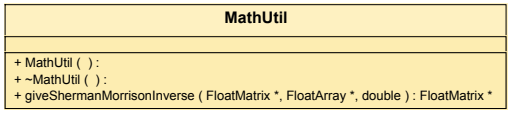
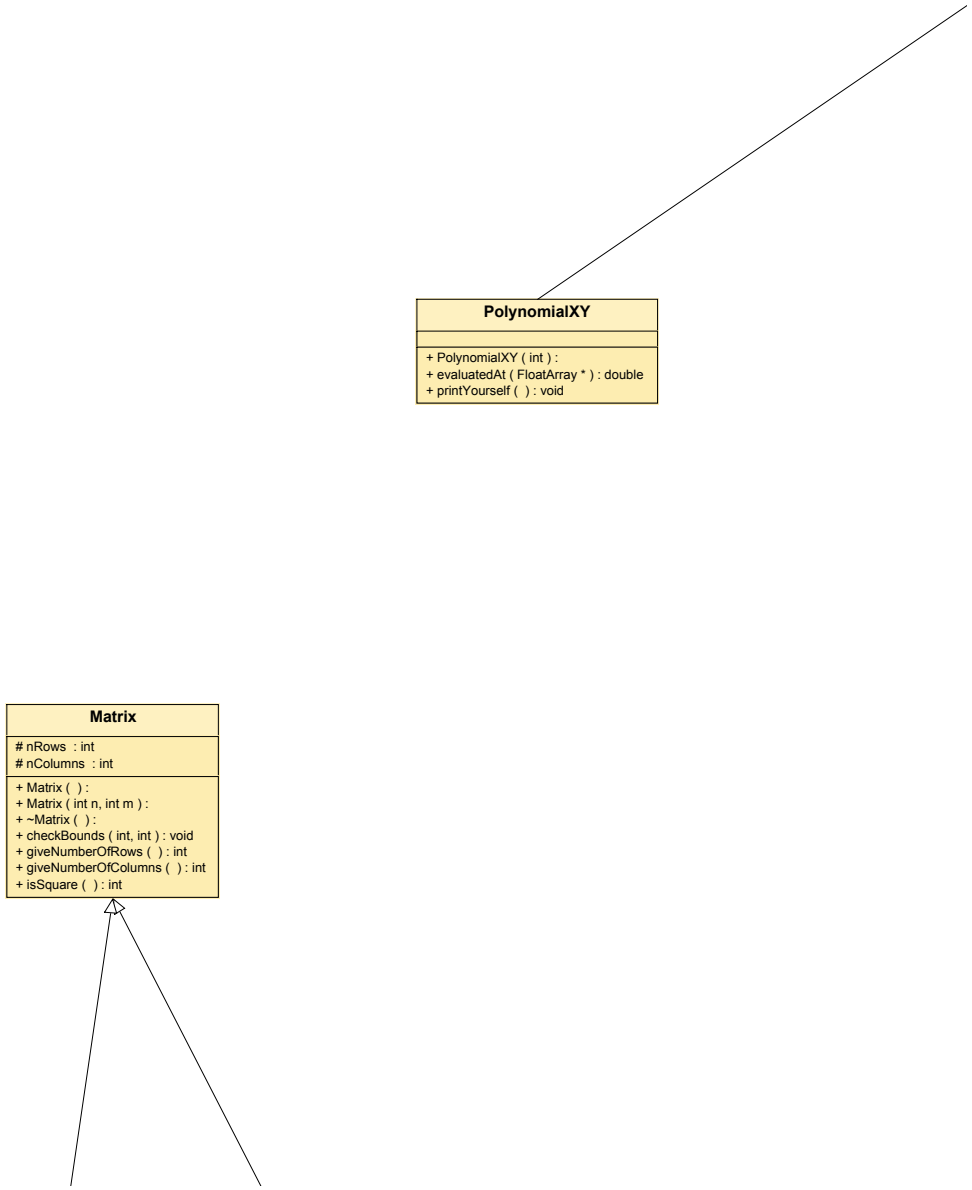
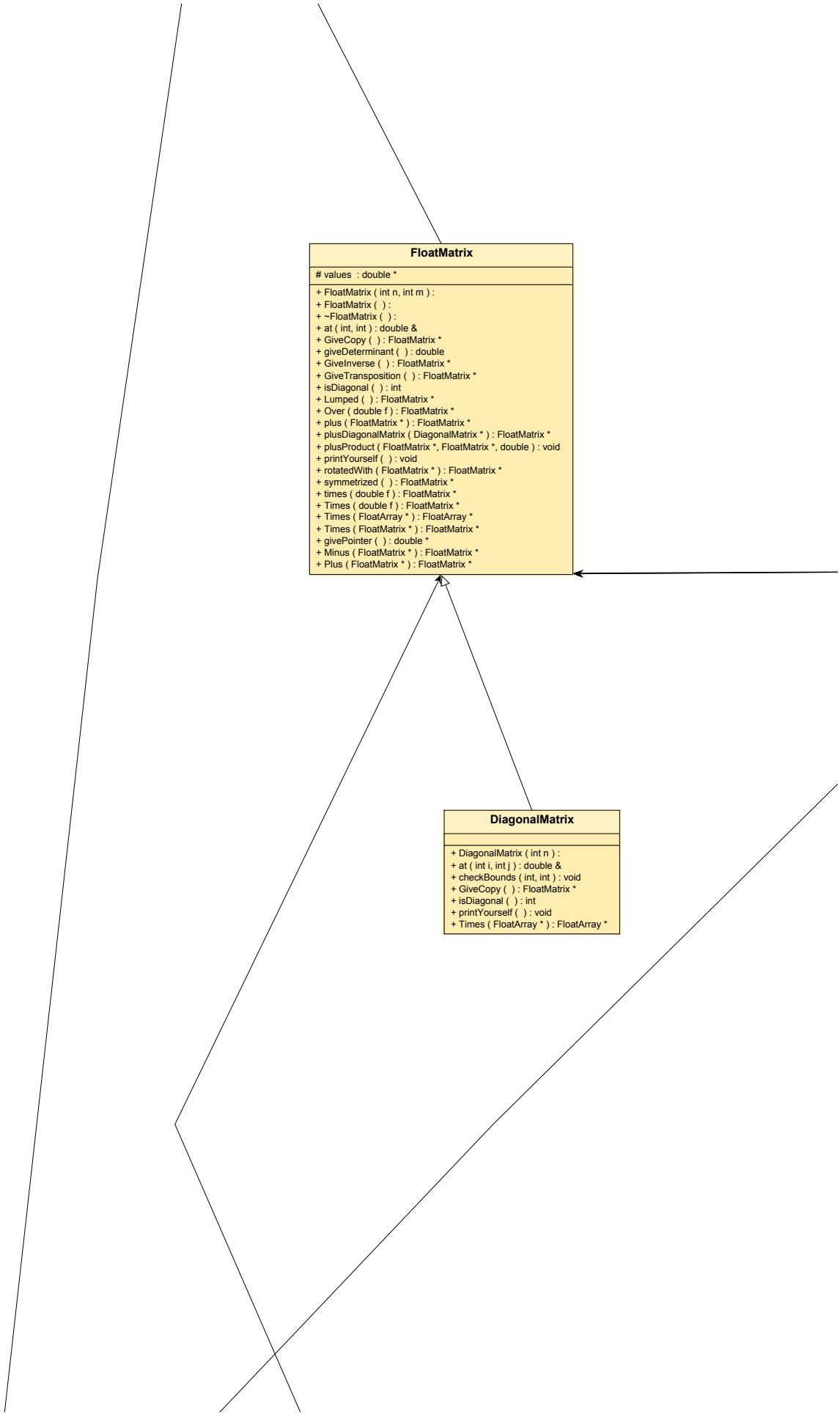
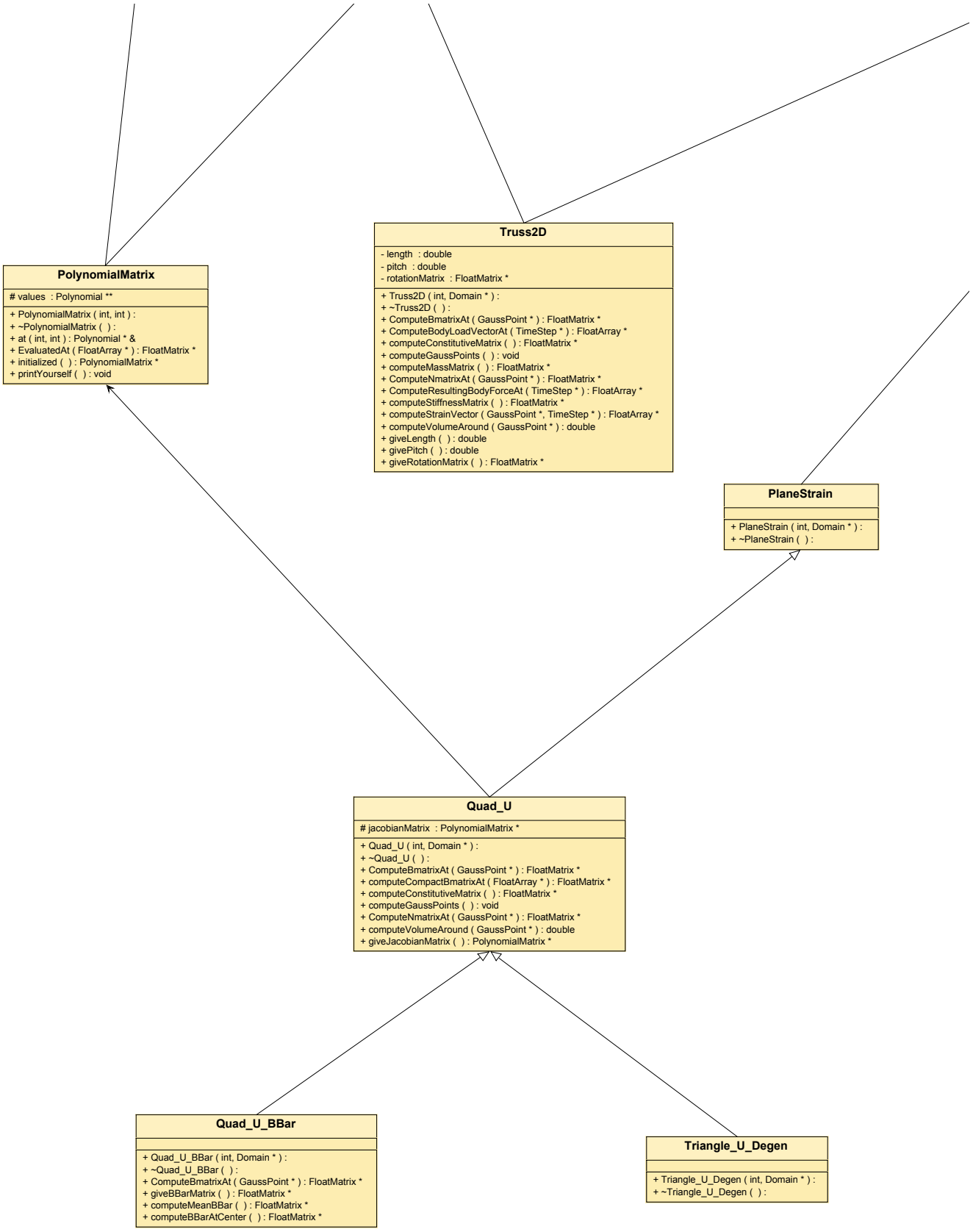
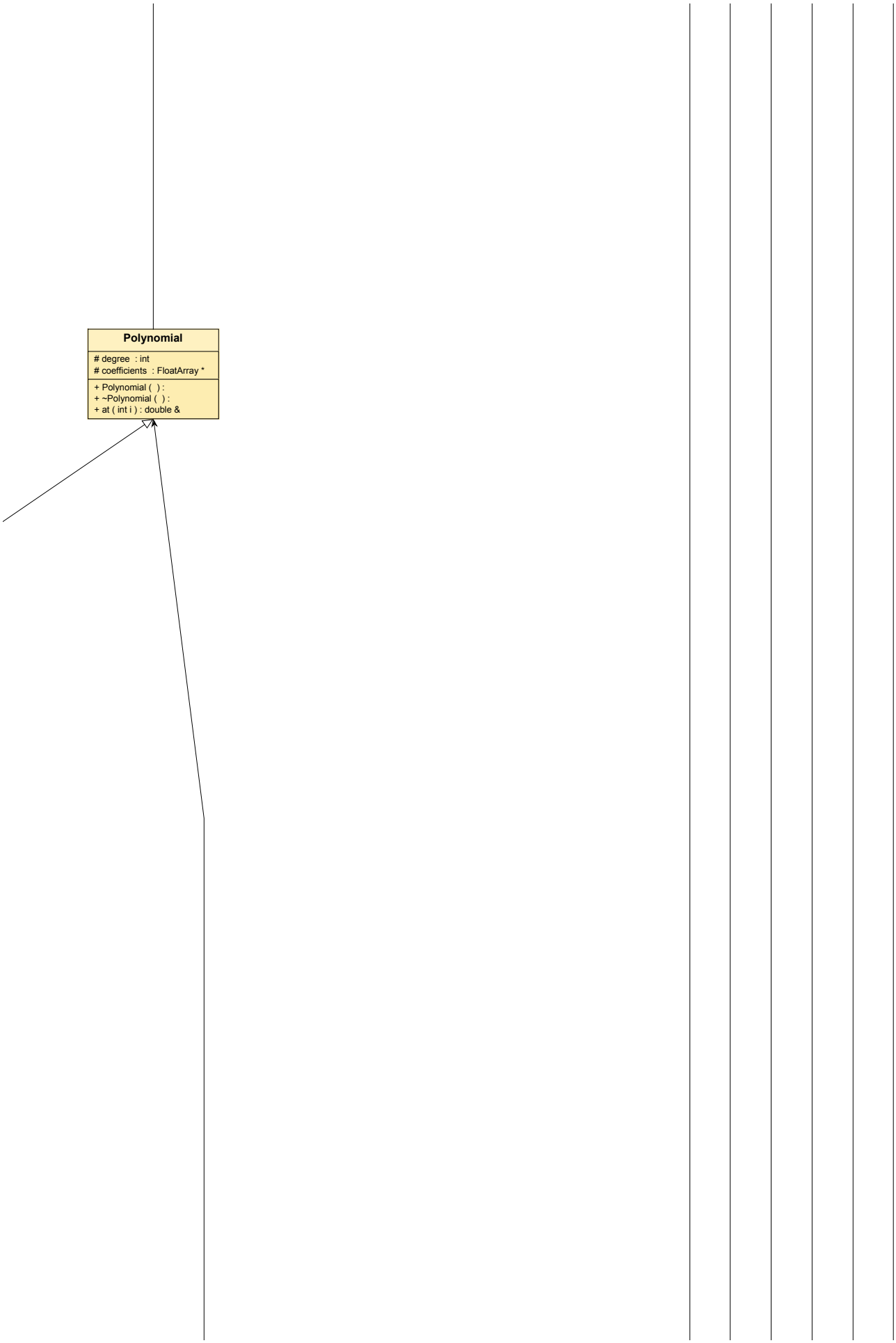
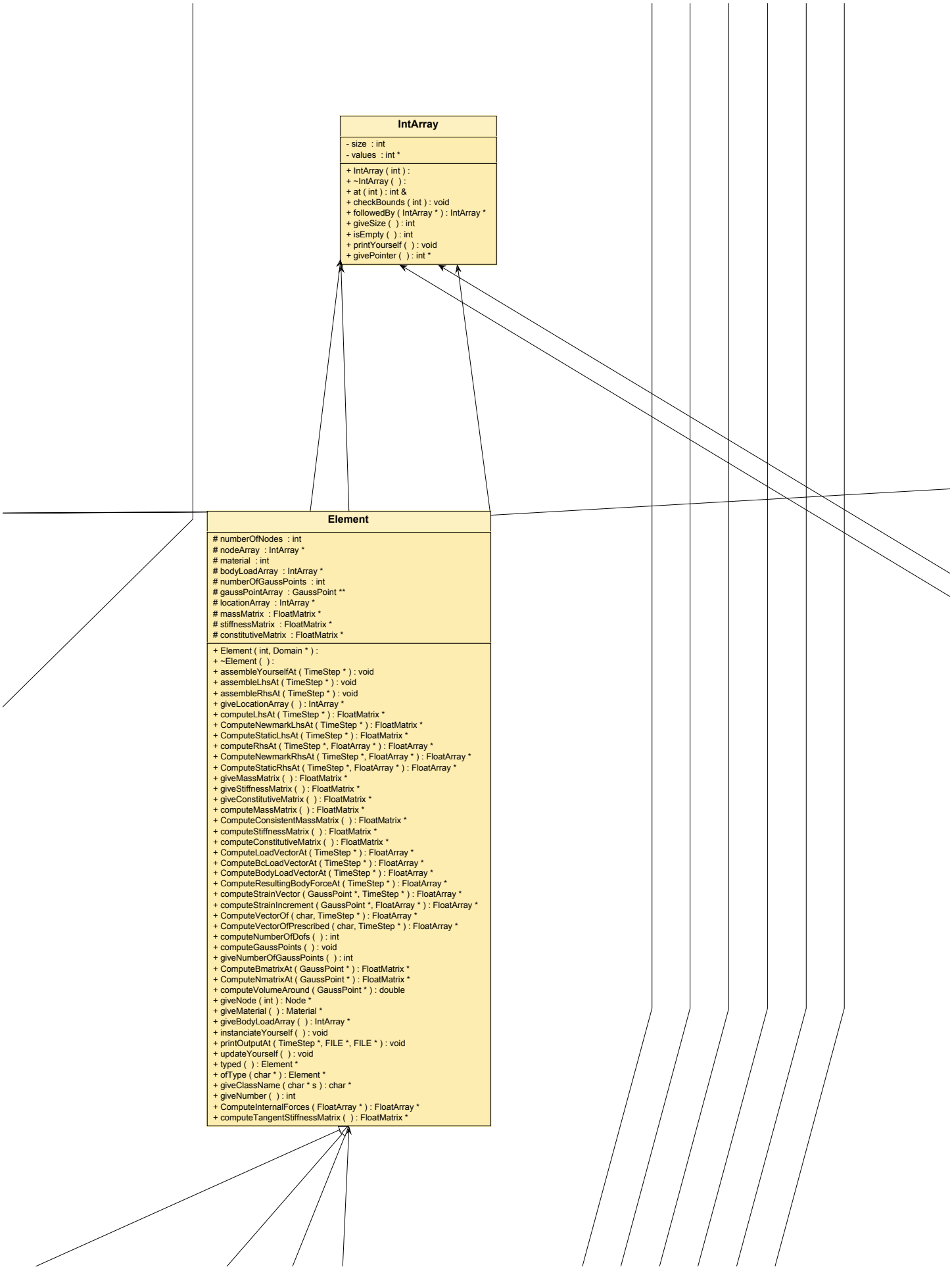

