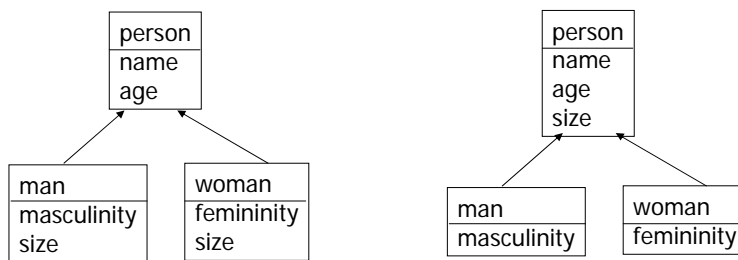


Specifying mappings

- Examples using VML

Inheritance example



VML for inheritance

```
inter_view(idm, integrated, view1, read_write, complete).
inter_class([person],[person],
  equivalences( name = name,
                age = age)
).
inter_class([man],[man],
  inherits(inter_class([person],[person])),
  equivalences( size = size,
                masculinity = masculinity)
).
inter_class([woman],[woman],
  inherits(inter_class([person],[person])),
  equivalences( size = size,
                femininity = femininity)
).
```

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Differing conceptions example

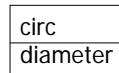
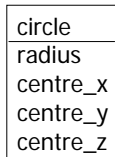
point
r
theta

point
x_coord
y_coord

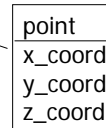
```
inter_view(idm, integrated, view1, read_write, complete).
inter_class([point],[point],
  equivalences( r * cos(theta) = x_coord,
                r * sin(theta) = y_coord,
                r = sqrt(sqr(x_coord) + sqr(y_coord)),
                theta = tan_1(y_coord / x_coord)
).
).
```

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Structure difference example



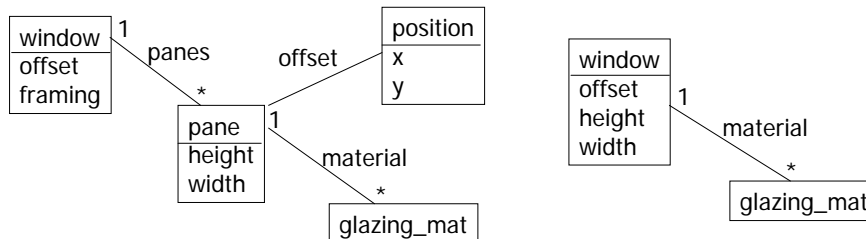
centre



```
inter_view(idm, integrated, view1, read_write, complete).
inter_class([circle],[circ],
  equivalences( radius * 2 = diameter,
                centre_x = centre=>x_coord,
                centre_y = centre=>y_coord,
                centre_z = centre=>z_coord)
).
```

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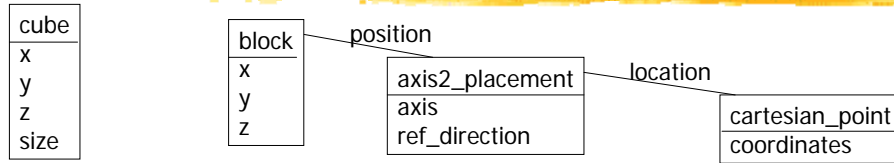
One way mapping example



```
inter_view(idm, integrated, view1, read_only, complete).
inter_class([window],[window],
  equivalences( offset = offset,
                panes[1]=>material,
                maximum(panes=>(offset=>y + height))- minimum(panes=>offset=>y) = height,
                maximum(panes=>(offset=>x + width))- minimum(panes=>offset=>x) = width)
).
```

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Collapsing structure example



```
inter_view(easy_203, read_write, ap_203, integrated, complete).
inter_class([cube],[block],
  invariants(    block.x = block.y,
                 block.y = block.z),
  equivalences( size = x,
                 x = position=>location=>coordinates[1],
                 y = position=>location=>coordinates[2],
                 z = position=>location=>coordinates[3]),
  initialisers( [0,0,1] = position=>axis=>vector,
                [0,0,1] = position=>ref_direction=>vector)
).
```

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