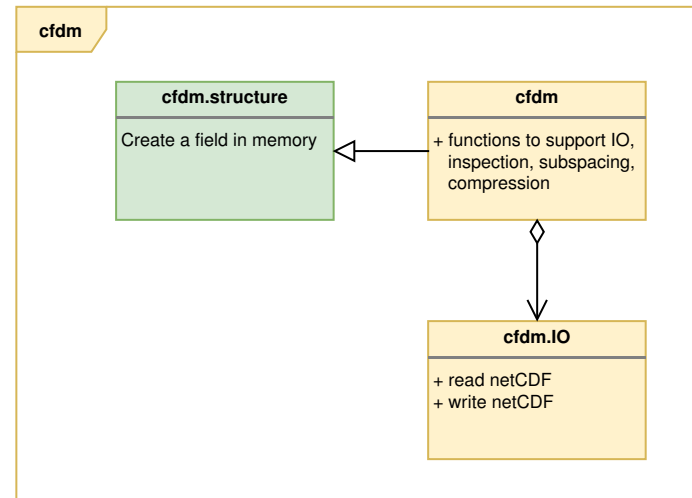
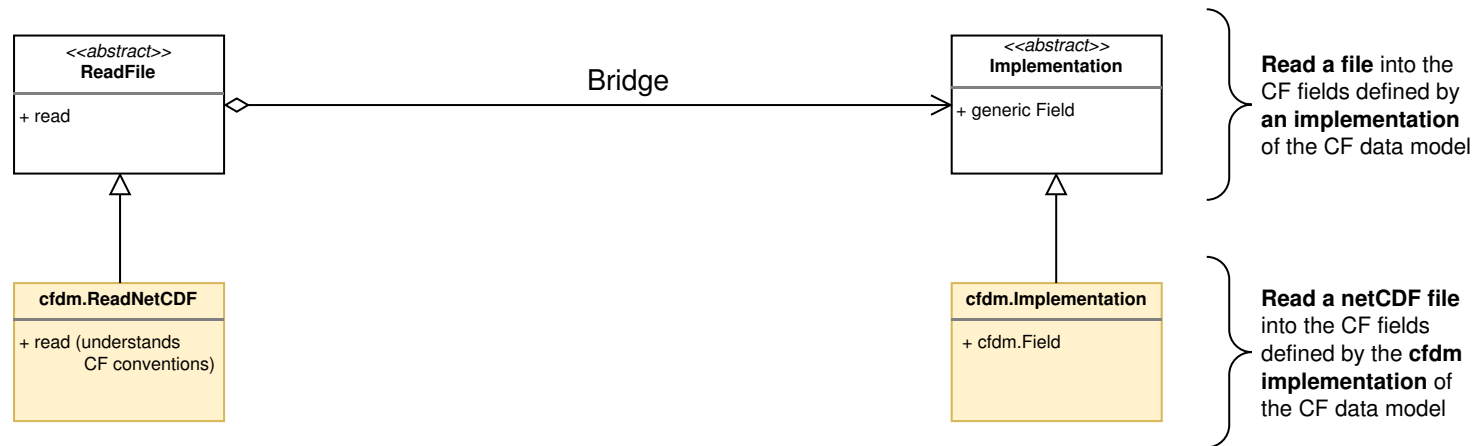


CF data model reference implementation



```
>>> 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')
```

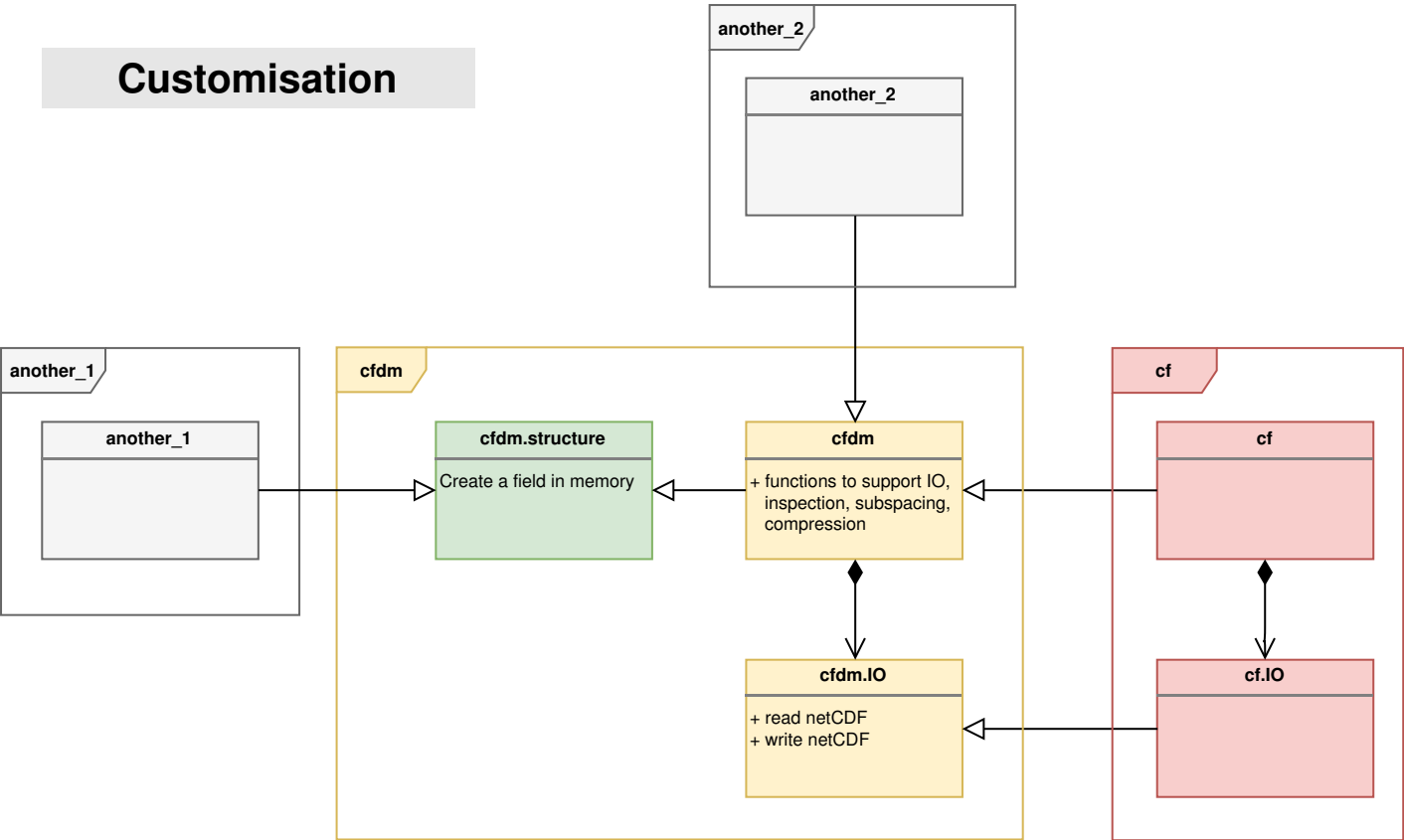