MathUtil
+ MathUtil ( ) :
+ ~MathUtil ( ) :
+ giveShermanMorrisonInverse (FloatMatrix *, FloatArray *, double) : FloatMatrix *

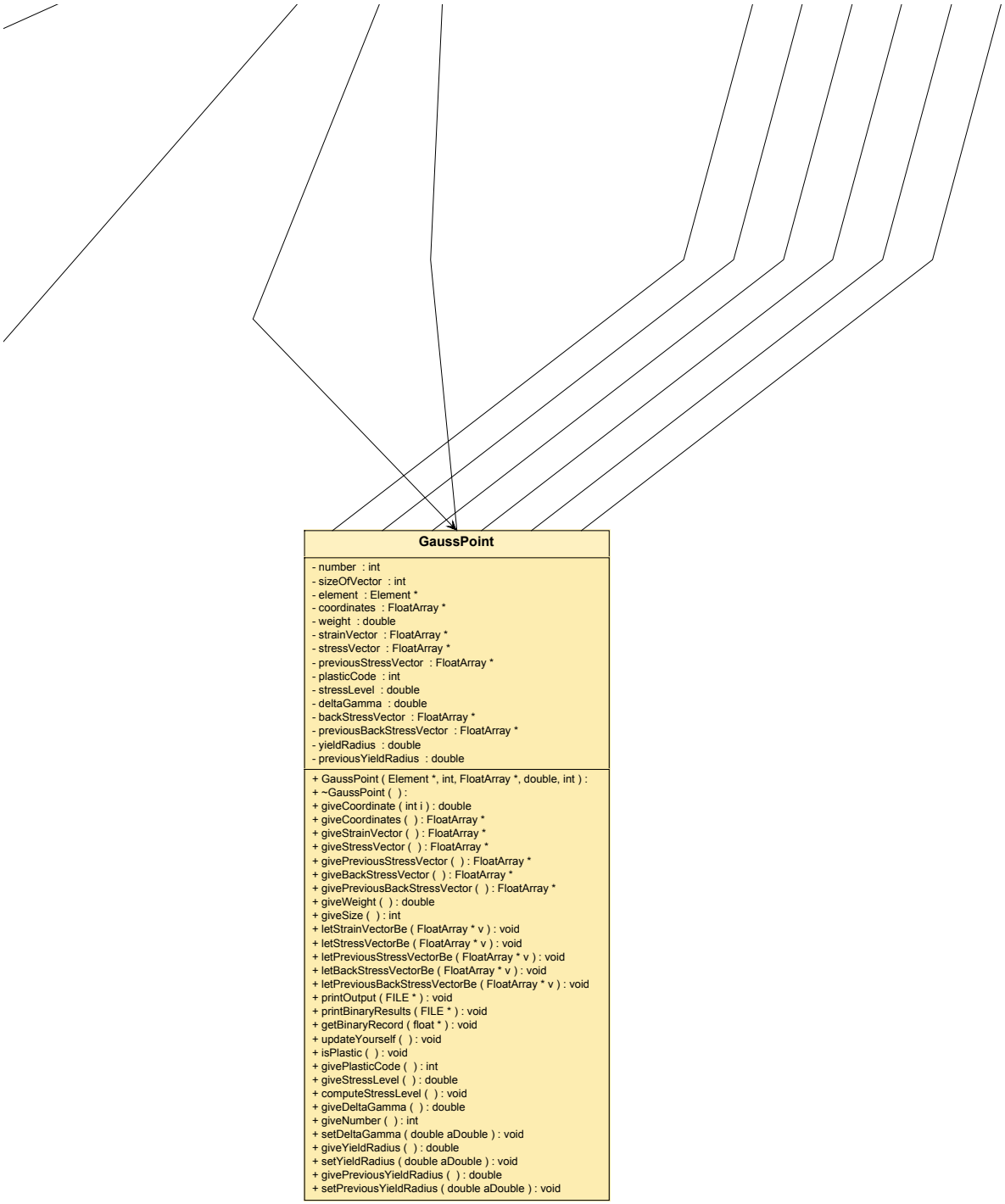

PolynomialXY
+ PolynomialXY (int) :
+ evaluatedAt (FloatArray *) : double
+ printYourself ( ) : void
Matrix
nRows : int
nColumns : int
+ Matrix ( ) :
+ Matrix (int n, int m) :
+ ~Matrix ( ) :
+ checkBounds (int, int) : void
+ giveNumberOfRows ( ) : int
+ giveNumberOfColumns ( ) : int
+ isSquare ( ) : int

