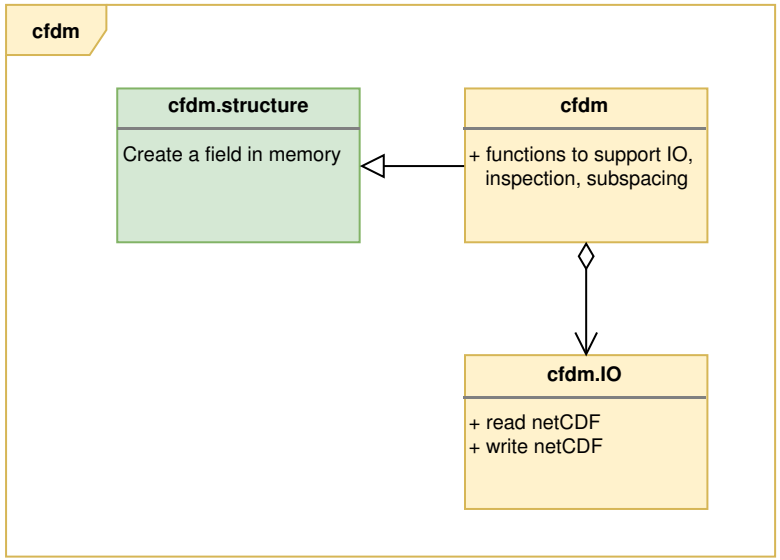
CFDM reference implemention

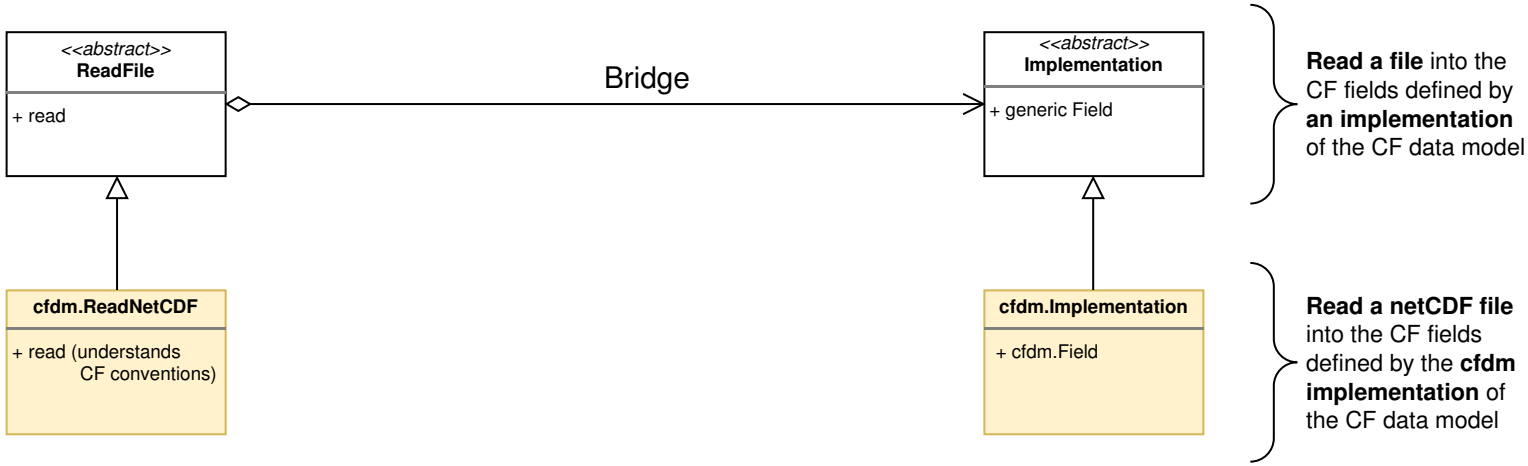



```
>>> import cfdm
>>> f = cfdm.structure.Field()
>>> f.set_property('standard_name', 'iron_growth_limitation_of_picophytoplankton'
>>> print f.get_property('standard_name')
'iron_growth_limitation_of_picophytoplankton'
```

```
>>> import cfdm
>>> f = cfdm.read('file.nc')
>>> print f.equals(f)
True
>>> f[:, 0] = -99
>>> cfdm.write(f, 'newfile.nc')
```