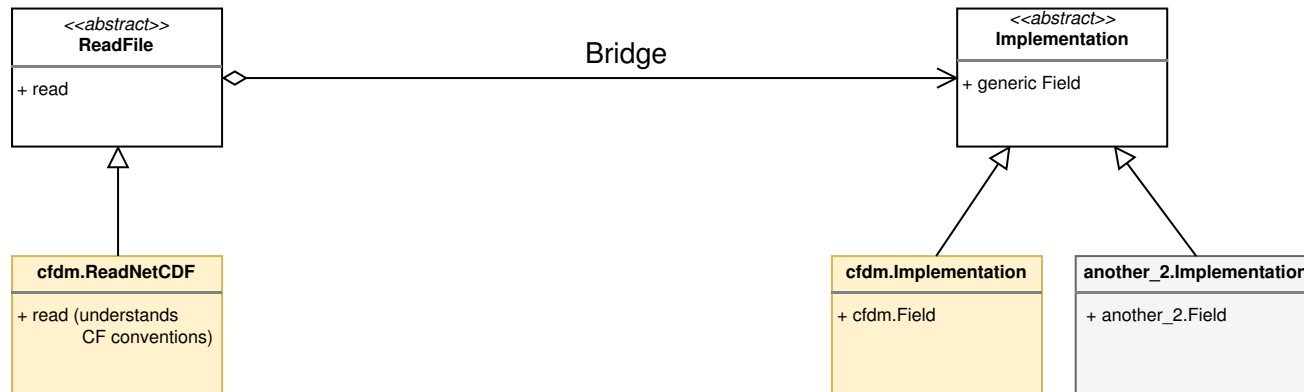
```

>>> import 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
  
```

Bridge pattern:

Decouple an abstraction from its implementation so the two can vary independently