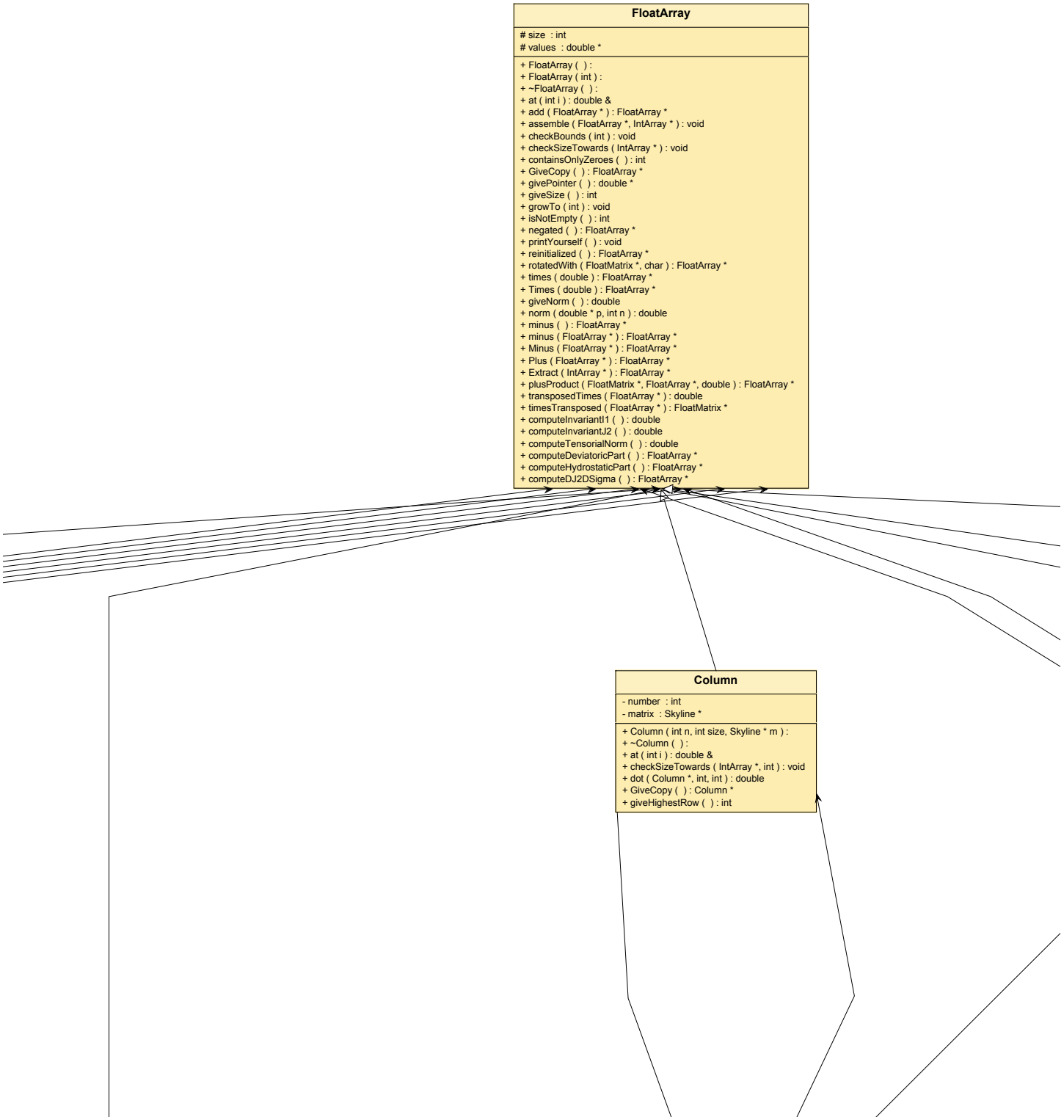

FloatMatrix
values : double *
+ FloatMatrix (int n, int m) :
+ FloatMatrix ( ) :
+ ~FloatMatrix ( ) :
+ at (int, int) : double &
+ GiveCopy ( ) : FloatMatrix *
+ giveDeterminant ( ) : double
+ GiveInverse ( ) : FloatMatrix *
+ GiveTransposition ( ) : FloatMatrix *
+ isDiagonal ( ) : int
+ Lumped ( ) : FloatMatrix *
+ Over (double f) : FloatMatrix *
+ plus (FloatMatrix *) : FloatMatrix *
+ plusDiagonalMatrix (DiagonalMatrix *) : FloatMatrix *
+ plusProduct (FloatMatrix *, FloatMatrix *, double) : void
+ printYourself ( ) : void
+ rotatedWith (FloatMatrix *) : FloatMatrix *
+ symmetrized ( ) : FloatMatrix *
+ times (double f) : FloatMatrix *
+ Times (double f) : FloatMatrix *
+ Times (FloatArray *) : FloatArray *
+ Times (FloatMatrix *) : FloatMatrix *
+ givePointer ( ) : double *
+ Minus (FloatMatrix *) : FloatMatrix *
+ Plus (FloatMatrix *) : FloatMatrix *
DiagonalMatrix
+ DiagonalMatrix (int n) :
+ at (int i, int j) : double &
+ checkBounds (int, int) : void
+ GiveCopy ( ) : FloatMatrix *
+ isDiagonal ( ) : int
+ printYourself ( ) : void
+ Times (FloatArray *) : FloatArray *

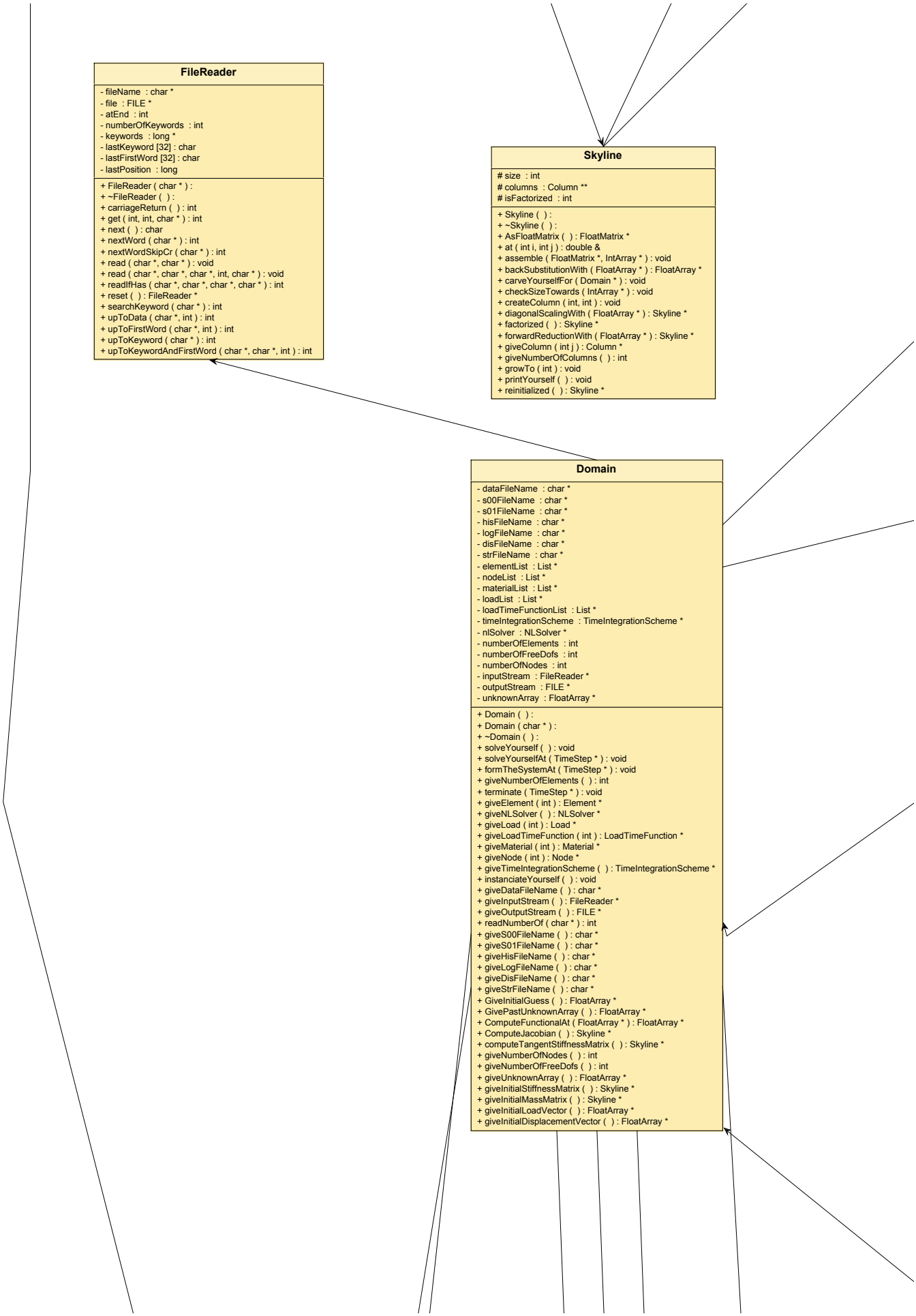

PolynomialMatrix
values : Polynomial **
+ PolynomialMatrix (int, int) :
+ ~PolynomialMatrix ( ) :
+ at (int, int) : Polynomial * &
+ EvaluatedAt (FloatArray *) : FloatMatrix *
+ initialized ( ) : PolynomialMatrix *
+ printYourself ( ) : void
Truss2D
- length : double
- pitch : double
- rotationMatrix : FloatMatrix *
+ Truss2D (int, Domain *) :
+ ~Truss2D ( ) :
+ ComputeBmatrixAt (GaussPoint *) : FloatMatrix *
+ ComputeBodyLoadVectorAt (TimeStep *) : FloatArray *
+ computeConstitutiveMatrix ( ) : FloatMatrix *
+ computeGaussPoints ( ) : void
+ computeMassMatrix ( ) : FloatMatrix *
+ ComputeNmatrixAt (GaussPoint *) : FloatMatrix *
+ ComputeResultingBodyForceAt (TimeStep *) : FloatArray *
+ computeStiffnessMatrix ( ) : FloatMatrix *
+ computeStrainVector (GaussPoint *, TimeStep *) : FloatArray *
+ computeVolumeAround (GaussPoint *) : double
+ giveLength ( ) : double
+ givePitch ( ) : double
+ giveRotationMatrix ( ) : FloatMatrix *
PlaneStrain
+ PlaneStrain (int, Domain *) :
+ ~PlaneStrain ( ) :
Quad_U
jacobianMatrix : PolynomialMatrix *
+ Quad_U (int, Domain *) :
+ ~Quad_U ( ) :
+ ComputeBmatrixAt (GaussPoint *) : FloatMatrix *
+ computeCompactBmatrixAt (FloatArray *) : FloatMatrix *
+ computeConstitutiveMatrix ( ) : FloatMatrix *
+ computeGaussPoints ( ) : void
+ ComputeNmatrixAt (GaussPoint *) : FloatMatrix *
+ computeVolumeAround (GaussPoint *) : double
+ giveJacobianMatrix ( ) : PolynomialMatrix *
Quad_U_BBar
+ Quad_U_BBar (int, Domain *) :
+ ~Quad_U_BBar ( ) :
+ ComputeBmatrixAt (GaussPoint *) : FloatMatrix *
+ giveBBarMatrix ( ) : FloatMatrix *
+ computeMeanBBar ( ) : FloatMatrix *
+ computeBBarAtCenter ( ) : FloatMatrix *
Triangle_U_Degen
+ Triangle_U_Degen (int, Domain *) :
+ ~Triangle_U_Degen ( ) :