CFDM reference implemention

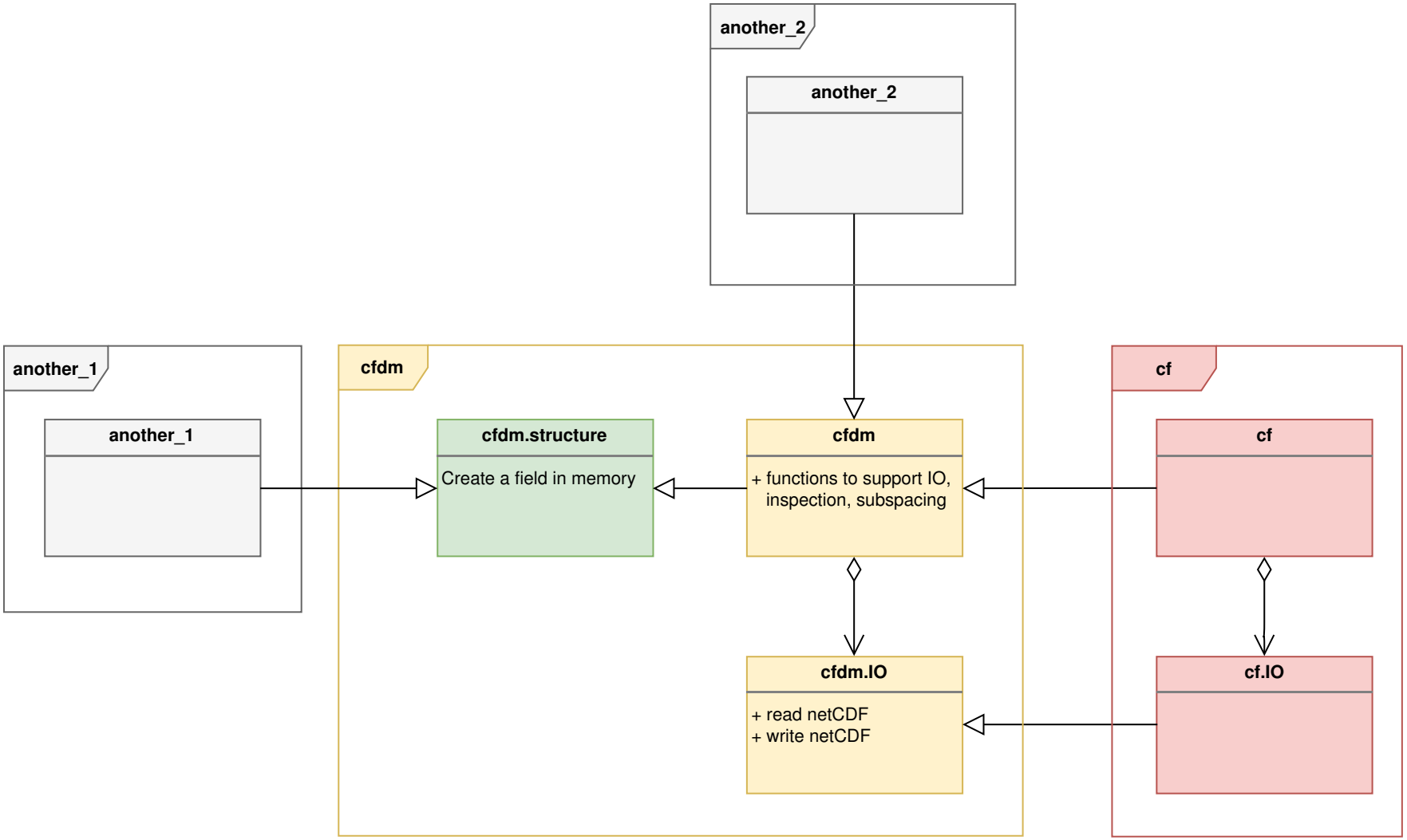
CFDM reference implemention




```
>>> import cfdm
>>> implementation = cfdm.Implementation(Field=cfdm.Field)
>>> netcdf = cfdm.ReadNetCDF(implementation)
>>> f = netcdf.read('myfile.nc')
>>> print f
[<Field: eastward_wind(height(1), grid_latitude(10), grid_longitude(9)) m s-1>,
 <Field: air_temperature(grid_latitude(10), grid_longitude(9)) K>]
>>> type(f[0])
cfdm.field.Field
```