```

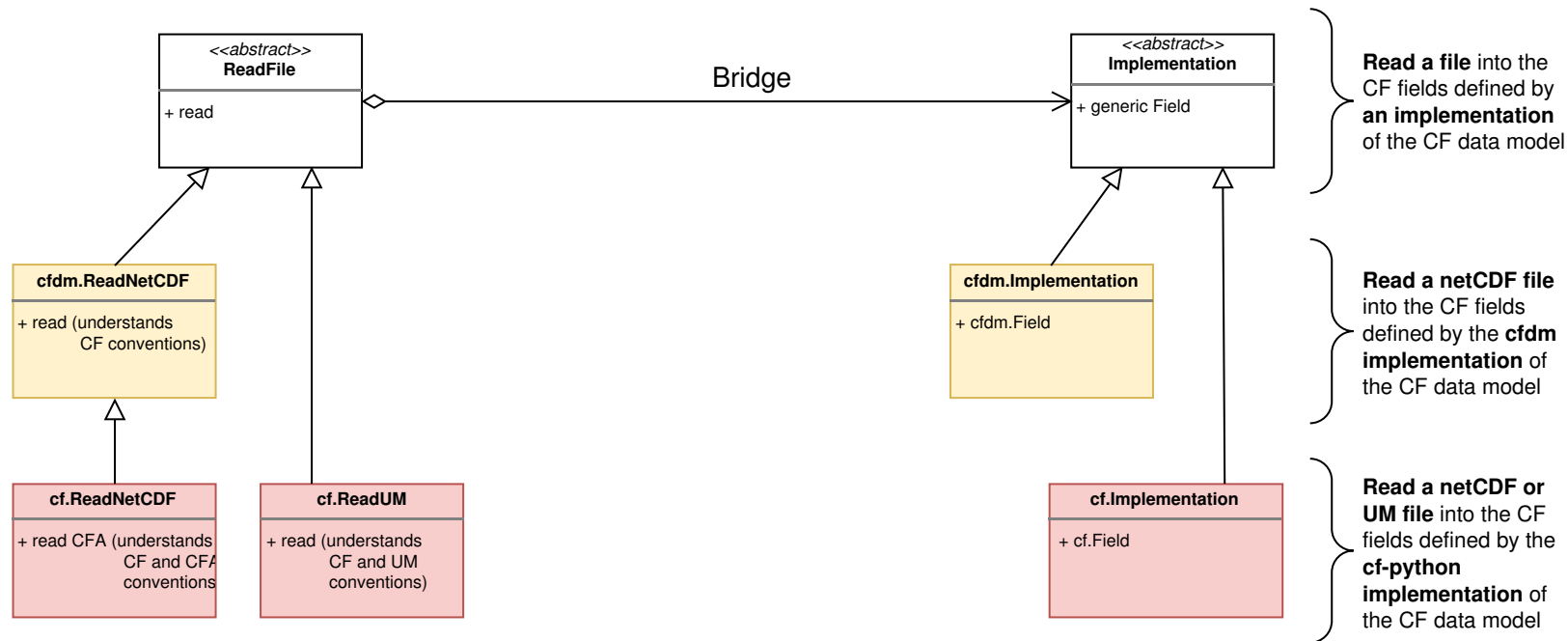
>>> import cfdm
>>> implementation = cfdm.Implementation(Field=cfm.Field)
>>> netcdf = cfdm.ReadNetCDF(implementation)
>>> f = netcdf.read('myfile.nc')
>>> print f