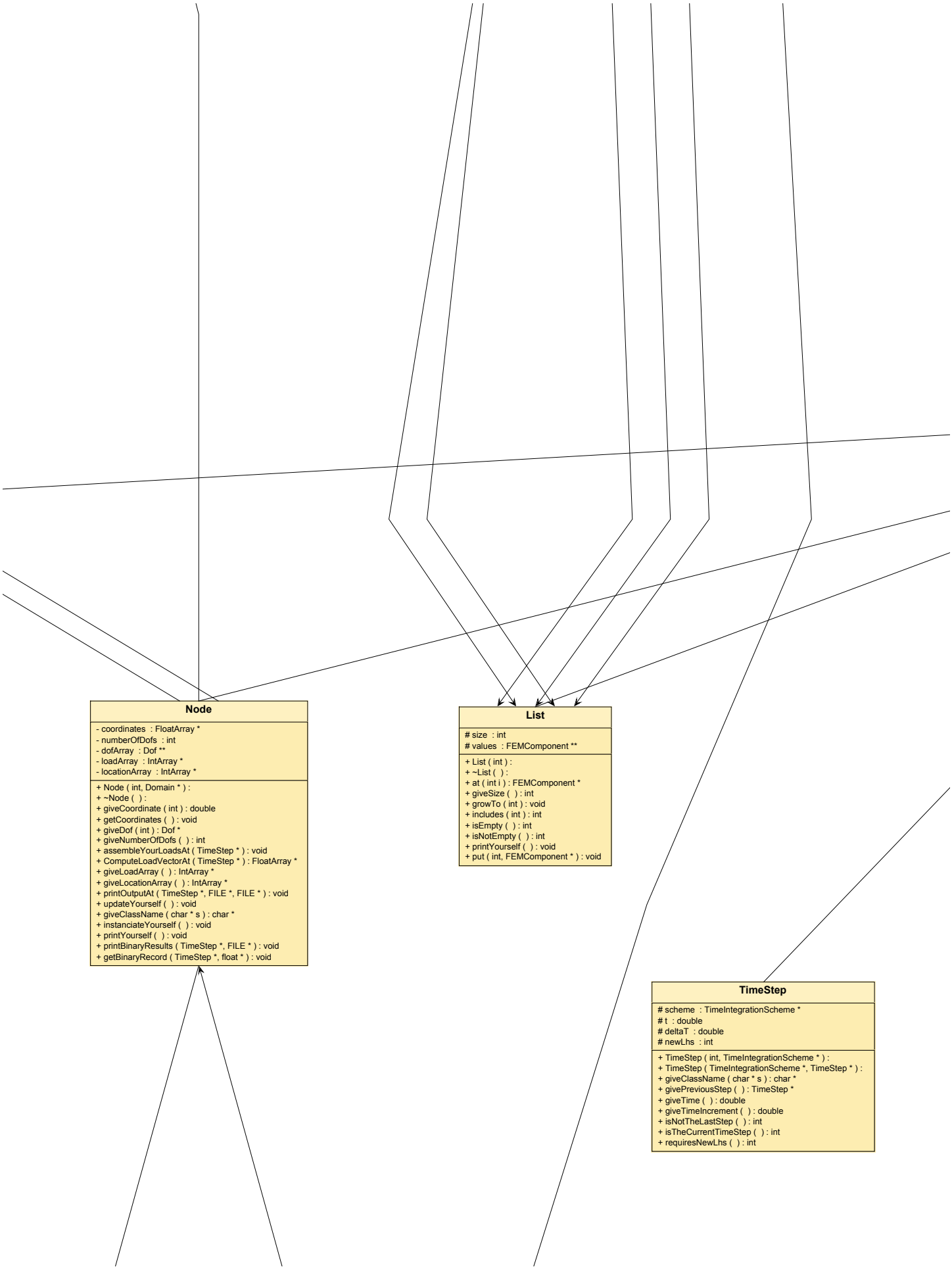

Polynomial
degree : int
coefficients : FloatArray *
+ Polynomial ( ) :
+ ~Polynomial ( ) :
+ at (int i) : double &

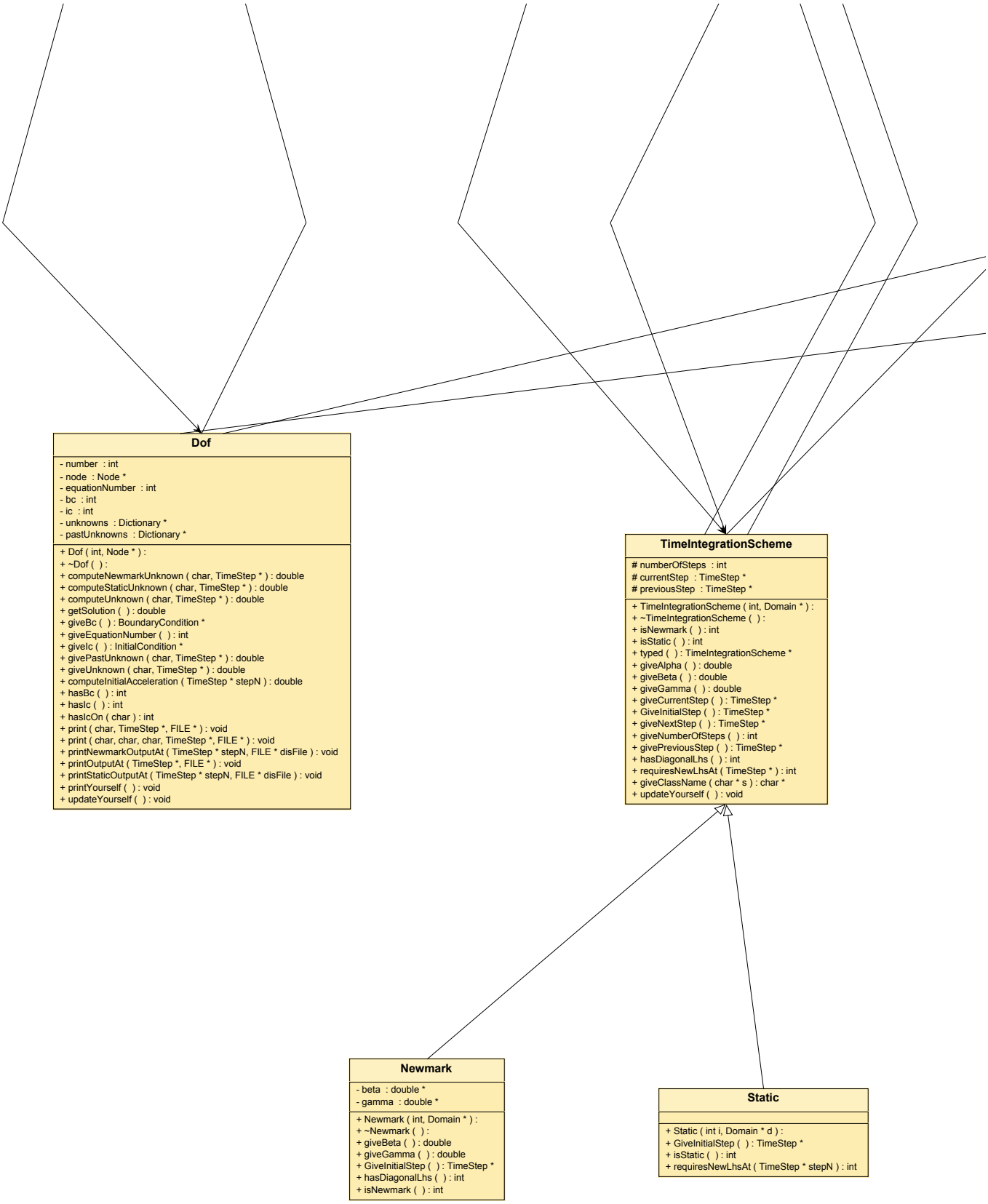

IntArray
- size : int
- values : int *
+ IntArray (int) :
+ ~IntArray ( ) :
+ at (int) : int &
+ checkBounds (int) : void
+ followedBy (IntArray *) : IntArray *
+ giveSize ( ) : int
+ isEmpty ( ) : int
+ printYourself ( ) : void
+ givePointer ( ) : int *
Element
numberOfNodes : int
nodeArray : IntArray *
material : int
bodyLoadArray : IntArray *
numberOfGaussPoints : int
gaussPointArray : GaussPoint **
locationArray : IntArray *
massMatrix : FloatMatrix *
stiffnessMatrix : FloatMatrix *
constitutiveMatrix : FloatMatrix *
+ Element (int, Domain *) :
+ ~Element ( ) :
+ assembleYourselfAt (TimeStep *) : void
+ assembleLhsAt (TimeStep *) : void
+ assembleRhsAt (TimeStep *) : void
+ giveLocationArray ( ) : IntArray *
+ computeLhsAt (TimeStep *) : FloatMatrix *
+ ComputeNewmarkLhsAt (TimeStep *) : FloatMatrix *
+ ComputeStaticLhsAt (TimeStep *) : FloatMatrix *
+ computeRhsAt (TimeStep *, FloatArray *) : FloatArray *
+ ComputeNewmarkRhsAt (TimeStep *, FloatArray *) : FloatArray *
+ ComputeStaticRhsAt (TimeStep *, FloatArray *) : FloatArray *
+ giveMassMatrix ( ) : FloatMatrix *
+ giveStiffnessMatrix ( ) : FloatMatrix *
+ giveConstitutiveMatrix ( ) : FloatMatrix *
+ computeMassMatrix ( ) : FloatMatrix *
+ ComputeConsistentMassMatrix ( ) : FloatMatrix *
+ computeStiffnessMatrix ( ) : FloatMatrix *
+ computeConstitutiveMatrix ( ) : FloatMatrix *
+ ComputeLoadVectorAt (TimeStep *) : FloatArray *
+ ComputeBcLoadVectorAt (TimeStep *) : FloatArray *
+ ComputeBodyLoadVectorAt (TimeStep *) : FloatArray *
+ ComputeResultingBodyForceAt (TimeStep *) : FloatArray *
+ computeStrainVector (GaussPoint *, TimeStep *) : FloatArray *
+ computeStrainIncrement (GaussPoint *, FloatArray *) : FloatArray *
+ ComputeVectorOf (char, TimeStep *) : FloatArray *
+ ComputeVectorOfPrescribed (char, TimeStep *) : FloatArray *
+ computeNumberOfDofs ( ) : int
+ computeGaussPoints ( ) : void
+ giveNumberOfGaussPoints ( ) : int
+ ComputeBmatrixAt (GaussPoint *) : FloatMatrix *
+ ComputeNmatrixAt (GaussPoint *) : FloatMatrix *
+ computeVolumeAround (GaussPoint *) : double
+ giveNode (int) : Node *
+ giveMaterial ( ) : Material *
+ giveBodyLoadArray ( ) : IntArray *
+ instanciateYourself ( ) : void
+ printOutputAt (TimeStep *, FILE *, FILE *) : void
+ updateYourself ( ) : void
+ typed ( ) : Element *
+ ofType (char *) : Element *
+ giveClassName (char * s) : char *
+ giveNumber ( ) : int
+ ComputeInternalForces (FloatArray *) : FloatArray *
+ computeTangentStiffnessMatrix ( ) : FloatMatrix *