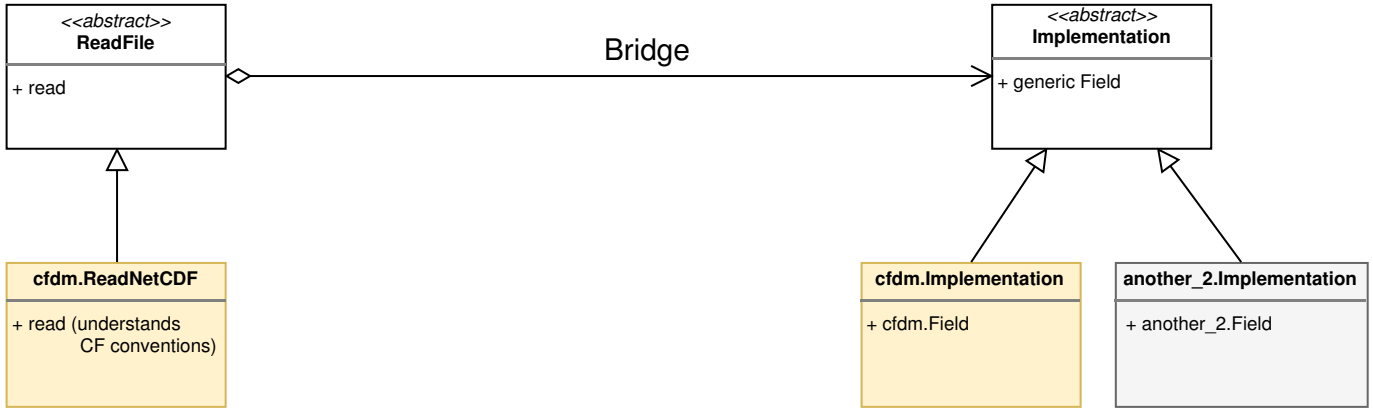
CFDM reference implemention

CFDM reference implemention



CFDM reference implemention

CFDM reference implemention

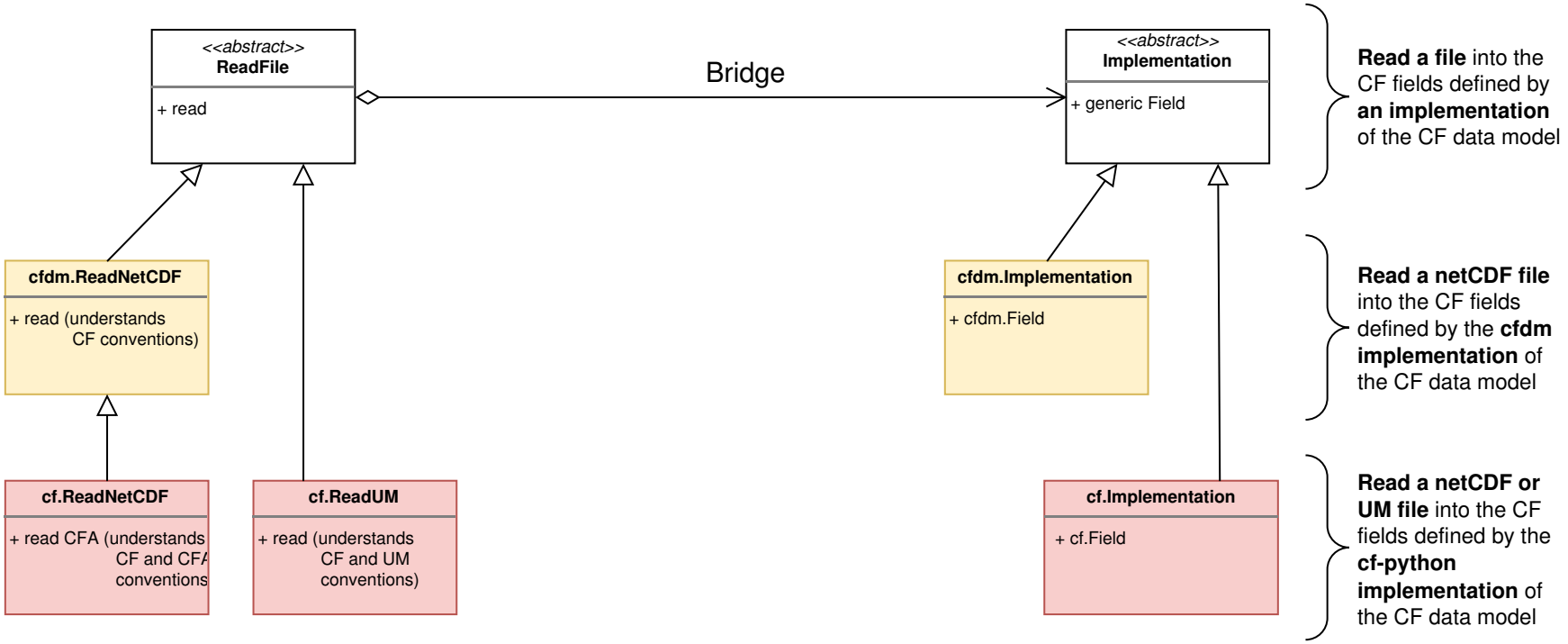



```
>>> import cfdm
>>> implementation = cfdm.Implementation(Field=cfdm.Field)
>>> netcdf = cfdm.ReadNetCDF(implementation)
>>> f = netcdf.read('myfile.nc')
>>> print f
[<Field: eastward_wind(height(1), grid_latitude(10), grid_longitude(9)) m s-1>,
 <Field: air_temperature(grid_latitude(10), grid_longitude(9)) K>]
>>> type(f[0])
cfdm.field.Field
```

```
>>> import cfdm
>>> import another_2
>>> implementation = another_2.Implementation(Field=another_2.Field)
>>> netcdf = cfdm.ReadNetCDF(implementation)    # SAME