[<Field: eastward_wind(height(1), grid_latitude(10), grid_longitude(9)) m s-1>,
 <Field: air_temperature(grid_latitude(10), grid_longitude(9))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

```

```

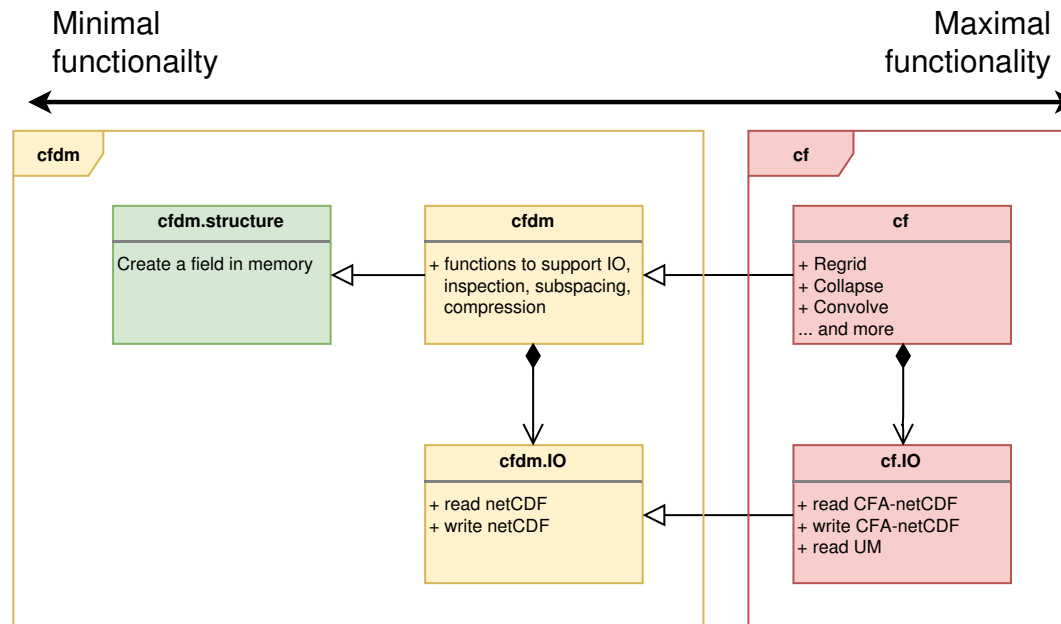