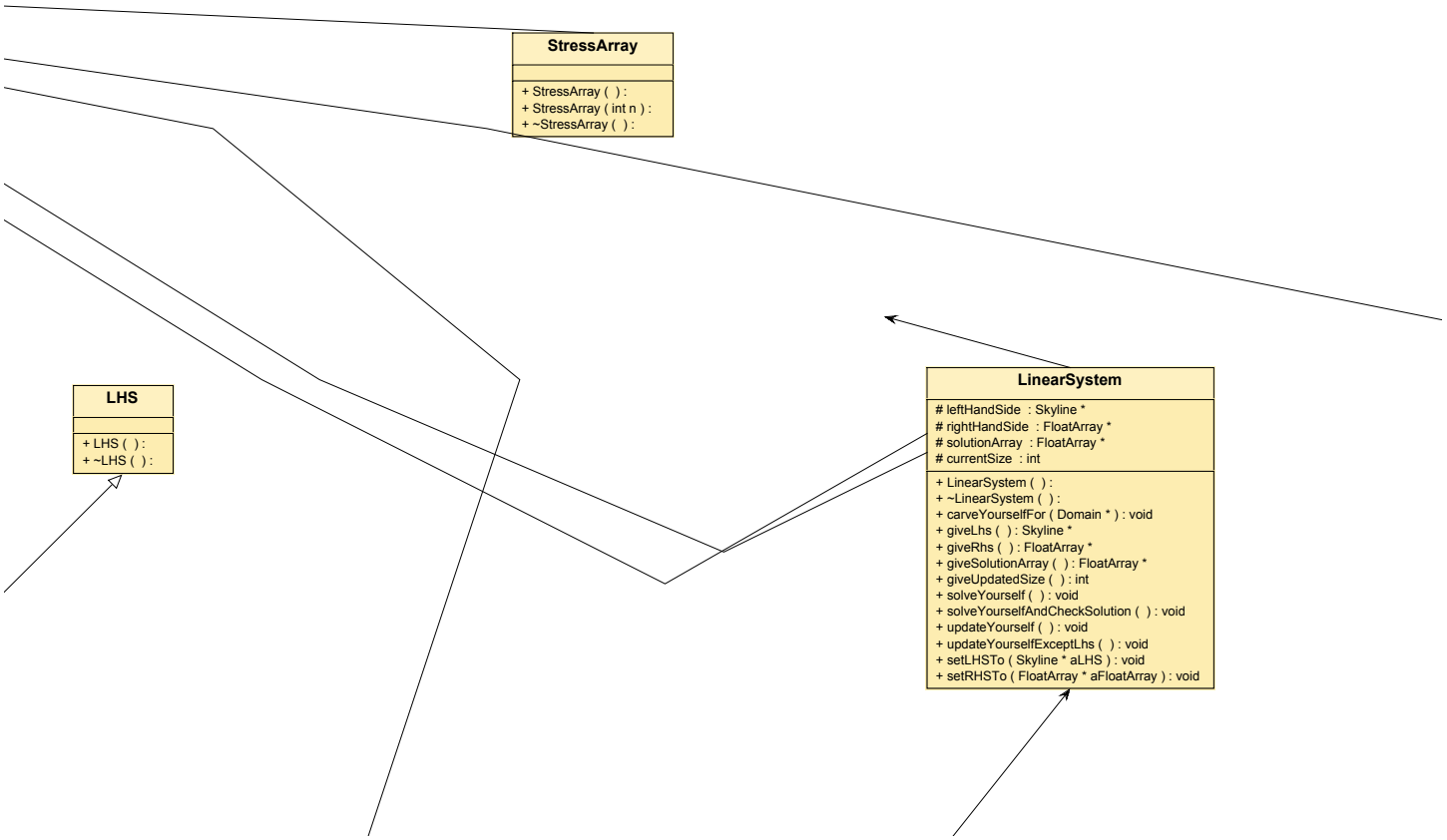

GaussPoint
- number : int
- sizeOfVector : int
- element : Element *
- coordinates : FloatArray *
- weight : double
- strainVector : FloatArray *
- stressVector : FloatArray *
- previousStressVector : FloatArray *
- plasticCode : int
- stressLevel : double
- deltaGamma : double
- backStressVector : FloatArray *
- previousBackStressVector : FloatArray *
- yieldRadius : double
- previousYieldRadius : double
+ GaussPoint (Element *, int, FloatArray *, double, int) :
+ ~GaussPoint ( ) :
+ giveCoordinate (int i) : double
+ giveCoordinates ( ) : FloatArray *
+ giveStrainVector ( ) : FloatArray *
+ giveStressVector ( ) : FloatArray *
+ givePreviousStressVector ( ) : FloatArray *
+ giveBackStressVector ( ) : FloatArray *
+ givePreviousBackStressVector ( ) : FloatArray *
+ giveWeight ( ) : double
+ giveSize ( ) : int
+ letStrainVectorBe (FloatArray * v) : void
+ letStressVectorBe (FloatArray * v) : void
+ letPreviousStressVectorBe (FloatArray * v) : void
+ letBackStressVectorBe (FloatArray * v) : void
+ letPreviousBackStressVectorBe (FloatArray * v) : void
+ printOutput (FILE *) : void
+ printBinaryResults (FILE *) : void
+ getBinaryRecord (float *) : void
+ updateYourself ( ) : void
+ isPlastic ( ) : void
+ givePlasticCode ( ) : int
+ giveStressLevel ( ) : double
+ computeStressLevel ( ) : void
+ giveDeltaGamma ( ) : double
+ giveNumber ( ) : int
+ setDeltaGamma (double aDouble) : void
+ giveYieldRadius ( ) : double
+ setYieldRadius (double aDouble) : void
+ givePreviousYieldRadius ( ) : double
+ setPreviousYieldRadius (double aDouble) : void

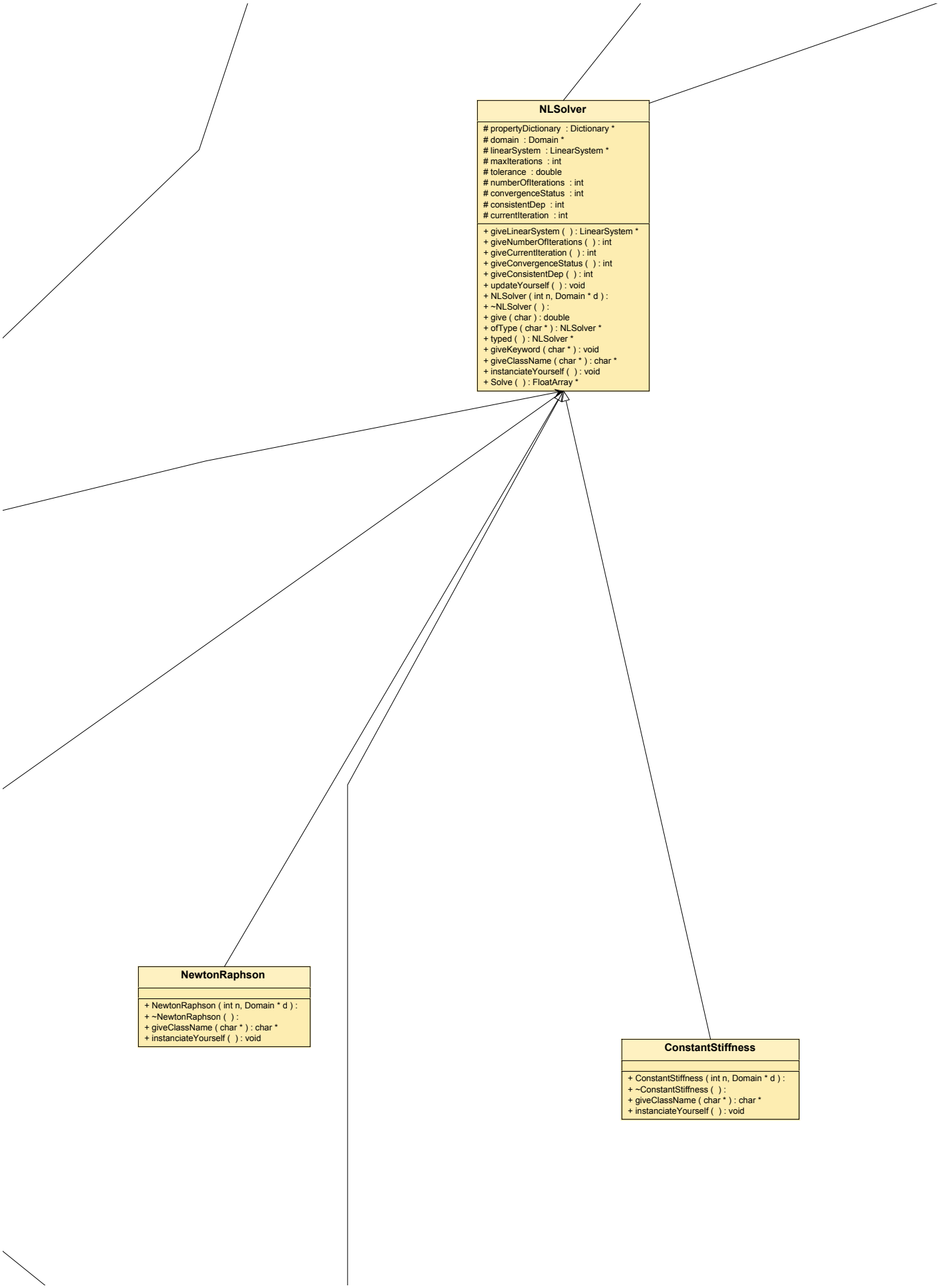

FloatArray
size : int
values : double *
+ FloatArray ( ) :
+ FloatArray (int) :
+ ~FloatArray ( ) :
+ at (int i) : double &
+ add (FloatArray *) : FloatArray *
+ assemble (FloatArray *, IntArray *) : void
+ checkBounds (int) : void
+ checkSizeTowards (IntArray *) : void
+ containsOnlyZeroes ( ) : int
+ GiveCopy ( ) : FloatArray *
+ givePointer ( ) : double *
+ giveSize ( ) : int
+ growTo (int) : void
+ isNotEmpty ( ) : int
+ negated ( ) : FloatArray *
+ printYourself ( ) : void
+ reinitialized ( ) : FloatArray *
+ rotatedWith (FloatMatrix *, char) : FloatArray *
+ times (double) : FloatArray *
+ Times (double) : FloatArray *
+ giveNorm ( ) : double
+ norm (double * p, int n) : double
+ minus ( ) : FloatArray *
+ minus (FloatArray *) : FloatArray *
+ Minus (FloatArray *) : FloatArray *
+ Plus (FloatArray *) : FloatArray *
+ Extract (IntArray *) : FloatArray *
+ plusProduct (FloatMatrix *, FloatArray *, double) : FloatArray *
+ transposedTimes (FloatArray *) : double
+ timesTransposed (FloatArray *) : FloatMatrix *
+ computeInvariantI1 ( ) : double
+ computeInvariantJ2 ( ) : double
+ computeTensorialNorm ( ) : double
+ computeDeviatoricPart ( ) : FloatArray *
+ computeHydrostaticPart ( ) : FloatArray *
+ computeDJ2DSigma ( ) : FloatArray *
Column
- number : int
- matrix : Skyline *
+ Column (int n, int size, Skyline * m) :
+ ~Column ( ) :
+ at (int i) : double &
+ checkSizeTowards (IntArray *, int) : void
+ dot (Column *, int, int) : double
+ GiveCopy ( ) : Column *
+ giveHighestRow ( ) : int