>>> f = netcdf.read('myfile.nc')                # SAME
>>> print f
[<Field: eastward_wind(height(1), grid_latitude(10), grid_longitude(9)) m s-1>,
 <Field: air_temperature(grid_latitude(10), grid_longitude(9)) K>]
>>> type(f[0])
another_2.field.Field
```

CFDM reference implemention

CFDM reference implemention

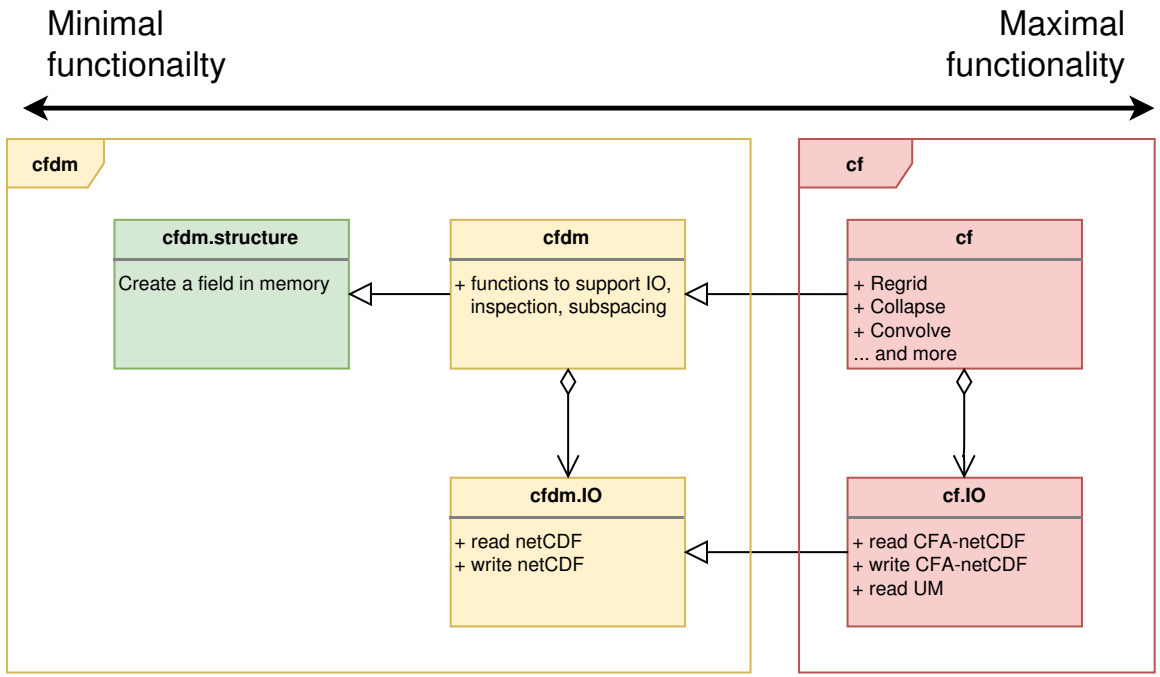



```
>>> import cfdm
>>> implementation = cfdm.Implementation(Field=cfdm.Field)
>>> netcdf = cfdm.ReadNetCDF(implementation)
>>> f = netcdf.read('myfile.nc')
>>> type(f[0])
cfdm.field.Field
```

```
>>> import cf
>>> implementation = cf.Implementation(Field=cf.Field)
>>> netcdf = cf.ReadNetCDF(implementation)    # DIFFERENT
>>> f = netcdf.read('myfile.nc')              # SAME
>>> type(f[0])
cf.field.Field
```

