name, Value > Class Template Reference

Inheritance diagram for Property< Name, Value >:



Collaboration diagram for Property< Name, Value >:



Public Member Functions

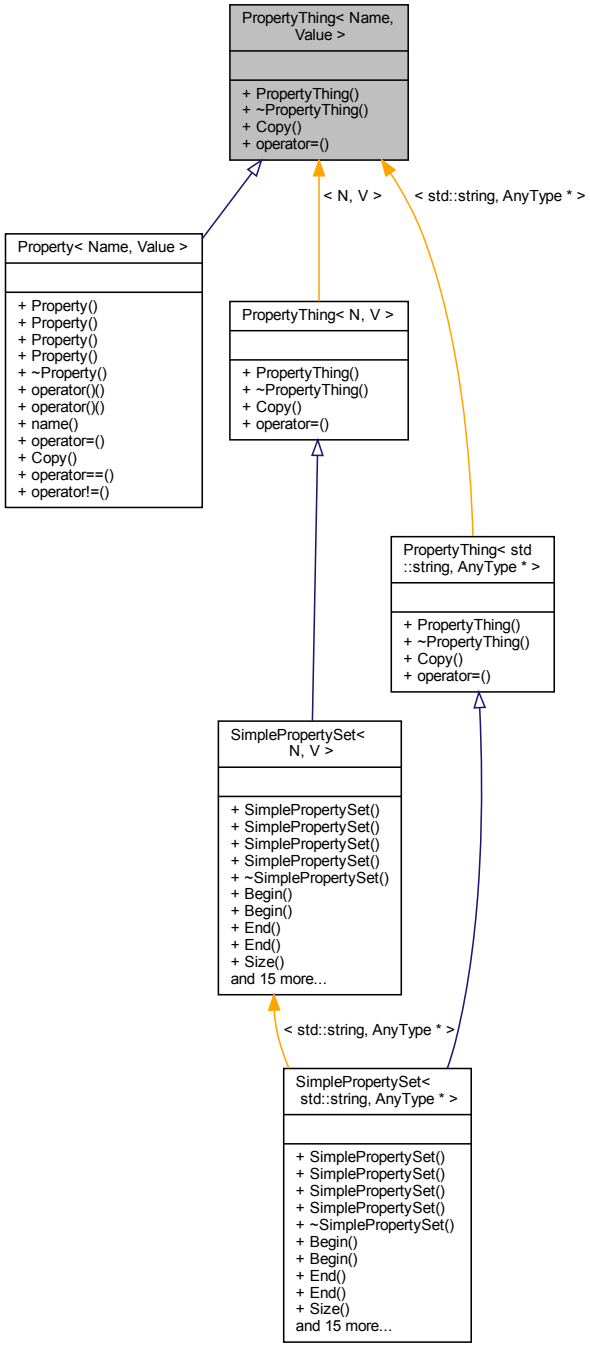
- **Property** (const Name &name)
- **Property** (const Name &name, const Value &t)
- **Property** (const Property< Name, Value > &source)
- virtual Value **operator()** () const
- virtual void **operator()** (const Value &t)
- virtual Name **name** () const
- Property< Name, Value > & **operator=** (const Property< Name, Value > &source)
- PropertyThing< Name, Value > * **Copy** () const
- bool **operator==** (const Property< Name, Value > &prop2)
- bool **operator!=** (const Property< Name, Value > &source)

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

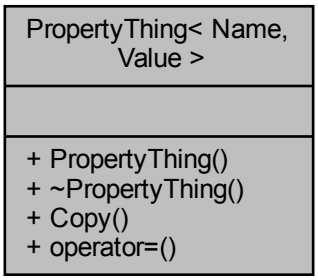
- include/duffy/Property.hh
- src/Property.cc

3.92 PropertyThing< Name, Value > Class Template Reference

Inheritance diagram for PropertyThing< Name, Value >:



Collaboration diagram for PropertyThing< Name, Value >:



Public Member Functions

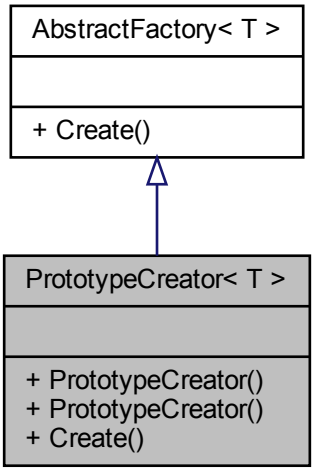
- virtual PropertyThing * **Copy** () const =0
- PropertyThing< Name, Value > & **operator=** (const PropertyThing< Name, Value > &source)

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

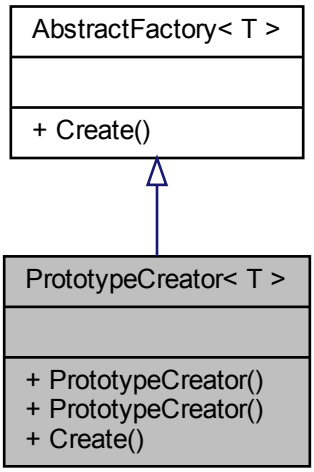
- include/duffy/PropertyThing.hh
- src/PropertyThing.cc

3.93 PrototypeCreator< T > Class Template Reference

Inheritance diagram for PrototypeCreator< T >:



Collaboration diagram for PrototypeCreator< T >:



Public Member Functions

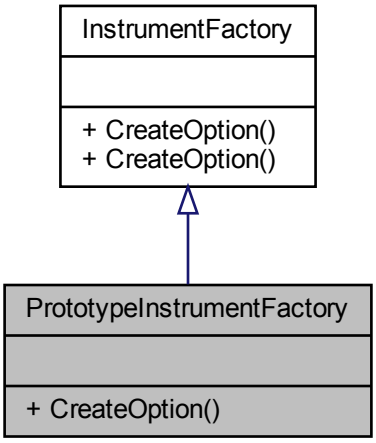
- **PrototypeCreator** (T ∗prototype)
- virtual T ∗ **Create** ()

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

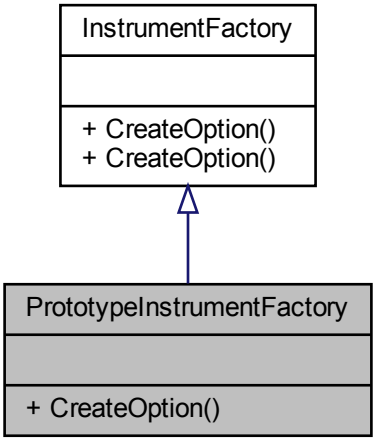
- src/GenericCreator.cc

3.94 PrototypeInstrumentFactory Class Reference

Inheritance diagram for PrototypeInstrumentFactory:



Collaboration diagram for PrototypeInstrumentFactory:



Public Member Functions

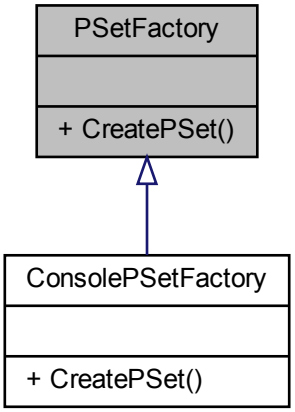
- TwoFactorOptionData * **CreateOption** () const

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

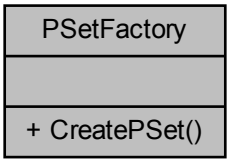
- include/duffy/InstrumentNew.hh

3.95 PSetFactory Class Reference

Inheritance diagram for PSetFactory:



Collaboration diagram for PSetFactory:



Public Member Functions

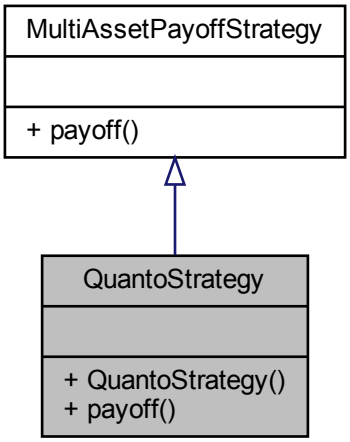
- virtual PSet * **CreatePSet** () const =0

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

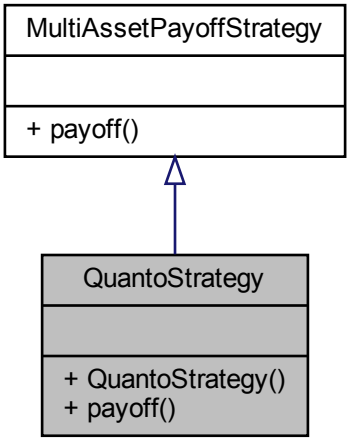
- include/duffy/PSetCreators.hh

3.96 QuantoStrategy Class Reference

Inheritance diagram for QuantoStrategy:



Collaboration diagram for QuantoStrategy:



Public Member Functions

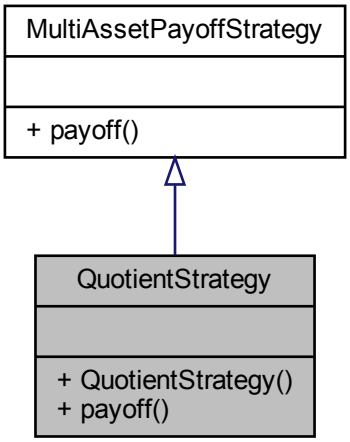
- **QuantoStrategy** (double foreignStrike, double cp, double forExchangeRate)
- double **payoff** (double S1, double S2) const

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

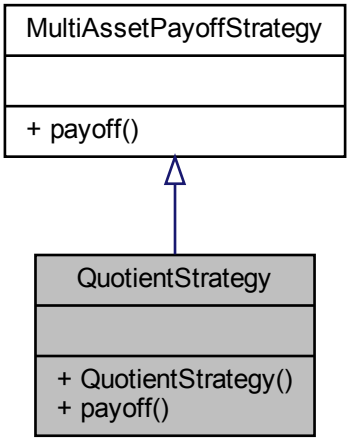
- MultiAssetPayoffStrategy.hh

3.97 QuotientStrategy Class Reference

Inheritance diagram for QuotientStrategy:



Collaboration diagram for QuotientStrategy:



Public Member Functions

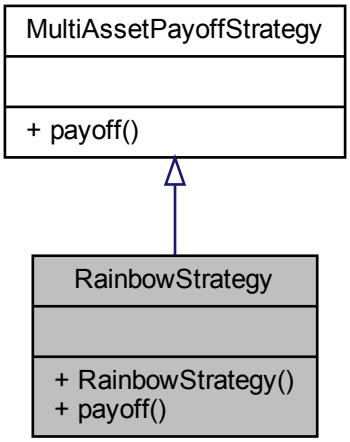
- **QuotientStrategy** (double strike, double cp)
- double **payoff** (double S1, double S2) const

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

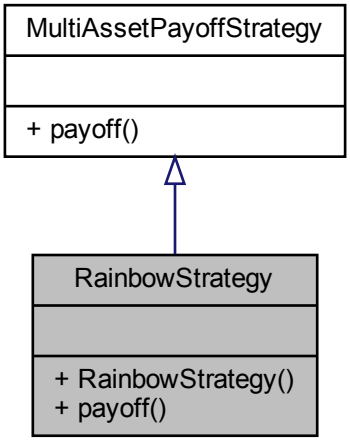
- MultiAssetPayoffStrategy.hh

3.98 RainbowStrategy Class Reference

Inheritance diagram for RainbowStrategy:



Collaboration diagram for RainbowStrategy:



Public Member Functions

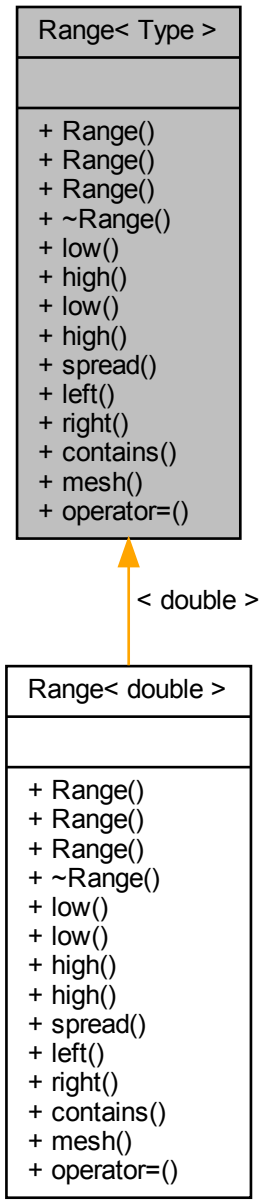
- **RainbowStrategy** (double strike, double cp, int DMinDMax)
- double **payoff** (double S1, double S2) const

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

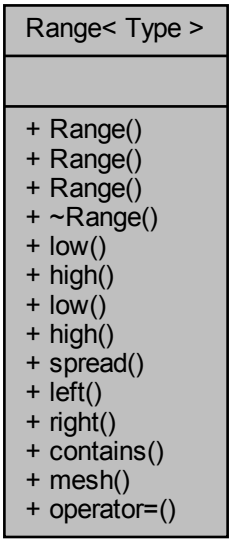
- MultiAssetPayoffStrategy.hh

3.99 Range< Type > Class Template Reference

Inheritance diagram for Range< Type >:



Collaboration diagram for Range< Type >:



Public Member Functions

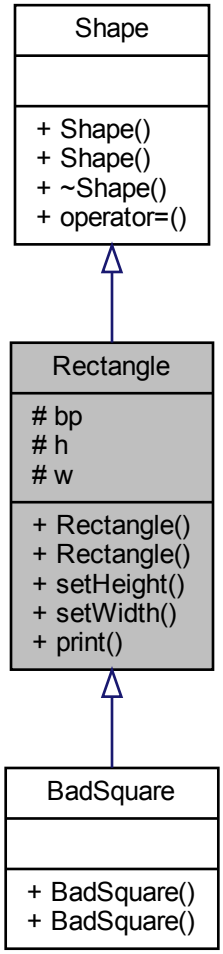
- **Range** (const Type &low, const Type &high)
- **Range** (const Range< Type > &ran2)
- void **low** (const Type &t1)
- void **high** (const Type &t1)
- Type **low** () const
- Type **high** () const
- Type **spread** () const
- bool **left** (const Type &value) const
- bool **right** (const Type &value) const
- bool **contains** (const Type &value) const
- Vector< Type, long > **mesh** (long nSteps) const
- Range< Type > & **operator=** (const Range< Type > &ran2)

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

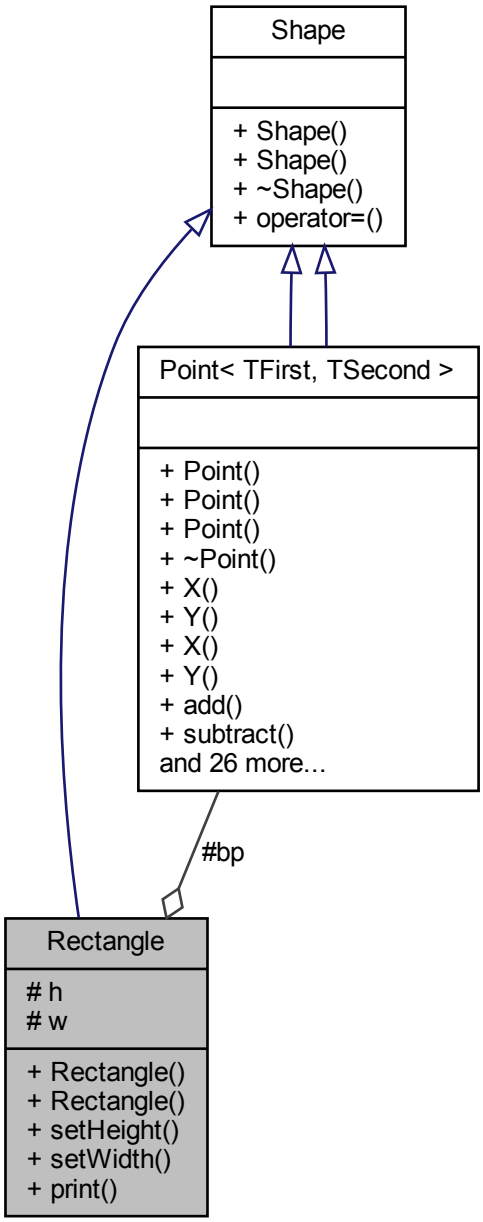
- include/duffy/Range.hh
- src/Range.cc

3.100 Rectangle Class Reference

Inheritance diagram for Rectangle:



Collaboration diagram for Rectangle:



Public Member Functions

- **Rectangle** (const Point &basePoint, double height, double width)
- void **setHeight** (double newHeight)
- void **setWidth** (double newWidth)
- void **print** () const