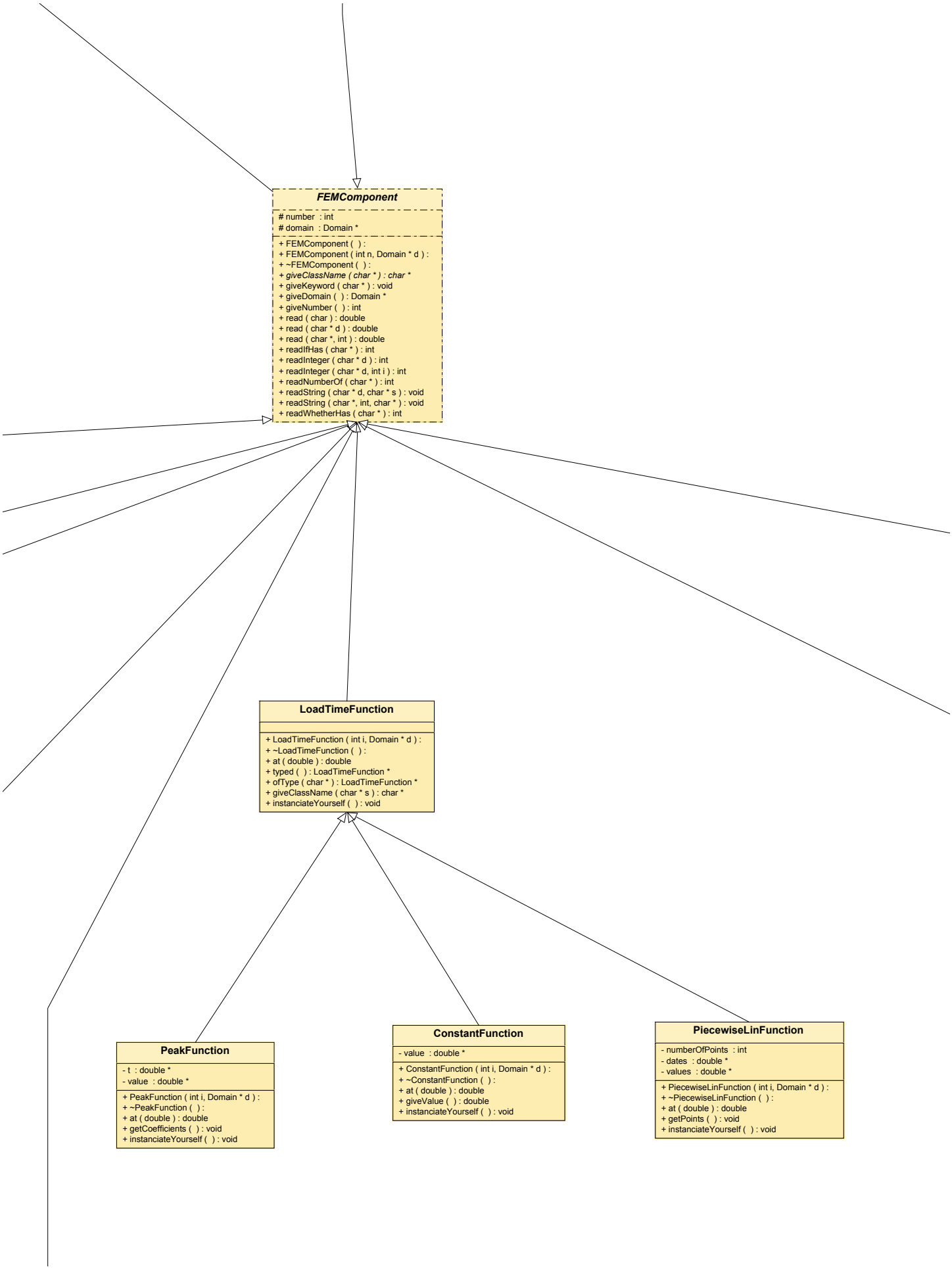

FileReader
- fileName : char *
- file : FILE *
- atEnd : int
- numberOfKeywords : int
- keywords : long *
- lastKeyword [32] : char
- lastFirstWord [32] : char
- lastPosition : long
+ FileReader (char *) :
+ ~FileReader ( ) :
+ carriageReturn ( ) : int
+ get (int, int, char *) : int
+ next ( ) : char
+ nextWord (char *) : int
+ nextWordSkipCr (char *) : int
+ read (char *, char *) : void
+ read (char *, char *, char *, int, char *) : void
+ readIfHas (char *, char *, char *, char *) : int
+ reset ( ) : FileReader *
+ searchKeyword (char *) : int
+ upToData (char *, int) : int
+ upToFirstWord (char *, int) : int
+ upToKeyword (char *) : int
+ upToKeywordAndFirstWord (char *, char *, int) : int
Skyline
size : int
columns : Column **
isFactorized : int
+ Skyline ( ) :
+ ~Skyline ( ) :
+ AsFloatMatrix ( ) : FloatMatrix *
+ at (int i, int j) : double &
+ assemble (FloatMatrix *, IntArray *) : void
+ backSubstitutionWith (FloatArray *) : FloatArray *
+ carveYourselfFor (Domain *) : void
+ checkSizeTowards (IntArray *) : void
+ createColumn (int, int) : void
+ diagonalScalingWith (FloatArray *) : Skyline *
+ factorized ( ) : Skyline *
+ forwardReductionWith (FloatArray *) : Skyline *
+ giveColumn (int j) : Column *
+ giveNumberOfColumns ( ) : int
+ growTo (int) : void
+ printYourself ( ) : void
+ reinitialized ( ) : Skyline *
Domain
- dataFileName : char *
- s00FileName : char *
- s01FileName : char *
- hisFileName : char *
- logFileName : char *
- disFileName : char *
- strFileName : char *
- elementList : List *
- nodeList : List *
- materialList : List *
- loadList : List *
- loadTimeFunctionList : List *
- timeIntegrationScheme : TimeIntegrationScheme *
- nlSolver : NLSolver *
- numberOfElements : int
- numberOfFreeDofs : int
- numberOfNodes : int
- inputStream : FileReader *
- outputStream : FILE *
- unknownArray : FloatArray *
+ Domain ( ) :
+ Domain (char *) :
+ ~Domain ( ) :
+ solveYourself ( ) : void
+ solveYourselfAt (TimeStep *) : void
+ formTheSystemAt (TimeStep *) : void
+ giveNumberOfElements ( ) : int
+ terminate (TimeStep *) : void
+ giveElement (int) : Element *
+ giveNLSolver ( ) : NLSolver *
+ giveLoad (int) : Load *
+ giveLoadTimeFunction (int) : LoadTimeFunction *
+ giveMaterial (int) : Material *
+ giveNode (int) : Node *
+ giveTimeIntegrationScheme ( ) : TimeIntegrationScheme *
+ instanciateYourself ( ) : void
+ giveDataFileName ( ) : char *
+ giveInputStream ( ) : FileReader *
+ giveOutputStream ( ) : FILE *
+ readNumberOf (char *) : int
+ giveS00FileName ( ) : char *
+ giveS01FileName ( ) : char *
+ giveHisFileName ( ) : char *
+ giveLogFileName ( ) : char *
+ giveDisFileName ( ) : char *
+ giveStrFileName ( ) : char *
+ GiveInitialGuess ( ) : FloatArray *
+ GivePastUnknownArray ( ) : FloatArray *
+ ComputeFunctionalAt (FloatArray *) : FloatArray *
+ ComputeJacobian ( ) : Skyline *
+ computeTangentStiffnessMatrix ( ) : Skyline *
+ giveNumberOfNodes ( ) : int
+ giveNumberOfFreeDofs ( ) : int
+ giveUnknownArray ( ) : FloatArray *
+ giveInitialStiffnessMatrix ( ) : Skyline *
+ giveInitialMassMatrix ( ) : Skyline *
+ giveInitialLoadVector ( ) : FloatArray *
+ giveInitialDisplacementVector ( ) : FloatArray *