CFDM reference implemention

CFDM reference implemention

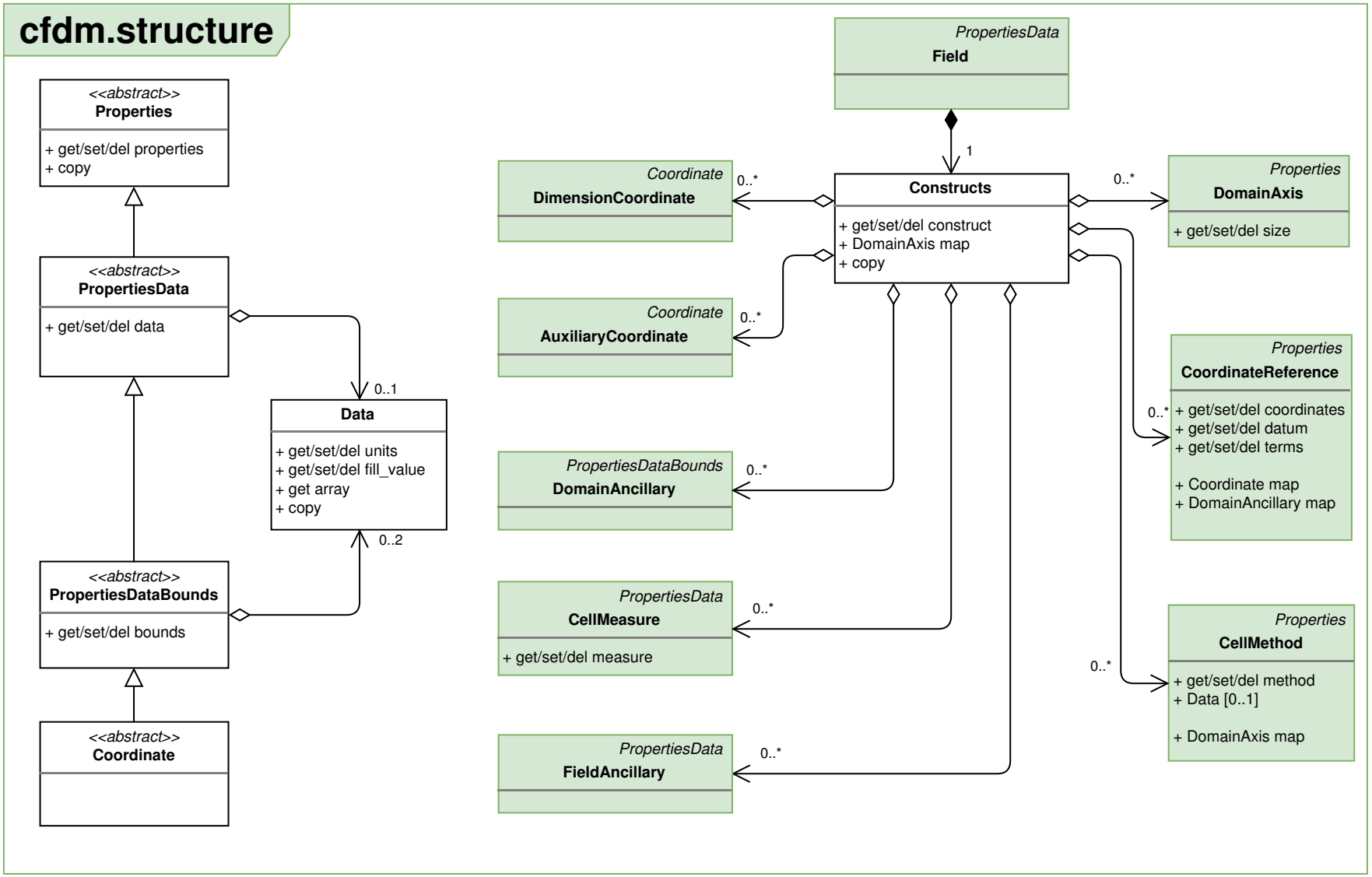



```
>>> import cfdm
>>> f = cfdm.structure.Field()
>>> f.set_property('standard_name', 'iron_growth_limitation_of_picophytoplankton'
>>> print f.get_property('standard_name')
'iron_growth_limitation_of_picophytoplankton'
```

