

referencedEntityOp

Returns an entity *r* of type *ReferencedEntity* that is referenced by the given entity *e* of type *GivenEntity* through the attribute *referencing_attribute*. Optionally, the referenced entity may be qualified through the additional requirement that *r.qualifying_attribute* = *value*. If there is not no entity that satisfies this requirement, returns null.

referencedEntitiesOp

Returns an aggregate of entities of type *ReferencedEntity* that are referenced by the given entity *e* of type *GivenEntity* through the attribute *referencing_attribute* that returns an aggregate. Optionally, the referenced entities may be qualified through the additional requirement that *r.qualifying_attribute* = *value*. If there are no entities that satisfies this requirement, returns null.

referencingEntityOp

Returns an entity *r* of type *ReferencingEntity* that references the given entity *e* of type *GivenEntity* through the attribute *referencing_attribute*. Optionally, the referencing entity may be qualified through the additional requirement(s) that *r.qualifying_attribute* = *value*, *r.qualifying_attribute2*->*e2*, and *r.qualifying_attribute3*->*e3* If there is not no entity that satisfies this requirement, returns null.

referencingEntitiesOp

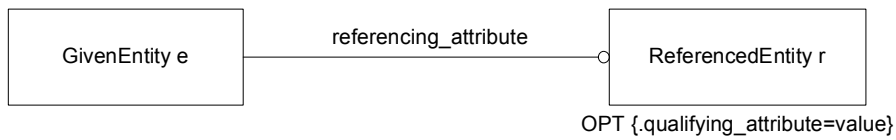
Returns an aggregate of entities of type *ReferencingEntity* that references the given entity *e* of type *GivenEntity* through the attribute *referencing_attribute*. Optionally, the referencing entities may be qualified through the additional requirement(s) that *r.qualifying_attribute* = *value*, *r.qualifying_attribute2*->*e2*, and *r.qualifying_attribute3*->*e3* If there are no entities that satisfies these requirements, returns null.

relatedEntityOp

Returns an entity *r* of type *RelatedEntity* that is related to the given entity *e* of type *GivenEntity* through the a relating entity *re* of type *RelatingEntity* that references *GivenEntity* through the attribute *given_attribute* and *RelatedEntity* through the attribute *related_attribute*. Optionally, the relating entity may be qualified through the additional requirement that *re.qualifying_attribute* = *value*. If there is no entity that satisfies this requirement, returns null.

relatedEntitiesOp

Returns an aggregate of entities of type *RelatedEntity* that are related to the given entity *e* of type *GivenEntity* through a relating entity of type *RelatingEntity* that references *GivenEntity* through the attribute *given_attribute* and *RelatedEntity* through the attribute *related_attribute*. Optionally, the relating entity may be qualified through the additional requirement that *re.qualifying_attribute* = *value*. If there are no entities that satisfies this requirement, returns null.

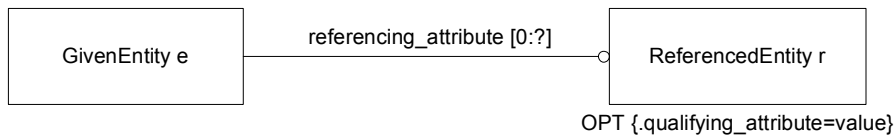


```

// Given: GivenEntity e
// Returns: ReferencedEntity r
// Where:
//   e.referencing_attribute->r
//   OPT r.qualifying_attribute=value
// Returns an entity r of type ReferencedEntity that is referenced by the given entity e of type GivenEntity through the attribute
// referencing_attribute. Optionally, the referenced entity may be qualified through the additional requirement that
// r.qualifying_attribute = value.
// If there is not no entity that satisfies this requirement, returns null.
  
```

```

ReferencedEntity r = referencedEntityOp(GivenEntity e)
  where {e.referencing_attribute -> r}
        OPT {r.qualifying_attribute=value}
{
  // implementation
  return ReferencedEntity r
}
  