Protected Attributes

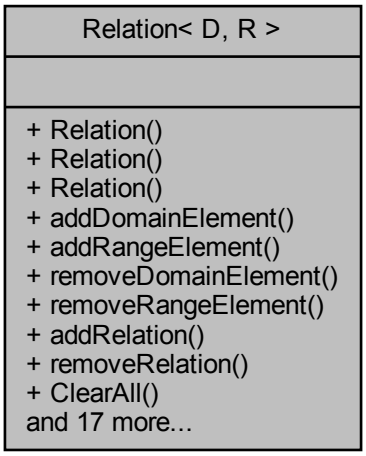
- Point **bp**
- double **h**
- double **w**

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

- src/Rectangle.cc

3.101 Relation< D, R > Class Template Reference

Collaboration diagram for Relation< D, R >:



Public Types

- typedef std::multimap< D, R >::iterator **iterator**
- typedef std::multimap< D, R >::const_iterator **const_iterator**
- typedef std::multimap< R, D >::iterator **iteratorInv**
- typedef std::multimap< R, D >::const_iterator **const_iteratorInv**

Public Member Functions

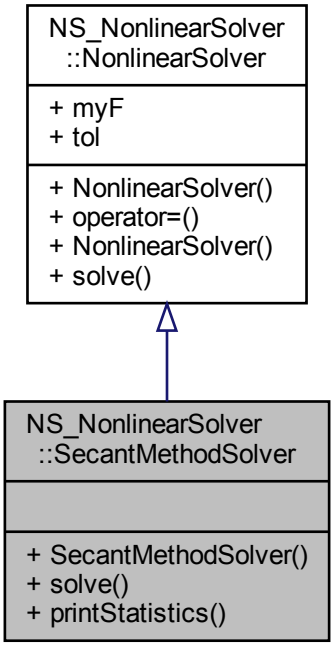
- **Relation** (const Set< D > &domainSet, const Set< R > &rangeSet)
- **Relation** (const Relation< D, R > &r2)
- void **addDomainElement** (const D &d)
- void **addRangeElement** (const R &r)
- void **removeDomainElement** (const D &d)
- void **removeRangeElement** (const R &r)
- void **addRelation** (const D &d, const R &r)
- void **removeRelation** (const D &d)
- void **ClearAll** ()
- void **ClearLinks** ()
- iterator **Begin** ()
- const_iterator **Begin** () const
- iterator **End** ()
- const_iterator **End** () const
- iteratorInv **BeginInv** ()
- const_iteratorInv **BeginInv** () const
- iteratorInv **EndInv** ()
- const_iteratorInv **EndInv** () const
- const Set< D > & **DomainSet** ()
- const Set< R > & **RangeSet** ()
- Set< R > **range** (const D &d)
- Set< D > **domain** (const R &r)
- bool **inDomain** (const D &d) const
- bool **inRange** (const D &r) const
- Relation< D, R > & **operator=** (const Relation< D, R > &r2)

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

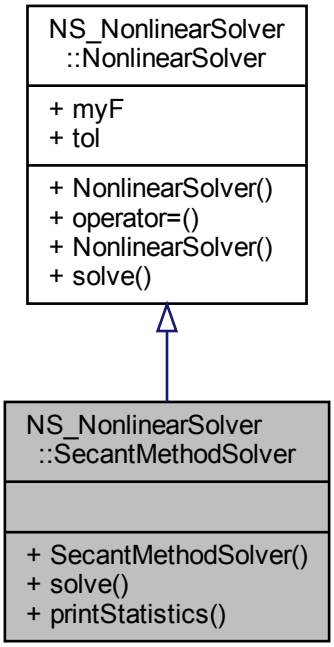
- include/duffy/Relation.hh
- src/Relation.cc

3.102 NS_NonlinearSolver::SecantMethodSolver Class Reference

Inheritance diagram for NS_NonlinearSolver::SecantMethodSolver:



Collaboration diagram for NS_NonlinearSolver::SecantMethodSolver:



Public Member Functions

- **SecantMethodSolver** (double guessZero, double guessOne, double(∗myFunction)(double x))
- double **solve** ()
- void **printStatistics** () const

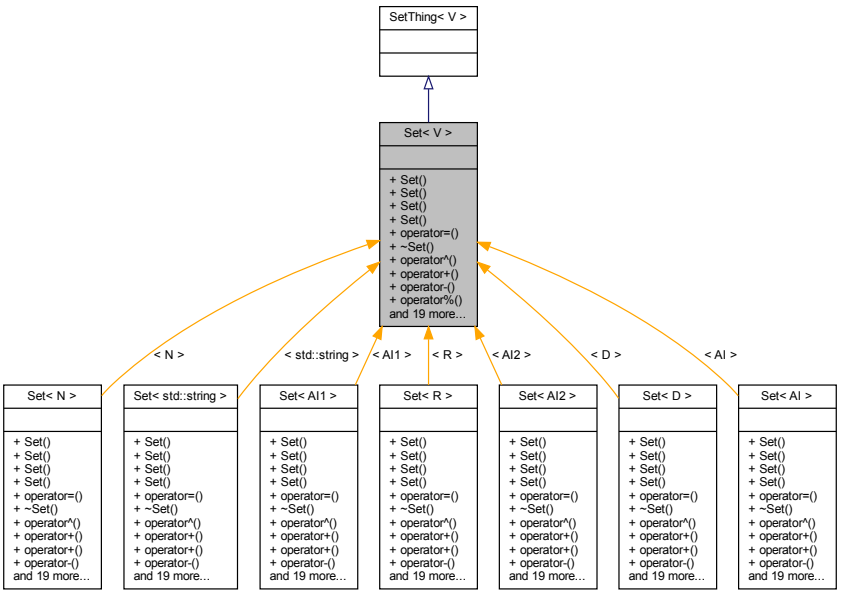
Additional Inherited Members

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

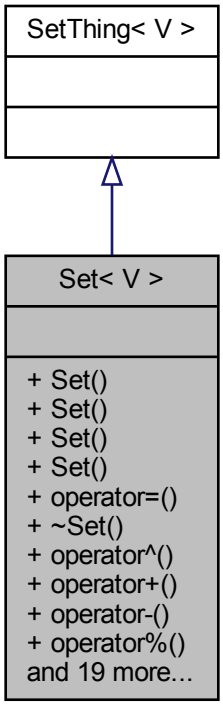
- include/duffy/NonlinearSolver.hh

3.103 Set< V > Class Template Reference

Inheritance diagram for Set< V >:



Collaboration diagram for Set< V >:



Public Types

- typedef std::set< V >::iterator **iterator**
- typedef std::set< V >::const_iterator **const_iterator**

Public Member Functions

- **Set** (const std::set< V > &stlSet)
- **Set** (const Set< V > &s2)
- **Set** (const std::list< V > &con)
- Set< V > **operator=** (const Set< V > &s2)
- Set< V > **operator^** (const Set< V > &s2)
- Set< V > **operator+** (const Set< V > &s2)
- Set< V > **operator-** (const Set< V > &s2)
- Set< V > **operator%** (const Set< V > &s2)
- template<class V2 >
  Set< std::pair< V, V2 > > **operator*** (const Set< V2 > &s2)
- template<class V2 >
  Set< std::pair< V, V2 > > **CartesianProduct** (const Set< V2 > &s2)
- iterator **Begin** ()
- const_iterator **Begin** () const
- iterator **End** ()

- const_iterator **End** () const
- long **Size** () const
- void **Insert** (const V &v)
- void **Insert** (const Set< V > &v)
- void **Remove** (const V &v)
- void **Replace** (const V &Old, const V &New)
- void **Clear** ()
- bool **Contains** (const V &v) const
- bool **Empty** () const
- void **operator+** (const V &v)
- void **operator-** (const V &v)
- bool **Subset** (const Set< V > &s2) const
- bool **Superset** (const Set< V > &s2) const
- bool **Intersects** (const Set< V > &s2) const