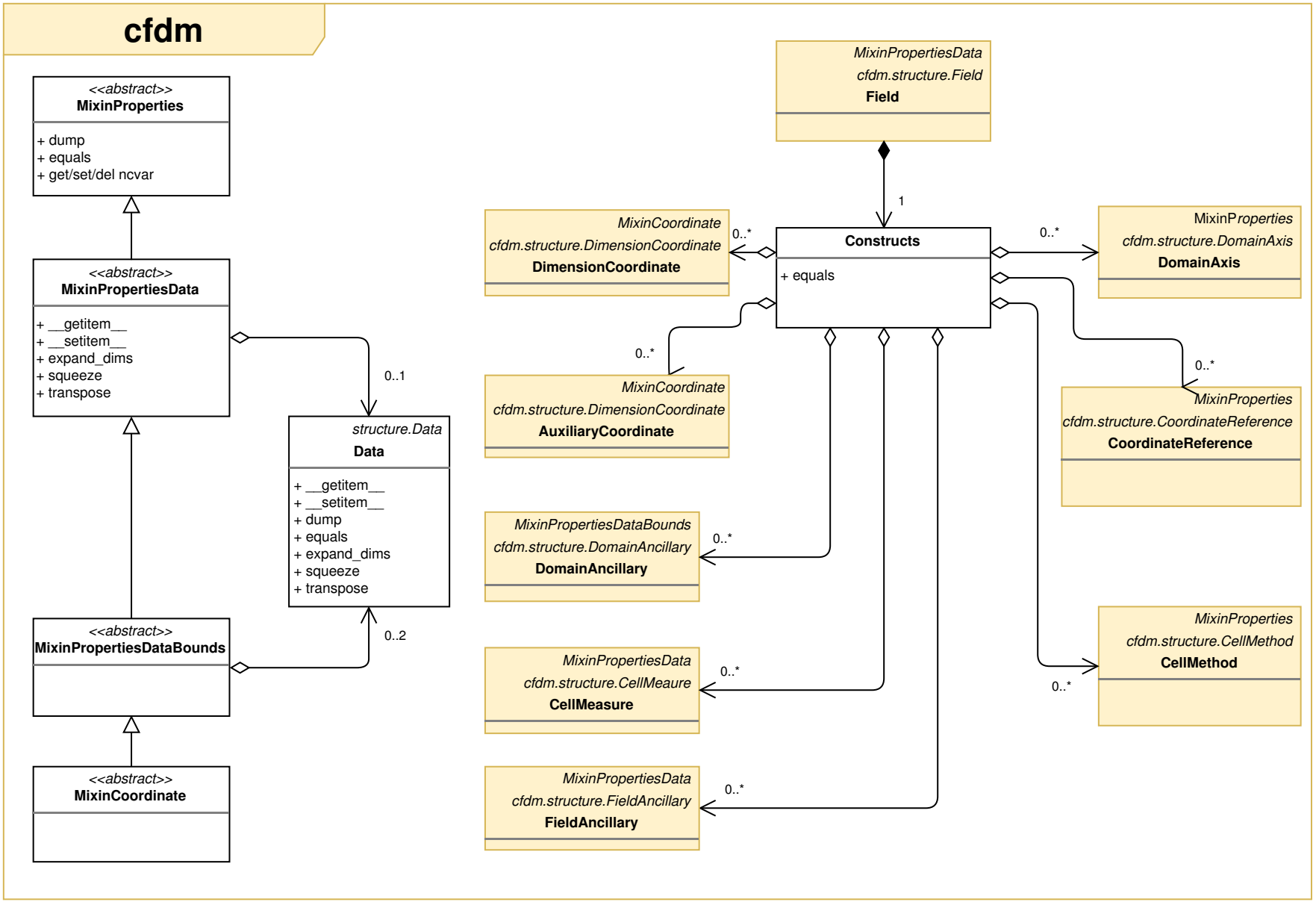
```
>>> import cfdm
>>> f = cfdm.read('file.nc')
>>> print f.equals(f)
True
>>> f[:, 0] = -99
>>> cfdm.write(f, 'newfile.nc')
```

```
>>> import cf
>>> f = cf.read('file[1-9].pp')
>>> f.standard_name = 'sea_water_practical_salinity'
>>> g = f.collapse('T: variance', weights='T')
>>> g = g.subspace(longitude=cf.wi(-10, 45))
>>> cf.write(g, 'newfile.nc', fmt='CFA4')
```