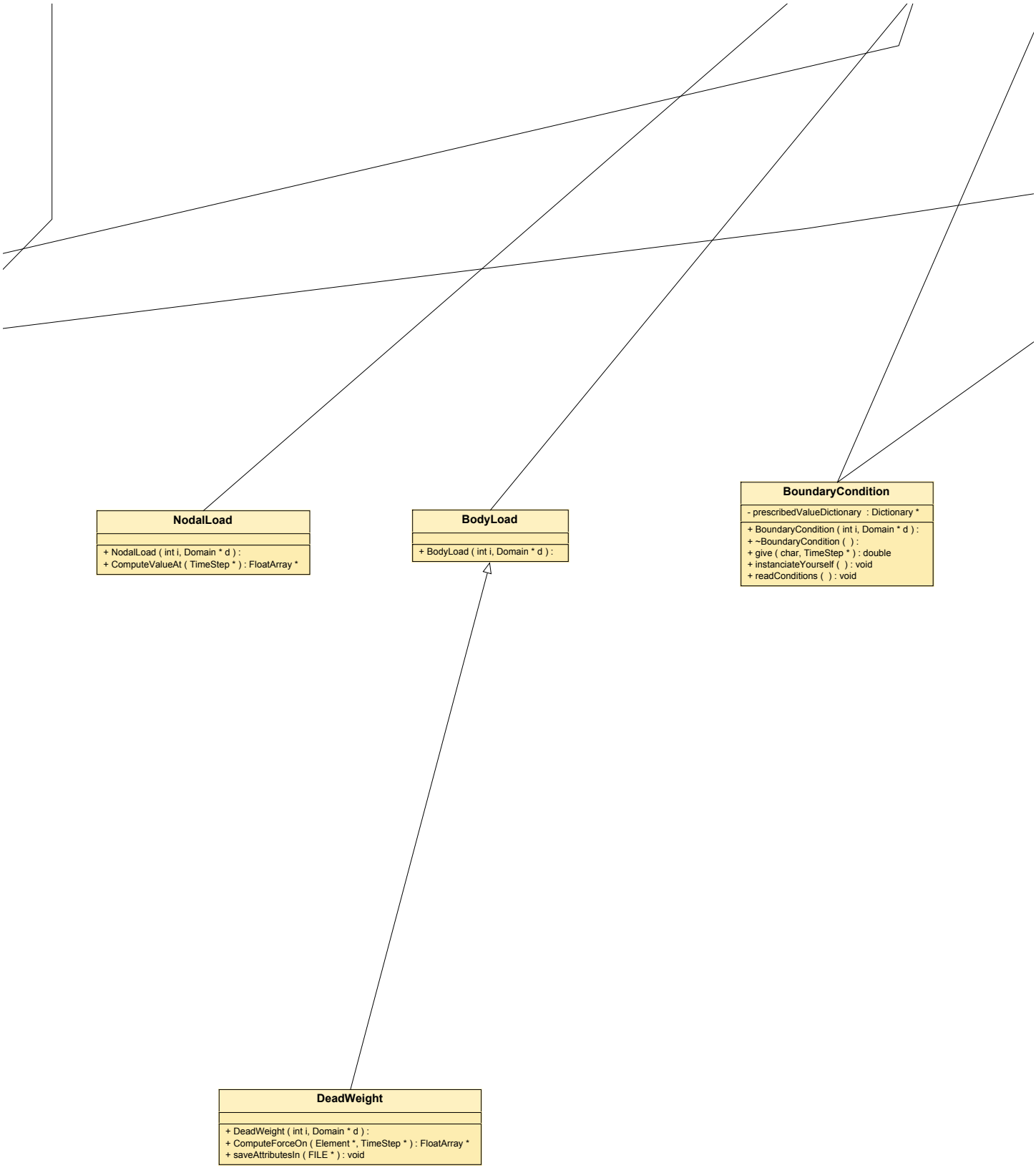

Node
- coordinates : FloatArray *
- numberOfDofs : int
- dofArray : Dof **
- loadArray : IntArray *
- locationArray : IntArray *
+ Node (int, Domain *) :
+ ~Node ( ) :
+ giveCoordinate (int) : double
+ getCoordinates ( ) : void
+ giveDof (int) : Dof *
+ giveNumberOfDofs ( ) : int
+ assembleYourLoadsAt (TimeStep *) : void
+ ComputeLoadVectorAt (TimeStep *) : FloatArray *
+ giveLoadArray ( ) : IntArray *
+ giveLocationArray ( ) : IntArray *
+ printOutputAt (TimeStep *, FILE *, FILE *) : void
+ updateYourself ( ) : void
+ giveClassName (char * s) : char *
+ instanciateYourself ( ) : void
+ printYourself ( ) : void
+ printBinaryResults (TimeStep *, FILE *) : void
+ getBinaryRecord (TimeStep *, float *) : void
List
size : int
values : FEMComponent **
+ List (int) :
+ ~List ( ) :
+ at (int i) : FEMComponent *
+ giveSize ( ) : int
+ growTo (int) : void
+ includes (int) : int
+ isEmpty ( ) : int
+ isNotEmpty ( ) : int
+ printYourself ( ) : void
+ put (int, FEMComponent *) : void
TimeStep
scheme : TimeIntegrationScheme *
t : double
deltaT : double
newLhs : int
+ TimeStep (int, TimeIntegrationScheme *) :
+ TimeStep (TimeIntegrationScheme *, TimeStep *) :
+ giveClassName (char * s) : char *
+ givePreviousStep ( ) : TimeStep *
+ giveTime ( ) : double
+ giveTimeIncrement ( ) : double
+ isNotTheLastStep ( ) : int
+ isTheCurrentTimeStep ( ) : int
+ requiresNewLhs ( ) : int

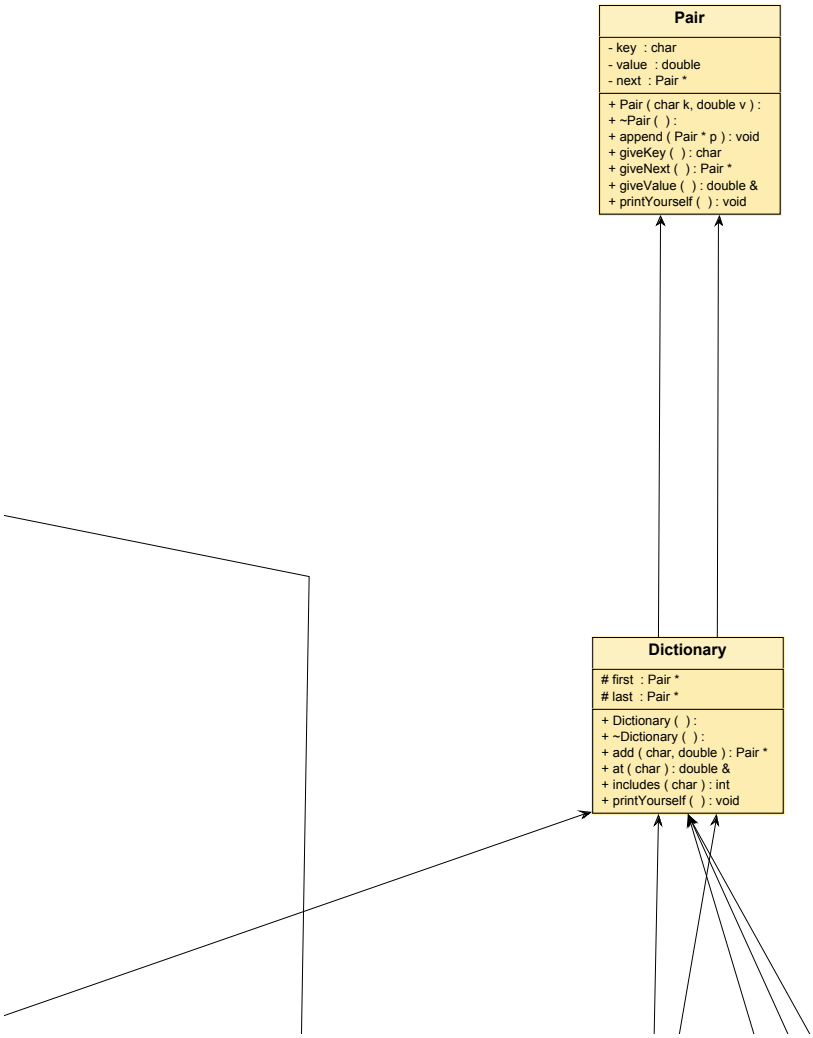

Dof
- number : int
- node : Node *
- equationNumber : int
- bc : int
- ic : int
- unknowns : Dictionary *
- pastUnknowns : Dictionary *
+ Dof (int, Node *) :
+ ~Dof ( ) :
+ computeNewmarkUnknown (char, TimeStep *) : double
+ computeStaticUnknown (char, TimeStep *) : double
+ computeUnknown (char, TimeStep *) : double
+ getSolution ( ) : double
+ giveBc ( ) : BoundaryCondition *
+ giveEquationNumber ( ) : int
+ giveIc ( ) : InitialCondition *
+ givePastUnknown (char, TimeStep *) : double
+ giveUnknown (char, TimeStep *) : double
+ computeInitialAcceleration (TimeStep * stepN) : double
+ hasBc ( ) : int
+ hasIc ( ) : int
+ hasIcOn (char) : int
+ print (char, TimeStep *, FILE *) : void
+ print (char, char, char, TimeStep *, FILE *) : void
+ printNewmarkOutputAt (TimeStep * stepN, FILE * disFile) : void
+ printOutputAt (TimeStep *, FILE *) : void
+ printStaticOutputAt (TimeStep * stepN, FILE * disFile) : void
+ printYourself ( ) : void
+ updateYourself ( ) : void
TimeIntegrationScheme
numberOfSteps : int
currentStep : TimeStep *
previousStep : TimeStep *
+ TimeIntegrationScheme (int, Domain *) :
+ ~TimeIntegrationScheme ( ) :
+ isNewmark ( ) : int
+ isStatic ( ) : int
+ typed ( ) : TimeIntegrationScheme *
+ giveAlpha ( ) : double
+ giveBeta ( ) : double
+ giveGamma ( ) : double
+ giveCurrentStep ( ) : TimeStep *
+ GiveInitialStep ( ) : TimeStep *
+ giveNextStep ( ) : TimeStep *
+ giveNumberOfSteps ( ) : int
+ givePreviousStep ( ) : TimeStep *
+ hasDiagonalLhs ( ) : int
+ requiresNewLhsAt (TimeStep *) : int
+ giveClassName (char * s) : char *
+ updateYourself ( ) : void
Newmark
- beta : double *
- gamma : double *
+ Newmark (int, Domain *) :
+ ~Newmark ( ) :
+ giveBeta ( ) : double
+ giveGamma ( ) : double
+ GiveInitialStep ( ) : TimeStep *
+ hasDiagonalLhs ( ) : int
+ isNewmark ( ) : int
Static
+ Static (int i, Domain * d) :
+ GiveInitialStep ( ) : TimeStep *
+ isStatic ( ) : int
+ requiresNewLhsAt (TimeStep * stepN) : int

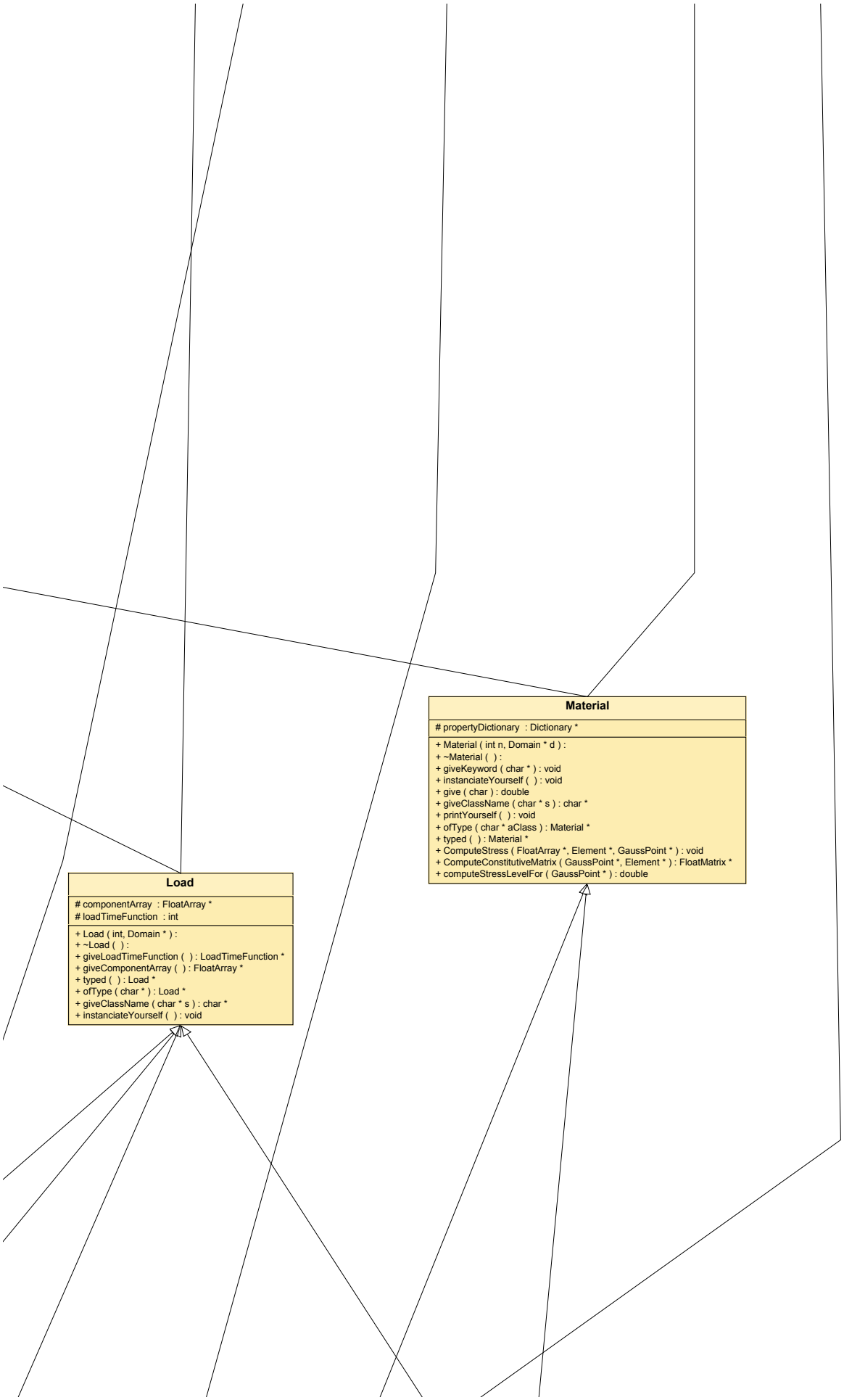

StressArray
+ StressArray ( ) :
+ StressArray (int n) :
+ ~StressArray ( ) :
LHS
+ LHS ( ) :
+ ~LHS ( ) :
LinearSystem
leftHandSide : Skyline *
rightHandSide : FloatArray *
solutionArray : FloatArray *
currentSize : int
+ LinearSystem ( ) :
+ ~LinearSystem ( ) :
+ carveYourselfFor (Domain *) : void
+ giveLhs ( ) : Skyline *
+ giveRhs ( ) : FloatArray *
+ giveSolutionArray ( ) : FloatArray *
+ giveUpdatedSize ( ) : int
+ solveYourself ( ) : void
+ solveYourselfAndCheckSolution ( ) : void
+ updateYourself ( ) : void
+ updateYourselfExceptLhs ( ) : void
+ setLHSTo (Skyline * aLHS) : void
+ setRHSTo (FloatArray * aFloatArray) : void