Friends

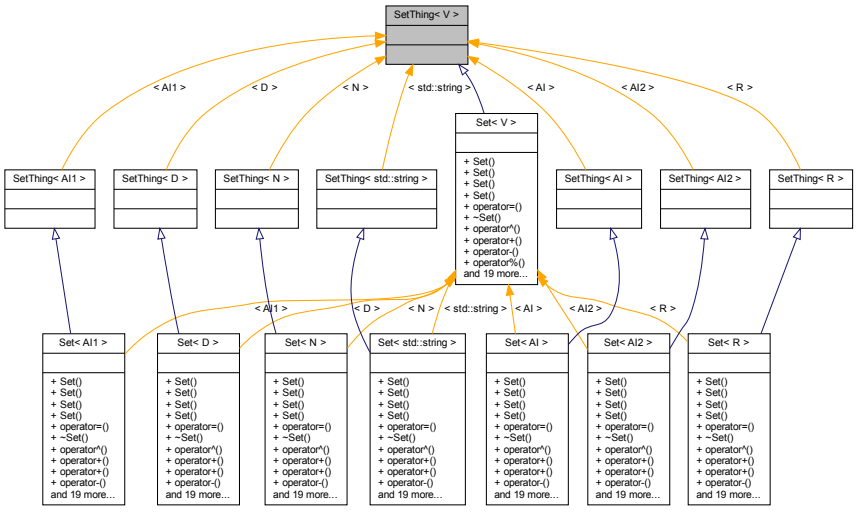
- Set< V > **Intersection** (const Set< V > &s1, const Set< V > &s2)
- Set< V > **Union** (const Set< V > &s1, const Set< V > &s2)
- Set< V > **Difference** (const Set< V > &s1, const Set< V > &s2)
- Set< V > **SymmetricDifference** (const Set< V > &s1, const Set< V > &s2)

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

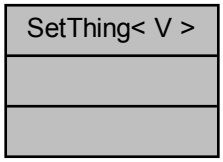
- include/duffy/Set.hh
- src/Set.cc

3.104 SetThing< V > Class Template Reference

Inheritance diagram for SetThing< V >:



Collaboration diagram for SetThing< V >:

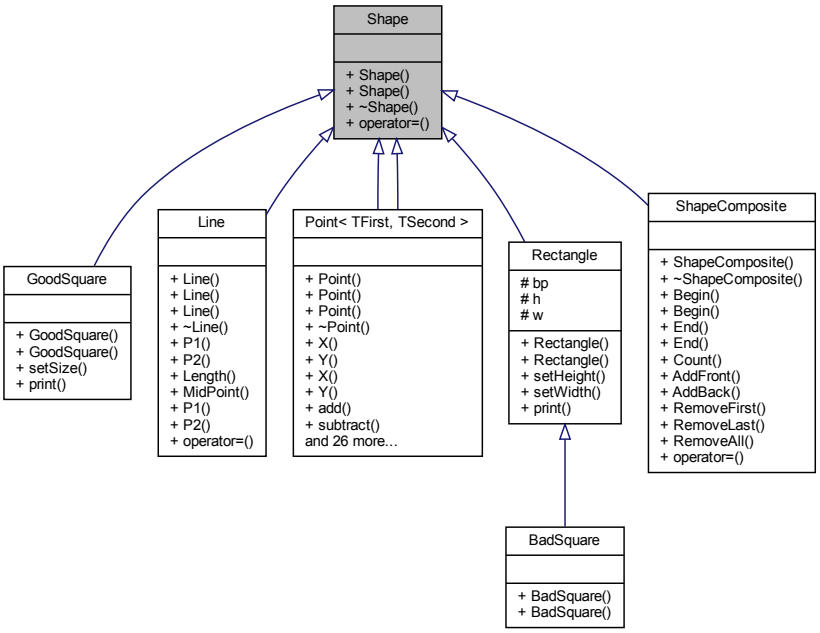


The documentation for this class was generated from the following file:

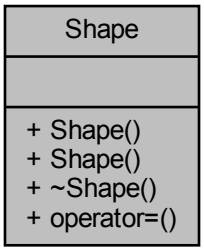
- include/duffy/Set.hh

3.105 Shape Class Reference

Inheritance diagram for Shape:



Collaboration diagram for Shape:



Public Member Functions

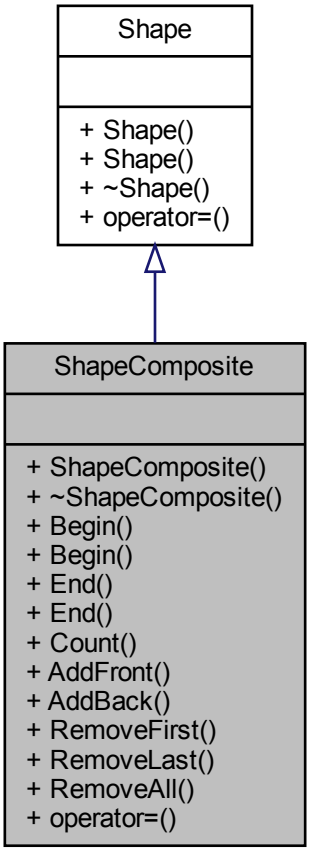
- **Shape** (const Shape &source)
- Shape & **operator=** (const Shape &source)

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

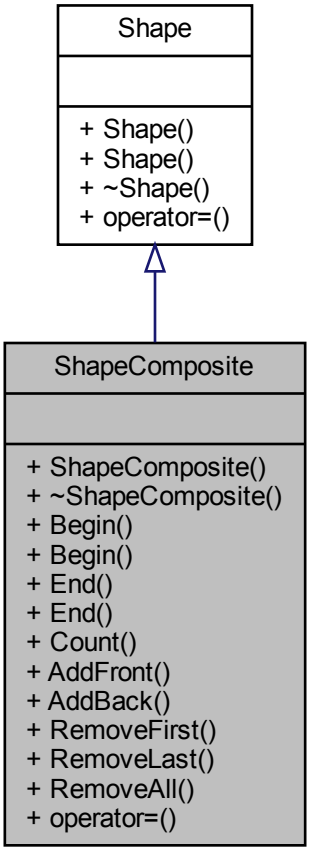
- include/duffy/Point.hh
- include/duffy/Shape.hh
- src/Shape.cc

3.106 ShapeComposite Class Reference

Inheritance diagram for ShapeComposite:



Collaboration diagram for ShapeComposite:



Public Types

- typedef std::list< Shape * >::iterator **iterator**
- typedef std::list< Shape * >::const_iterator **const_iterator**

Public Member Functions

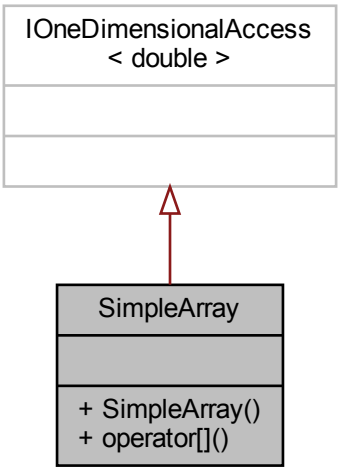
- iterator **Begin** ()
- const_iterator **Begin** () const
- iterator **End** ()
- const_iterator **End** () const
- int **Count** () const
- void **AddFront** (Shape *s)
- void **AddBack** (Shape *s)
- void **RemoveFirst** ()
- void **RemoveLast** ()
- void **RemoveAll** ()
- ShapeComposite & **operator=** (const ShapeComposite &source)

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

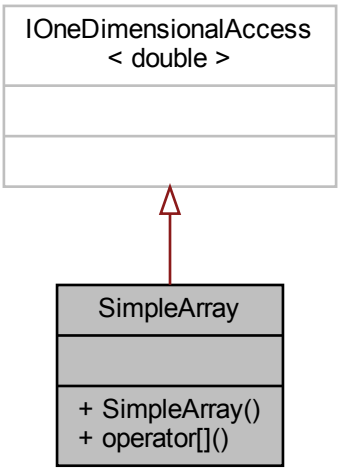
- include/duffy/ShapeComposite.hh
- src/ShapeComposite.cc

3.107 SimpleArray Class Reference

Inheritance diagram for SimpleArray:



Collaboration diagram for SimpleArray:



Public Member Functions

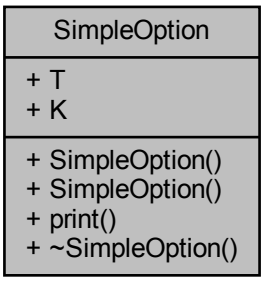
- double & **operator[ ]** (int index)

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

- tests/TestInterfaces.cc

3.108 SimpleOption Class Reference

Collaboration diagram for SimpleOption:



Public Member Functions

- **SimpleOption** (double expiry, double strike)
- void **print** () const

Public Attributes

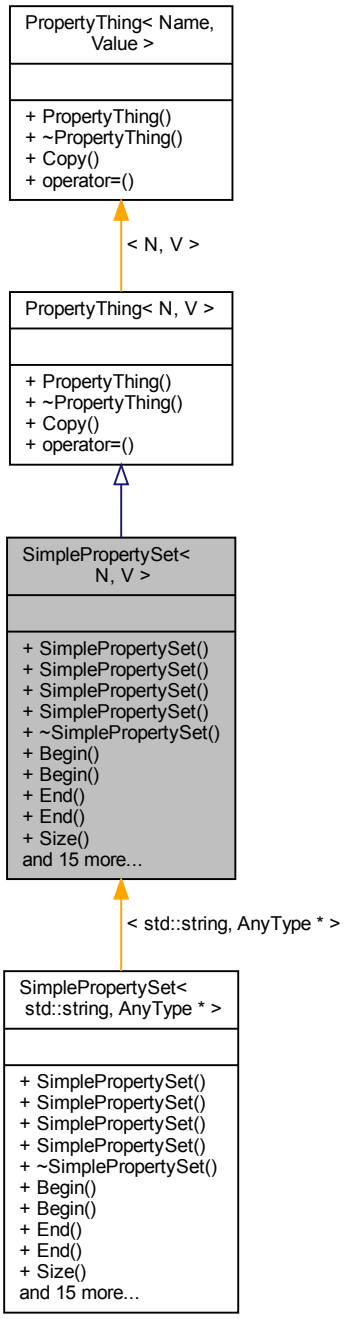
- double **T**
- double **K**

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

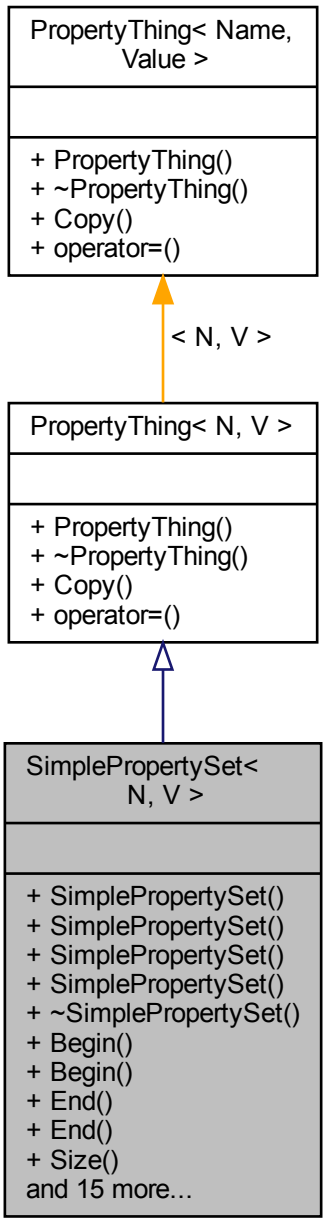
- tests/TestOptionStack.cc

3.109 SimplePropertySet< N, V > Class Template Reference

Inheritance diagram for SimplePropertySet< N, V >:



Collaboration diagram for SimplePropertySet< N, V >:



Public Types

- typedef std::map< N, V >::iterator **iterator**
- typedef std::map< N, V >::const_iterator **const_iterator**

Public Member Functions

- **SimplePropertySet** (const N &name)

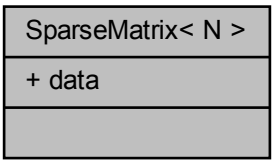
- **SimplePropertySet** (const SimplePropertySet< N, V > &source)
- **SimplePropertySet** (const N &name, const Set< N > &keySet)
- iterator **Begin** ()
- const_iterator **Begin** () const
- iterator **End** ()
- const_iterator **End** () const
- int **Size** () const
- N **operator()** () const
- N **name** () const
- Set< N > & **definingSet** () const
- bool **hasProperty** (const N &search_name) const
- V **value** (const N &name) const
- void **operator()** (const N &name)
- void **value** (const N &name, const V &value)
- void **value** (const Property< N, V > &prop)
- void **ClearAll** ()
- void **add** (const Property< N, V > &p)
- void **add** (const N &key, const V &value)
- void **remove** (const N &key)
- void **remove** (const Property< N, V > &prop)
- SimplePropertySet< N, V > & **operator=** (const SimplePropertySet< N, V > &source)
- PropertyThing< N, V > * **Copy** () const

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

- include/duffy/SimplePropertySet.hh
- src/SimplePropertySet.cc

3.110 SparseMatrix< N > Struct Template Reference

Collaboration diagram for SparseMatrix< N >:



Public Attributes

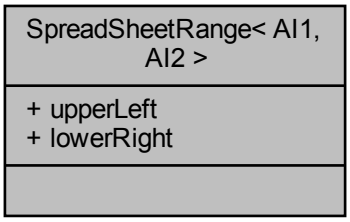
- std::map< int, SparseRow > **data**

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

- tests/TestSparseMatrix.cc

3.111 SpreadSheetRange< AI1, AI2 > Struct Template Reference

Collaboration diagram for SpreadSheetRange< AI1, AI2 >:



Public Attributes

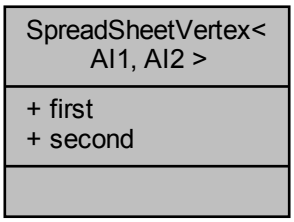
- SpreadSheetVertex< AI1, AI2 > **upperLeft**
- SpreadSheetVertex< AI1, AI2 > **lowerRight**

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

- AssocMatrix.hh

3.112 SpreadSheetVertex< AI1, AI2 > Struct Template Reference

Collaboration diagram for SpreadSheetVertex< AI1, AI2 >:



Public Attributes

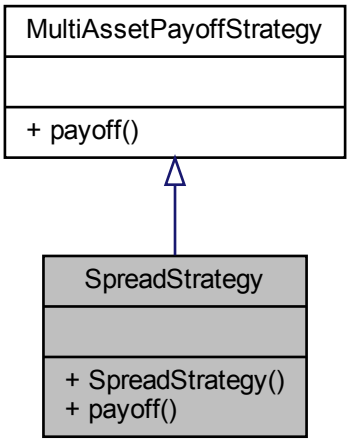
- AI1 **first**
- AI2 **second**

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

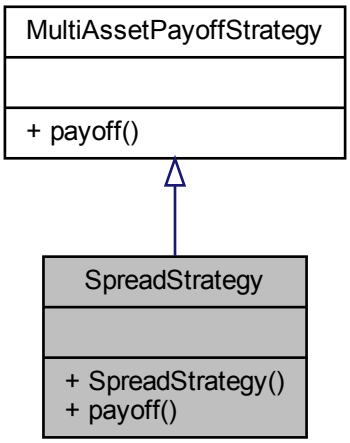
- AssocMatrix.hh

3.113 SpreadStrategy Class Reference

Inheritance diagram for SpreadStrategy:



Collaboration diagram for SpreadStrategy:



Public Member Functions

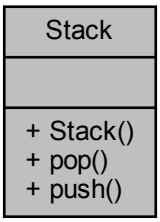
- **SpreadStrategy** (double cp, double strike=0.0, double A=1.0, double B=-1.0)
- double **payoff** (double S1, double S2) const

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

- MultiAssetPayoffStrategy.hh

3.114 Stack Class Reference

Collaboration diagram for Stack:



Public Member Functions

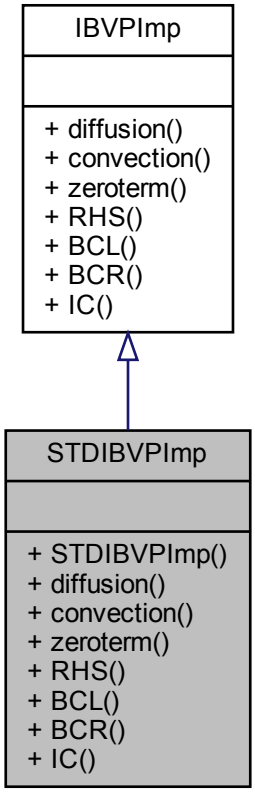
- double **pop** ()
- void **push** (double value)

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

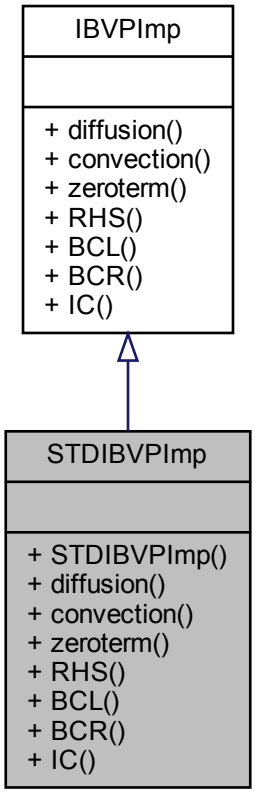
- include/duffy/Stack.hh

3.115 STDIBVPImp Class Reference

Inheritance diagram for STDIBVPImp:



Collaboration diagram for STDIBVPImp:



Public Member Functions

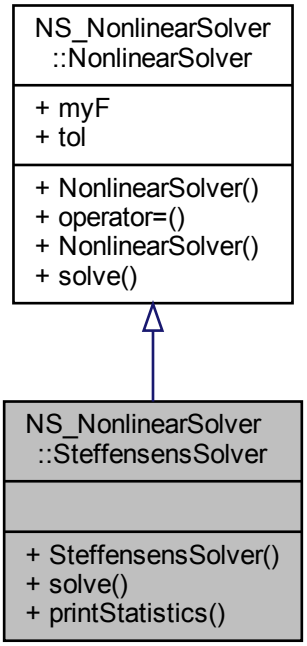
- double **diffusion** (double x, double t) const
- double **convection** (double x, double t) const
- double **zeroterm** (double x, double t) const
- double **RHS** (double x, double t) const
- double **BCL** (double t) const
- double **BCR** (double t) const
- double **IC** (double x) const

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

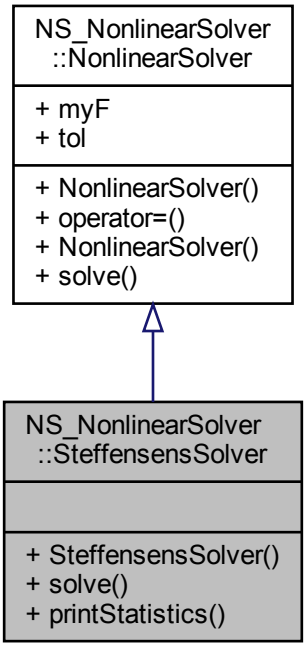
- include/duffy/STDImp.hh
- src/STDImp.cc

3.116 NS_NonlinearSolver::SteffensensSolver Class Reference

Inheritance diagram for NS_NonlinearSolver::SteffensensSolver:



Collaboration diagram for NS_NonlinearSolver::SteffensensSolver:



Public Member Functions

- **SteffensensSolver** (double guess, double(∗myFunction)(double x))
- double **solve** ()
- void **printStatistics** () const

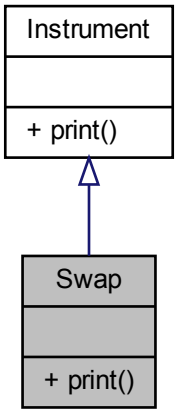
Additional Inherited Members

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

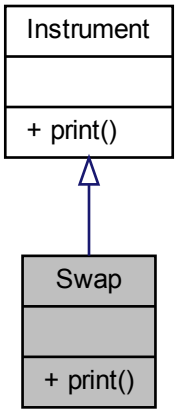
- include/duffy/NonlinearSolver.hh

3.117 Swap Class Reference

Inheritance diagram for Swap:



Collaboration diagram for Swap:



Public Member Functions

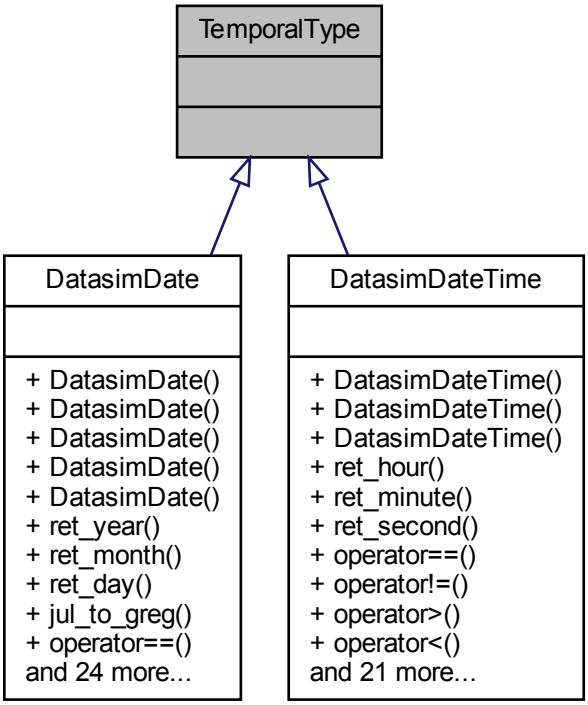
- void **print** () const

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

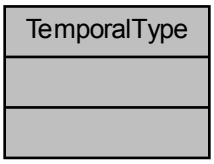
- include/duffy/InstrumentOld.hh

3.118 TemporalType Class Reference

Inheritance diagram for TemporalType:



Collaboration diagram for TemporalType:

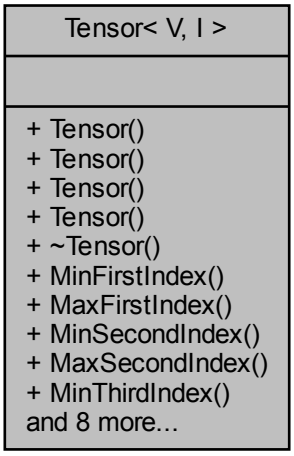


The documentation for this class was generated from the following file:

- include/duffy/TemporalType.hh

3.119 Tensor< V, I > Class Template Reference

Collaboration diagram for Tensor< V, I >:



Public Member Functions

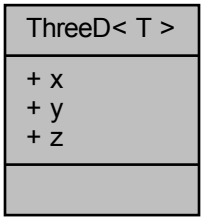
- **Tensor** (size_t rows, size_t columns, size_t third)
- **Tensor** (size_t rows, size_t columns, size_t third, I rowStart, I columnStart, I thirdStart)
- **Tensor** (const Tensor< V, I > &source)
- long **MinFirstIndex** () const
- long **MaxFirstIndex** () const
- long **MinSecondIndex** () const
- long **MaxSecondIndex** () const
- long **MinThirdIndex** () const
- long **MaxThirdIndex** () const
- size_t **Rows** () const
- size_t **Columns** () const
- size_t **sizeThird** () const
- NumericMatrix< V, I > & **operator[ ]** (I k)
- const NumericMatrix< V, I > & **operator[ ]** (I k) const
- V & **operator()** (I i, I j, I k)
- Tensor< V, I > & **operator=** (const Tensor< V, I > &source)

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

- include/duffy/Tensor.hh
- src/Tensor.cc

3.120 ThreeD< T > Struct Template Reference

Collaboration diagram for ThreeD< T >:



Public Attributes

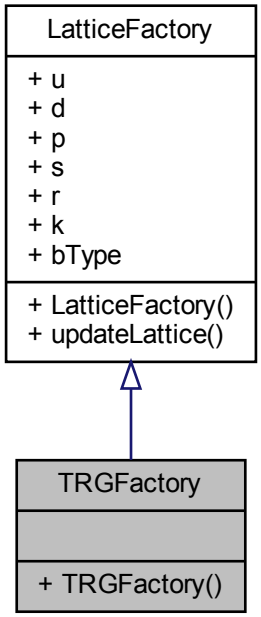
- T **x**
- T **y**
- T **z**

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

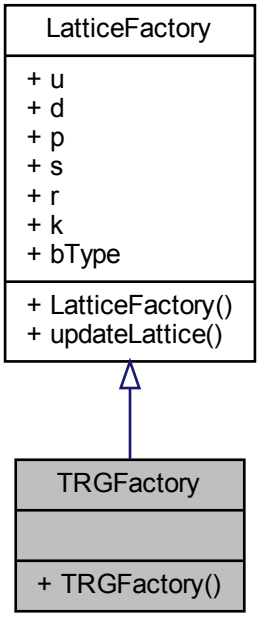
- tests/FunctionWrapper.cc

3.121 TRGFactory Class Reference

Inheritance diagram for TRGFactory:



Collaboration diagram for TRGFactory:



Public Member Functions

- **TRGFactory** (double s, double r, double k)