CFDM reference implemention

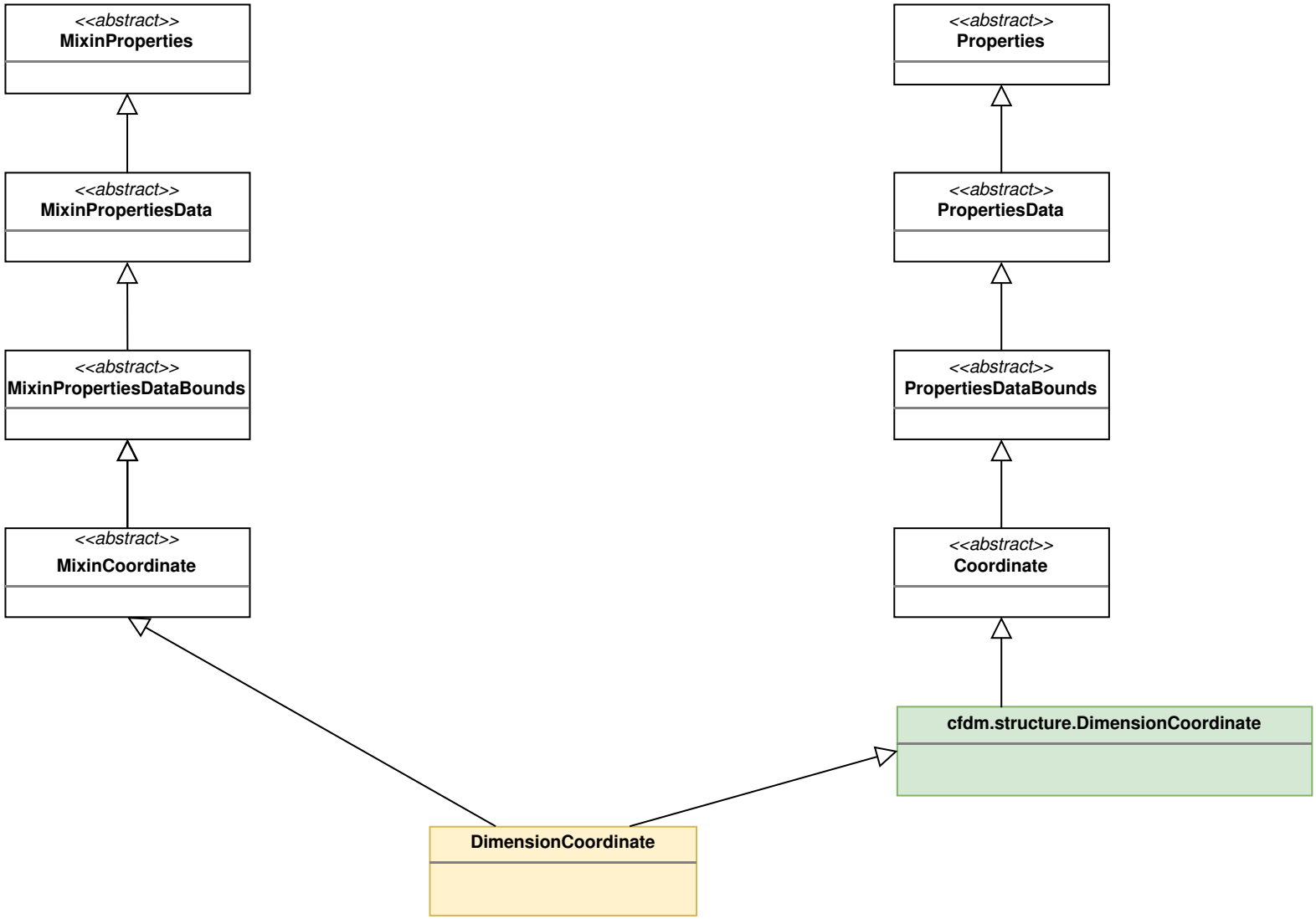

cfdm.structure
<<abstract>>
Properties
+ get/set/del properties
+ copy
<<abstract>>
PropertiesData
+ get/set/del data
0..1
Data
+ get/set/del units
+ get/set/del fill_value
+ get array
+ copy
0..2
<<abstract>>
PropertiesDataBounds
+ get/set/del bounds
<<abstract>>
Coordinate
PropertiesData
Field
1
Constructs
+ get/set/del construct
+ DomainAxis map
+ copy
Coordinate
DimensionCoordinate
0..*
Coordinate
AuxiliaryCoordinate
0..*
PropertiesDataBounds
DomainAncillary
0..*
PropertiesData
CellMeasure
+ get/set/del measure
0..*
PropertiesData
FieldAncillary
0..*
0..*
Properties
DomainAxis
+ get/set/del size
0..*
Properties
CoordinateReference
+ get/set/del coordinates
+ get/set/del datum
+ get/set/del terms
+ Coordinate map
+ DomainAncillary map
0..*
0..*
Properties
CellMethod
+ get/set/del method
+ Data [0..1]
+ DomainAxis map

CFDM reference implemention


cfdm
<<abstract>>
MixinProperties
+ dump
+ equals
+ get/set/del ncvar
<<abstract>>