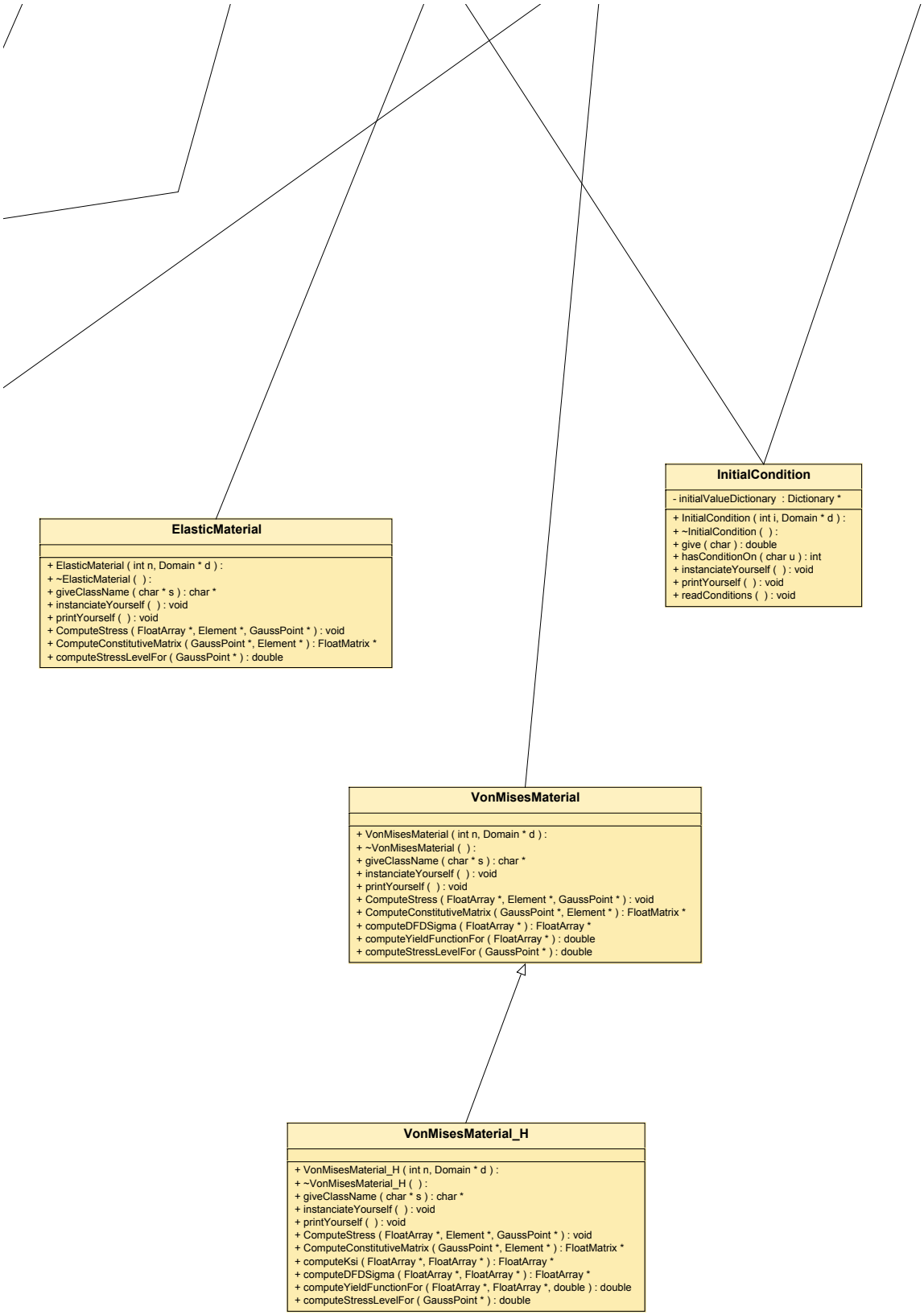

NLSolver
propertyDictionary : Dictionary *
domain : Domain *
linearSystem : LinearSystem *
maxIterations : int
tolerance : double
numberOfIterations : int
convergenceStatus : int
consistentDep : int
currentIteration : int
+ giveLinearSystem ( ) : LinearSystem *
+ giveNumberOfIterations ( ) : int
+ giveCurrentIteration ( ) : int
+ giveConvergenceStatus ( ) : int
+ giveConsistentDep ( ) : int
+ updateYourself ( ) : void
+ NLSolver (int n, Domain * d) :
+ ~NLSolver ( ) :
+ give (char) : double
+ ofType (char *) : NLSolver *
+ typed ( ) : NLSolver *
+ giveKeyword (char *) : void
+ giveClassName (char *) : char *
+ instanciateYourself ( ) : void
+ Solve ( ) : FloatArray *
NewtonRaphson
+ NewtonRaphson (int n, Domain * d) :
+ ~NewtonRaphson ( ) :
+ giveClassName (char *) : char *
+ instanciateYourself ( ) : void
ConstantStiffness
+ ConstantStiffness (int n, Domain * d) :
+ ~ConstantStiffness ( ) :
+ giveClassName (char *) : char *
+ instanciateYourself ( ) : void


FEMComponent
number : int
domain : Domain *
+ FEMComponent ( ) :
+ FEMComponent (int n, Domain * d) :
+ ~FEMComponent ( ) :
+ giveClassName (char *) : char *
+ giveKeyword (char *) : void
+ giveDomain ( ) : Domain *
+ giveNumber ( ) : int
+ read (char) : double
+ read (char * d) : double
+ read (char *, int) : double
+ readIfHas (char *) : int
+ readInteger (char * d) : int
+ readInteger (char * d, int i) : int
+ readNumberOf (char *) : int
+ readString (char * d, char * s) : void
+ readString (char *, int, char *) : void
+ readWhetherHas (char *) : int
LoadTimeFunction
+ LoadTimeFunction (int i, Domain * d) :
+ ~LoadTimeFunction ( ) :
+ at (double) : double
+ typed ( ) : LoadTimeFunction *
+ ofType (char *) : LoadTimeFunction *
+ giveClassName (char * s) : char *
+ instanciateYourself ( ) : void
PeakFunction
- t : double *
- value : double *
+ PeakFunction (int i, Domain * d) :
+ ~PeakFunction ( ) :
+ at (double) : double
+ getCoefficients ( ) : void
+ instanciateYourself ( ) : void
ConstantFunction
- value : double *
+ ConstantFunction (int i, Domain * d) :
+ ~ConstantFunction ( ) :
+ at (double) : double
+ giveValue ( ) : double
+ instanciateYourself ( ) : void
PiecewiseLinFunction
- numberOfPoints : int
- dates : double *
- values : double *
+ PiecewiseLinFunction (int i, Domain * d) :
+ ~PiecewiseLinFunction ( ) :
+ at (double) : double
+ getPoints ( ) : void
+ instanciateYourself ( ) : void


NodalLoad
+ NodalLoad (int i, Domain * d) :
+ ComputeValueAt (TimeStep *) : FloatArray *
BodyLoad
+ BodyLoad (int i, Domain * d) :
BoundaryCondition
- prescribedValueDictionary : Dictionary *
+ BoundaryCondition (int i, Domain * d) :
+ ~BoundaryCondition ( ) :
+ give (char, TimeStep *) : double
+ instanciateYourself ( ) : void
+ readConditions ( ) : void
DeadWeight
+ DeadWeight (int i, Domain * d) :
+ ComputeForceOn (Element *, TimeStep *) : FloatArray *
+ saveAttributesIn (FILE *) : void


Pair
- key : char
- value : double
- next : Pair *
+ Pair (char k, double v) :
+ ~Pair ( ) :
+ append (Pair * p) : void
+ giveKey ( ) : char
+ giveNext ( ) : Pair *
+ giveValue ( ) : double &
+ printYourself ( ) : void
Dictionary
first : Pair *
last : Pair *
+ Dictionary ( ) :
+ ~Dictionary ( ) :
+ add (char, double) : Pair *
+ at (char) : double &
+ includes (char) : int
+ printYourself ( ) : void


Material
propertyDictionary : Dictionary *
+ Material (int n, Domain * d) :
+ ~Material ( ) :
+ giveKeyword (char *) : void
+ instanciateYourself ( ) : void
+ give (char) : double
+ giveClassName (char * s) : char *
+ printYourself ( ) : void
+ ofType (char * aClass) : Material *
+ typed ( ) : Material *
+ ComputeStress (FloatArray *, Element *, GaussPoint *) : void
+ ComputeConstitutiveMatrix (GaussPoint *, Element *) : FloatMatrix *
+ computeStressLevelFor (GaussPoint *) : double
Load
componentArray : FloatArray *
loadTimeFunction : int
+ Load (int, Domain *) :
+ ~Load ( ) :
+ giveLoadTimeFunction ( ) : LoadTimeFunction *
+ giveComponentArray ( ) : FloatArray *
+ typed ( ) : Load *
+ ofType (char *) : Load *
+ giveClassName (char * s) : char *
+ instanciateYourself ( ) : void


InitialCondition
- initialValueDictionary : Dictionary *
+ InitialCondition (int i, Domain * d) :
+ ~InitialCondition ( ) :
+ give (char) : double
+ hasConditionOn (char u) : int
+ instanciateYourself ( ) : void
+ printYourself ( ) : void
+ readConditions ( ) : void
ElasticMaterial
+ ElasticMaterial (int n, Domain * d) :
+ ~ElasticMaterial ( ) :
+ giveClassName (char * s) : char *
+ instanciateYourself ( ) : void
+ printYourself ( ) : void
+ ComputeStress (FloatArray *, Element *, GaussPoint *) : void
+ ComputeConstitutiveMatrix (GaussPoint *, Element *) : FloatMatrix *
+ computeStressLevelFor (GaussPoint *) : double
VonMisesMaterial
+ VonMisesMaterial (int n, Domain * d) :
+ ~VonMisesMaterial ( ) :
+ giveClassName (char * s) : char *
+ instanciateYourself ( ) : void
+ printYourself ( ) : void
+ ComputeStress (FloatArray *, Element *, GaussPoint *) : void
+ ComputeConstitutiveMatrix (GaussPoint *, Element *) : FloatMatrix *
+ computeDFDSigma (FloatArray *) : FloatArray *
+ computeYieldFunctionFor (FloatArray *) : double
+ computeStressLevelFor (GaussPoint *) : double
VonMisesMaterial_H
+ VonMisesMaterial_H (int n, Domain * d) :
+ ~VonMisesMaterial_H ( ) :
+ giveClassName (char * s) : char *
+ instanciateYourself ( ) : void
+ printYourself ( ) : void
+ ComputeStress (FloatArray *, Element *, GaussPoint *) : void
+ ComputeConstitutiveMatrix (GaussPoint *, Element *) : FloatMatrix *
+ computeKsi (FloatArray *, FloatArray *) : FloatArray *
+ computeDFDSigma (FloatArray *, FloatArray *) : FloatArray *
+ computeYieldFunctionFor (FloatArray *, FloatArray *, double) : double
+ computeStressLevelFor (GaussPoint *) : double