>>> import cfdm
>>> implementation = cfdm.Implementation(Field=cfdm.Field)
>>> netcdf = cfdm.ReadNetCDF(implementation)
>>> f = netcdf.read('myfile.nc')
>>> type(f[0])
cfdm.field.Field

```

```

>>> 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

```

```

>>> 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'

```

```

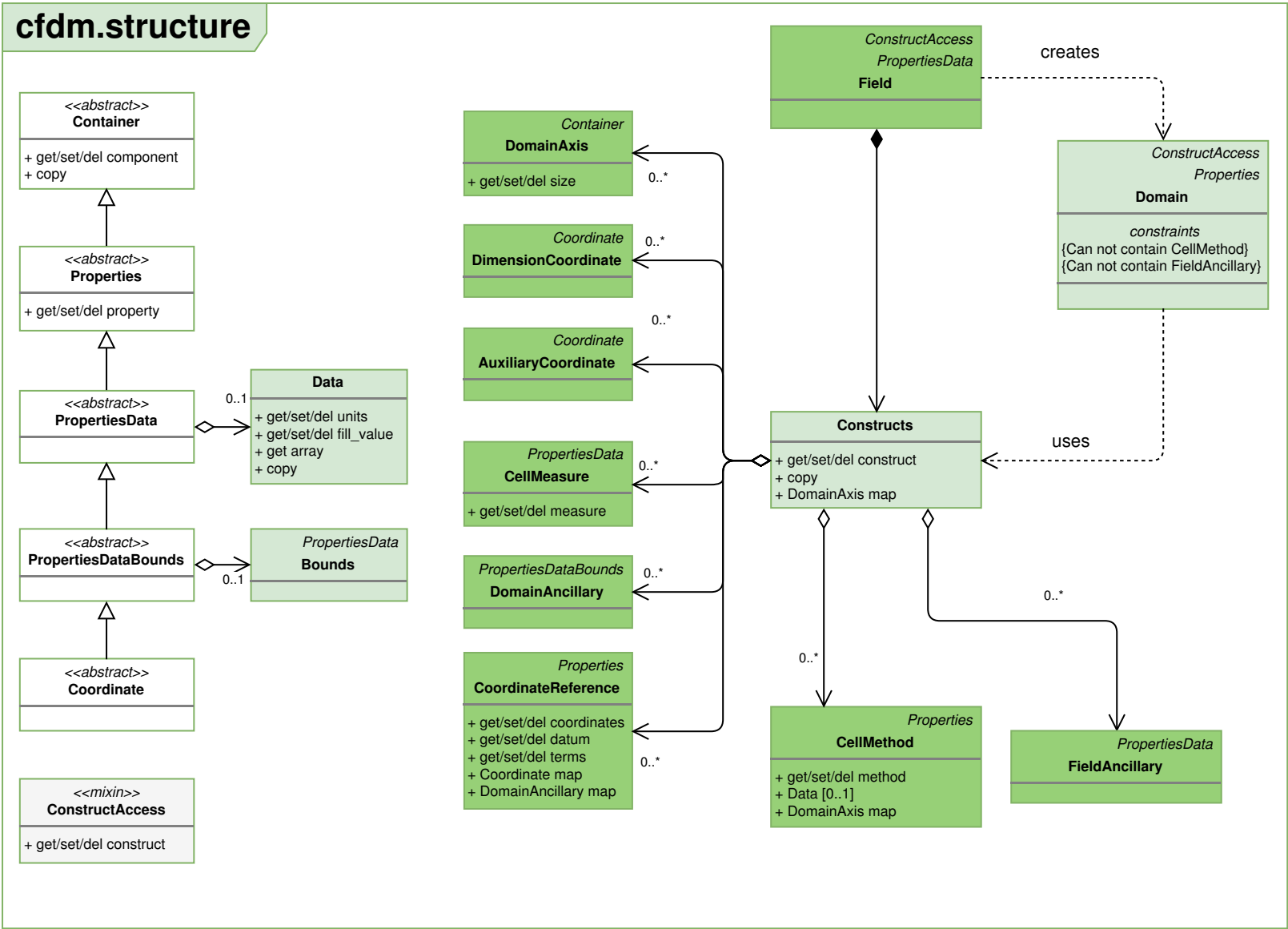
>>> import cfdm
>>> f = cfdm.read('file.nc')
>>> print f.equals(f)
True
>>> f[:, 0] = -99