MixinPropertiesData
+ __getitem__
+ __setitem__
+ expand_dims
+ squeeze
+ transpose
0..1
structure.Data
Data
+ __getitem__
+ __setitem__
+ dump
+ equals
+ expand_dims
+ squeeze
+ transpose
0..2
<<abstract>>
MixinPropertiesDataBounds
<<abstract>>
MixinCoordinate
MixinPropertiesData
cfdm.structure.Field
Field
1
Constructs
+ equals
MixinCoordinate
cfdm.structure.DimensionCoordinate
DimensionCoordinate
0..*
MixinCoordinate
cfdm.structure.DimensionCoordinate
AuxiliaryCoordinate
0..*
MixinPropertiesDataBounds
cfdm.structure.DomainAncillary
DomainAncillary
0..*
MixinPropertiesData
cfdm.structure.CellMeaure
CellMeasure
0..*
MixinPropertiesData
cfdm.structure.FieldAncillary
FieldAncillary
0..*
MixinProperties
cfdm.structure.DomainAxis
DomainAxis
0..*
MixinProperties
cfdm.structure.CoordinateReference
CoordinateReference
0..*
MixinProperties
cfdm.structure.CellMethod
CellMethod
0..*

CFDM reference implemention

```
class DimensionCoordinate(MixinCoordinate, cfdm.structure.DimensionCoordinate):
```



CFDM reference implemention