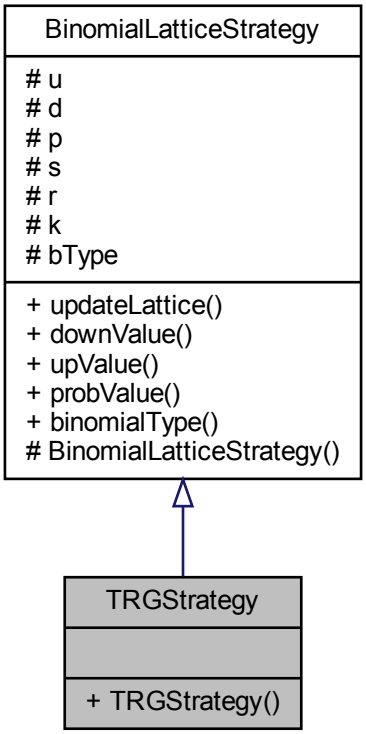
Additional Inherited Members

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

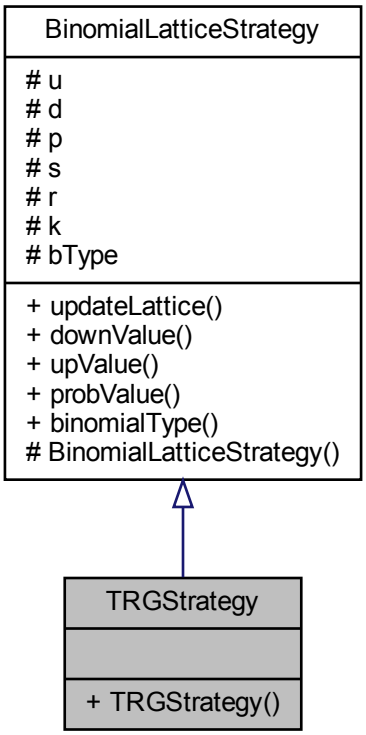
- include/duffy/LatticeFactory.hh

3.122 TRGStrategy Class Reference

Inheritance diagram for TRGStrategy:



Collaboration diagram for TRGStrategy:



Public Member Functions

- **TRGStrategy** (double vol, double interest, double delta)

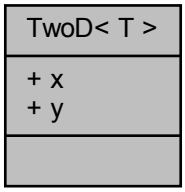
Additional Inherited Members

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

- include/duffy/BinomialLatticeStrategy.hh
- src/BinomialLatticeStrategy.cc

3.123 TwoD< T > Struct Template Reference

Collaboration diagram for TwoD< T >:



Public Attributes

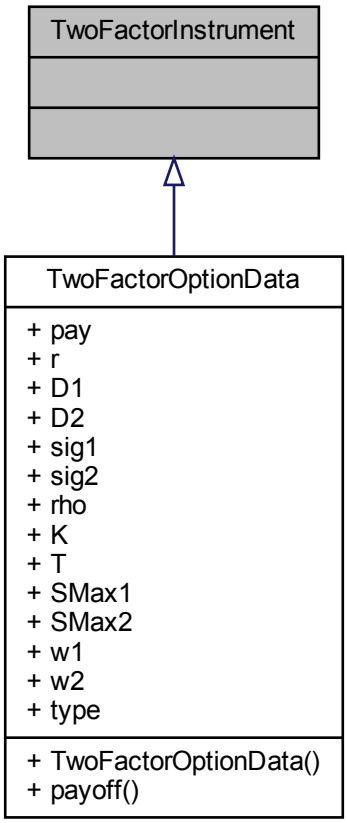
- T **x**
- T **y**

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

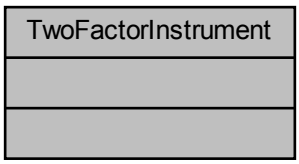
- tests/FunctionWrapper.cc

3.124 TwoFactorInstrument Class Reference

Inheritance diagram for TwoFactorInstrument:



Collaboration diagram for TwoFactorInstrument:

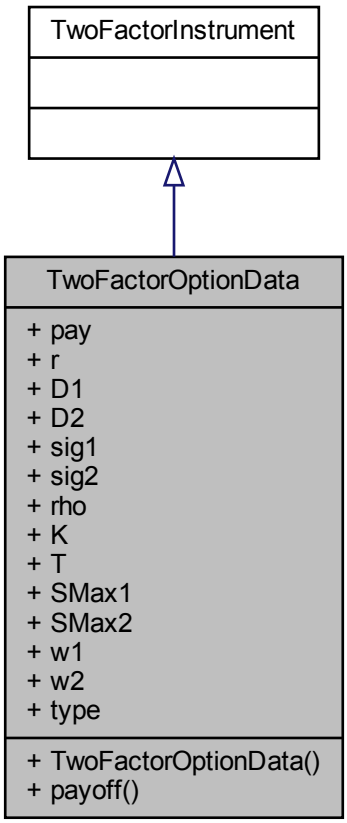


The documentation for this class was generated from the following file:

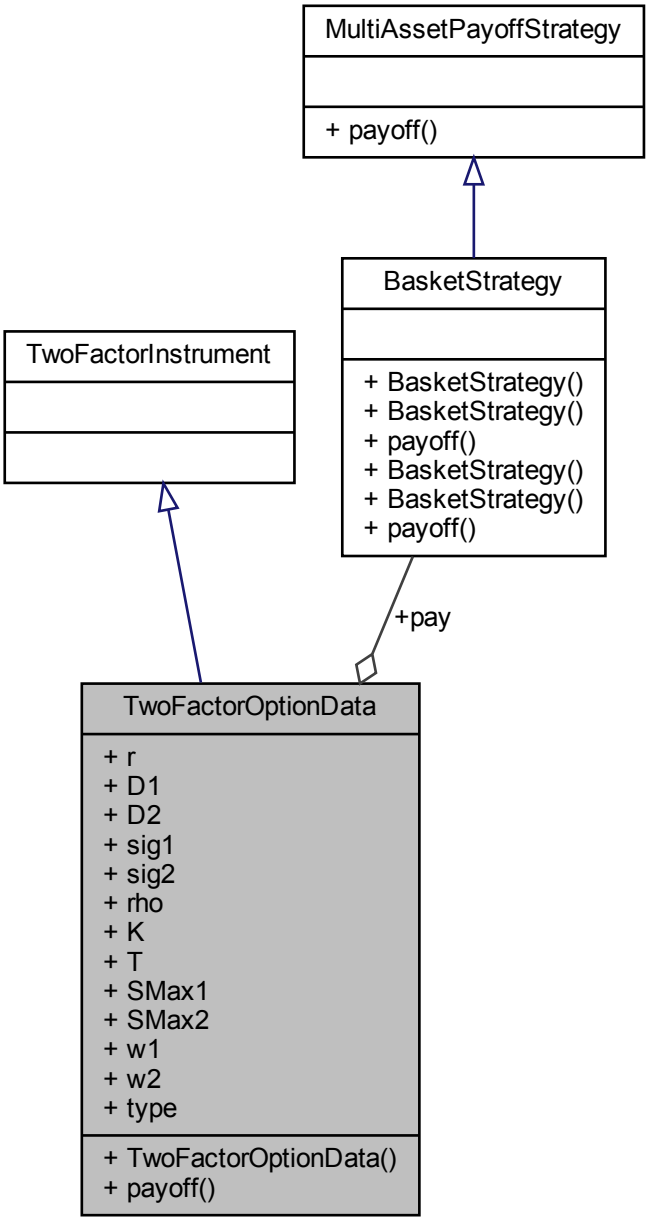
- include/duffy/InstrumentNew.hh

3.125 TwoFactorOptionData Class Reference

Inheritance diagram for TwoFactorOptionData:



Collaboration diagram for TwoFactorOptionData:



Public Member Functions

- double **payoff** (double x, double y) const

Public Attributes

- BasketStrategy **pay**

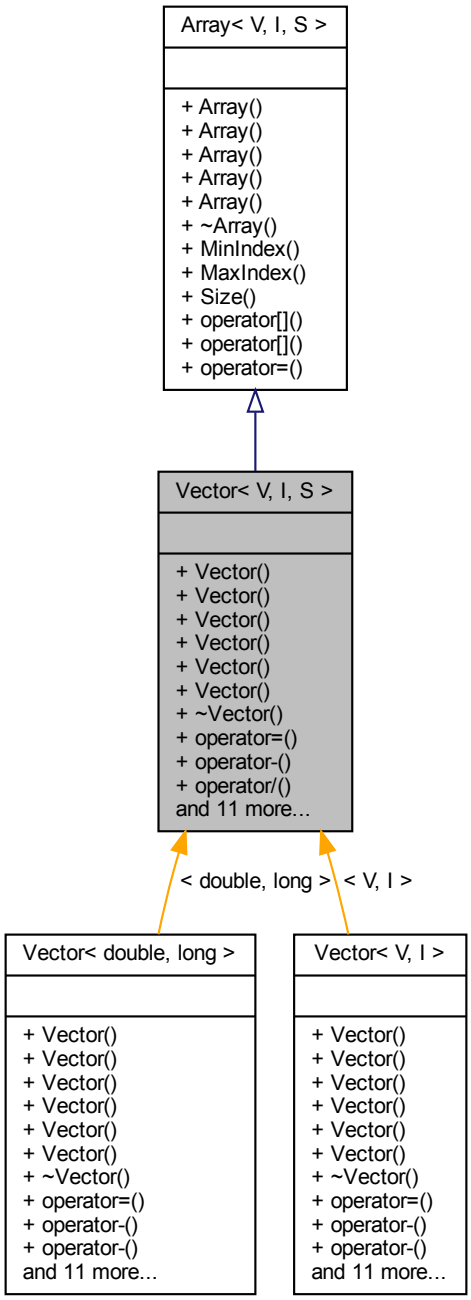
- double **r**
- double **D1**
- double **D2**
- double **sig1**
- double **sig2**
- double **rho**
- double **K**
- double **T**
- double **SMax1**
- double **SMax2**
- double **w1**
- double **w2**
- int **type**