>>> cfdm.write(f, 'newfile.nc')

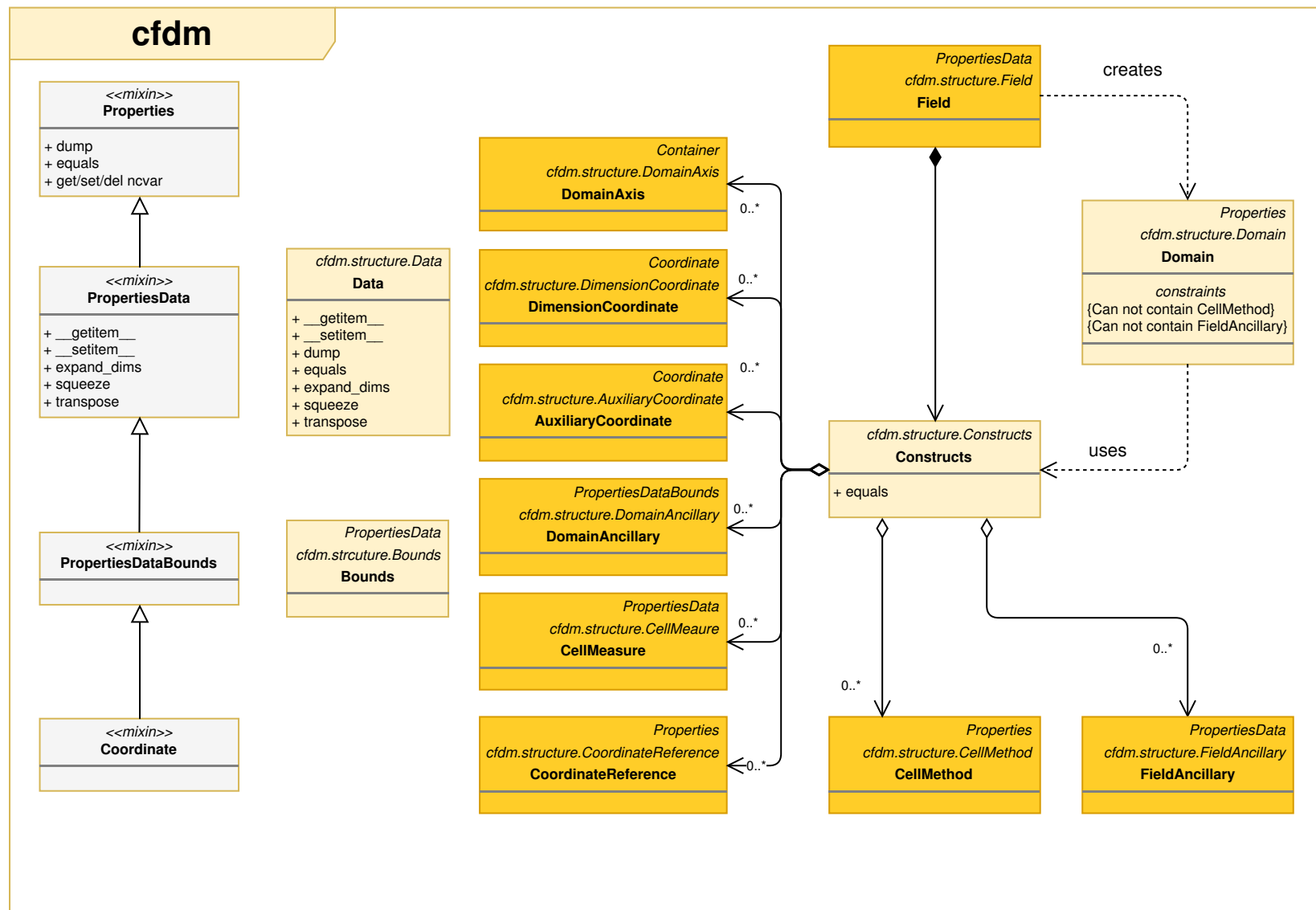
```

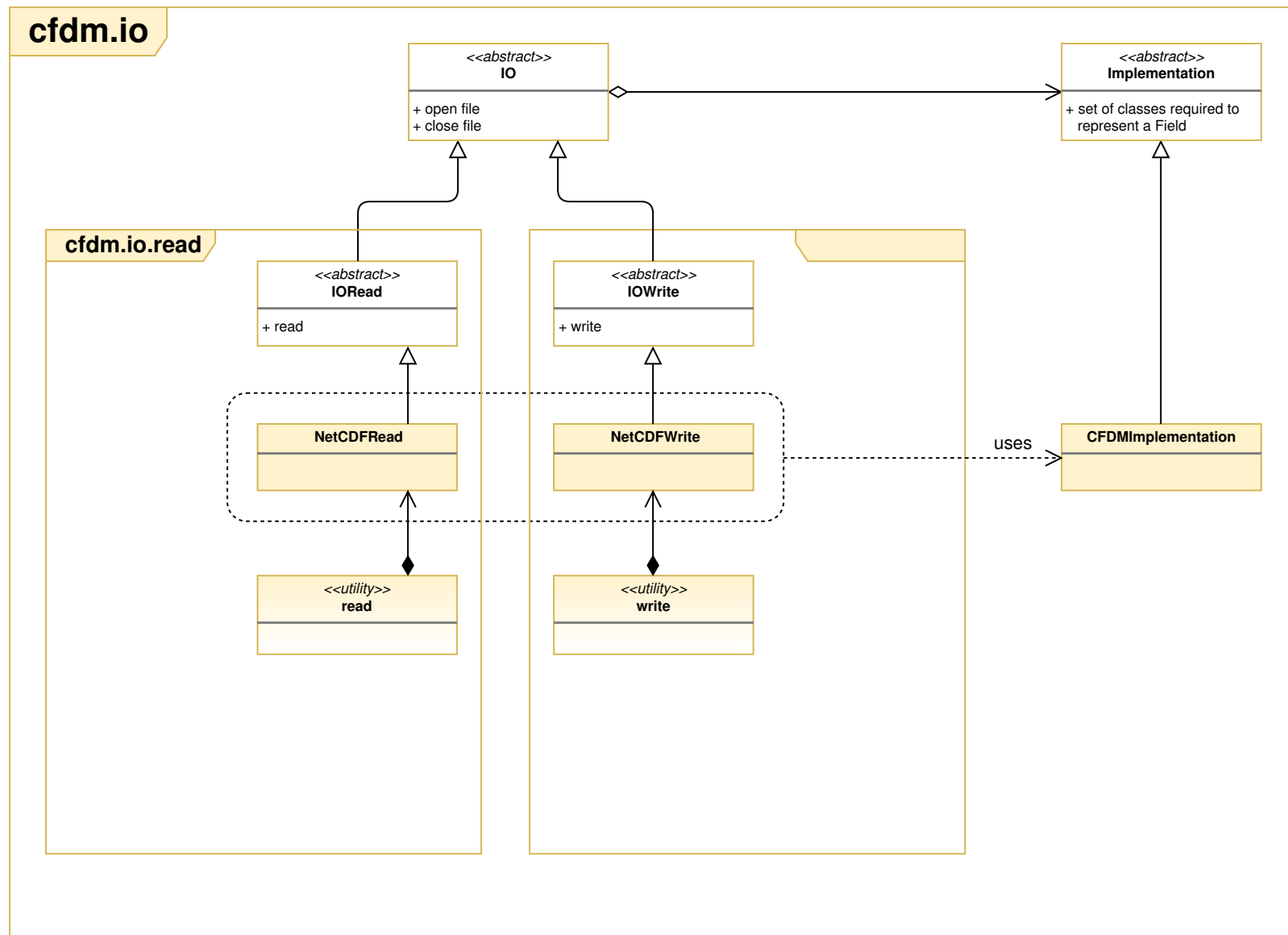
```

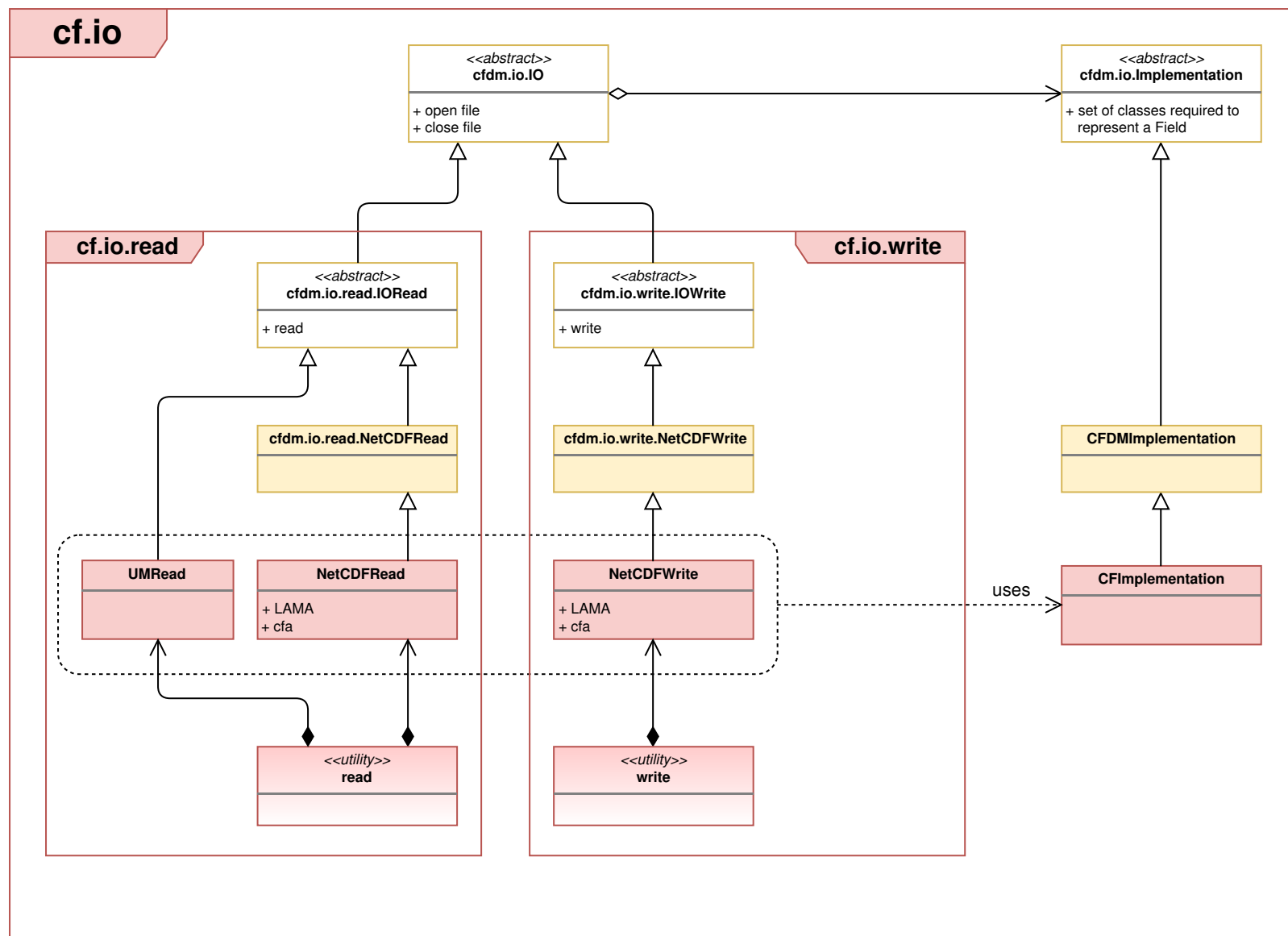
>>> import cf
>>> f = cf.read('file[1-9].pp')
>>> f.standard_name = 'sea_water_practical_salinity'
>>> g = f.collapse('T: variance', weights='T')
>>> g = g.subspace(longitude=cf.wi(-10, 45))
>>> cf.write(g, 'newfile.nc', fmt='CFA4')

```








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