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

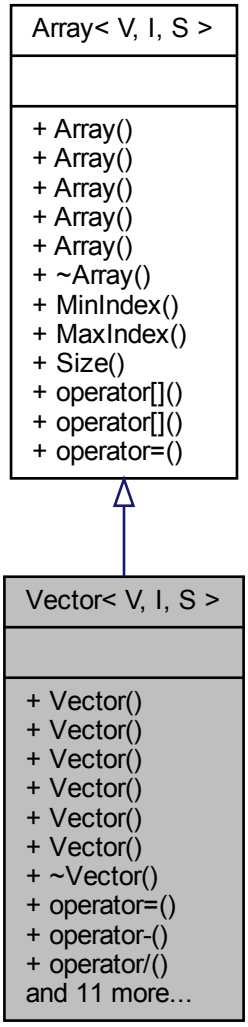
- include/duffy/InstrumentNew.hh

3.126 Vector< V, I, S > Class Template Reference

Inheritance diagram for Vector< V, I, S >:



Collaboration diagram for Vector< V, I, S >:



Public Member Functions

- **Vector** (I size)
- **Vector** (I size, I start)
- **Vector** (I size, I start, const V &val)
- **Vector** (const Vector< V, I, S > &source)
- **Vector** (const Array< V, I, S > &source)
- Vector< V, I, S > & **operator=** (const Vector< V, I, S > &source)
- Vector< V, I, S > operator- () const
- Vector< V, I, S > **operator**/ (const V &a) const
- Vector< V, I, S > **operator+** (const Vector< V, I, S > &v) const
- Vector< V, I, S > **operator-** (const Vector< V, I, S > &v) const
- Vector< V, I, S > **operator**∗ (const Vector< V, I, S > &v) const
- Vector< V, I, S > **operator**/ (const Vector< V, I, S > &v) const

- Vector< V, I, S > & **operator+=** (const V &v)
- Vector< V, I, S > & **operator-=** (const V &v)
- Vector< V, I, S > & **operator*=** (const V &v)
- Vector< V, I, S > & **operator/=** (const V &v)
- Vector< V, I, S > & **operator+=** (const Vector< V, I, S > &v)
- Vector< V, I, S > & **operator-=** (const Vector< V, I, S > &v)
- Vector< V, I, S > & **operator*=** (const Vector< V, I, S > &v)

Friends

- template<class V1 , class I1 , class S1 >
  Vector< V, I, S > **operator+** (const Vector< V1, I1, S1 > &v, const V1 &a)
- template<class V1 , class I1 , class S1 >
  Vector< V, I, S > **operator+** (const V1 &a, const Vector< V1, I1, S1 > &v)
- template<class V1 , class I1 , class S1 >
  Vector< V, I, S > **operator-** (const Vector< V1, I1, S1 > &v, const V1 &a)
- template<class V1 , class I1 , class S1 >
  Vector< V, I, S > **operator-** (const V1 &a, const Vector< V1, I1, S1 > &v)
- template<class V1 , class I1 , class S1 >
  Vector< V, I, S > **operator*** (const Vector< V1, I1, S1 > &v, const V1 &a)
- template<class V1 , class I1 , class S1 >
  Vector< V, I, S > **operator*** (const V1 &a, const Vector< V1, I1, S1 > &v)

3.126.1 Member Function Documentation

3.126.1.1 operator-()

```
template<class V , class I , class S >
Vector< V, I, S > Vector< V, I, S >::operator- ( ) const
```

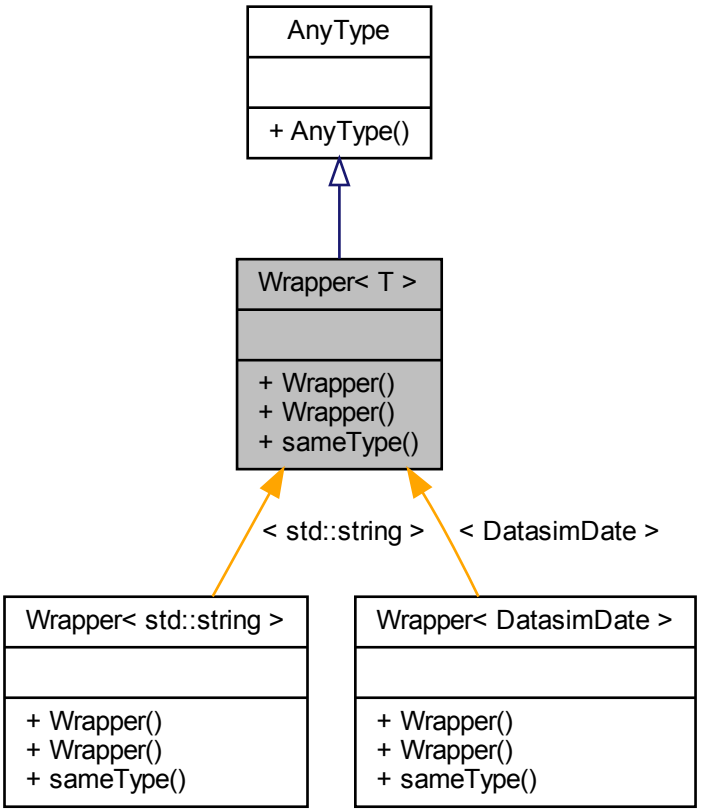
BUG BUG DAMN IT result[i] = - result[i];

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

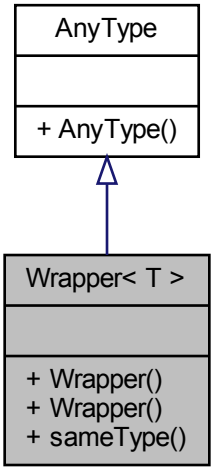
- include/duffy/Vector.hh
- src/Vector.cc

3.127 Wrapper< T > Class Template Reference

Inheritance diagram for Wrapper< T >:



Collaboration diagram for Wrapper< T >:



Public Member Functions

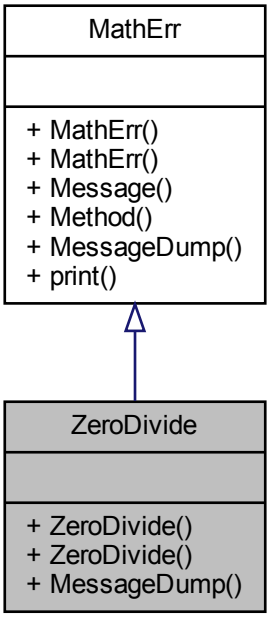
- **Wrapper** (T wrappedObject)
- template<class T2 >
  bool **sameType** (const T2 &t2)

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

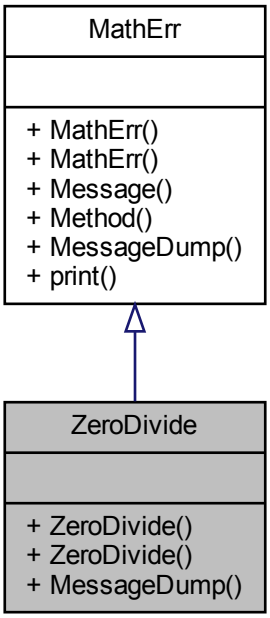
- src/Wrapper.cc

3.128 ZeroDivide Class Reference

Inheritance diagram for ZeroDivide:



Collaboration diagram for ZeroDivide:



Public Member Functions

- **ZeroDivide** (const std::string &message, const std::string &method, const std::string &annotation)
- std::vector< std::string > **MessageDump** () const

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

- src/MathErr.cc

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