```



```

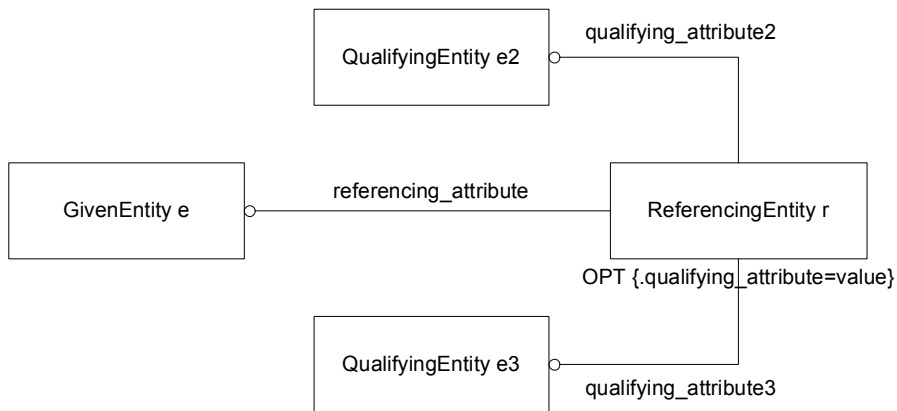
// Given: GivenEntity e
// Returns: Aggregate<ReferencedEntity> a_r
// Where:
//   e.referencing_attribute->r
//   OPT r.qualifying_attribute=value
// Returns an aggregate of entities of type ReferencedEntity that are referenced by the given entity e of type GivenEntity through the
// attribute referencing_attribute that returns an aggregate. Optionally, the referenced entities may be qualified through the additional
// requirement that r.qualifying_attribute = value.
// If there are no entities that satisfies this requirement, returns null.

```

```

Aggregate<ReferencedEntity> a_r = referencedEntitiesOp(GivenEntity e)
  where {ReferencedEntity r}
        {e.referencing_attribute -> r}
        OPT {r.qualifying_attribute=value}
{
  // implementation
  return Aggregate<ReferencedEntity> a_r
}

```



```

// Given: GivenEntity e
// Returns: ReferencingEntity r
// Where:
// e <- r.referencing_attribute
// OPT r.qualifying_attribute=value
// OPT r.qualifying_attribute2->e2
// OPT r.qualifying_attribute3->e3

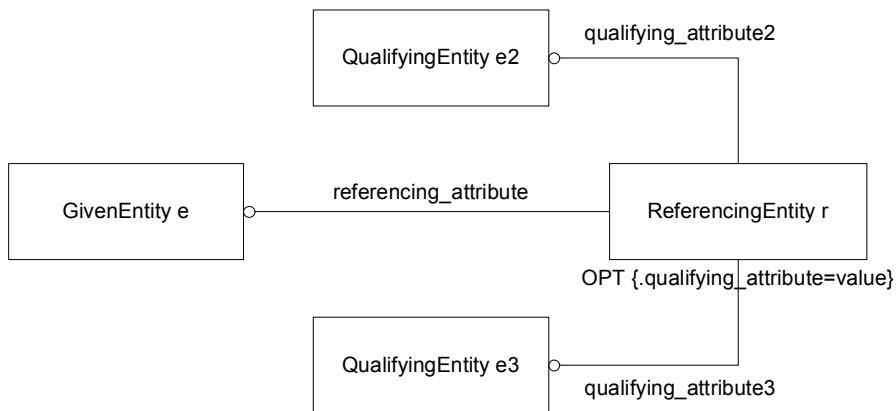
```

// Returns an entity r of type ReferencingEntity that references the given entity e of type GivenEntity through the attribute referencing_attribute. Optionally, the referencing entity may be qualified through the additional requirement(s) that r.qualifying_attribute = value, r.qualifying_attribute2->e2, and r.qualifying_attribute3->e3
 // If there is not no entity that satisfies this requirement, returns null.

```

ReferencingEntity r = referencingEntityOp(GivenEntity e)
  where {e <- r.referencing_attribute}
         OPT {r.qualifying_attribute=value}
         OPT {r.qualifying_attribute2->e2}
         OPT {r.qualifying_attribute3->e3}
{
  // implementation
  return ReferencingEntity r
}

```



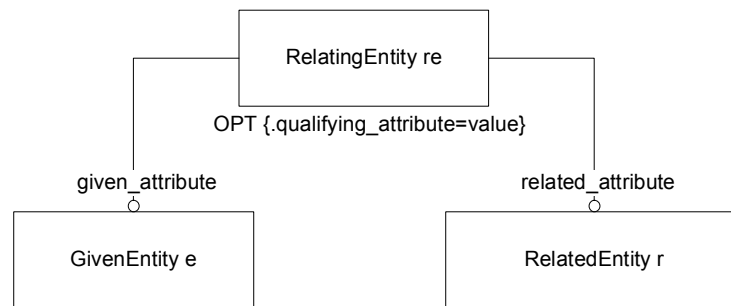
```

// Given: GivenEntity e
// Returns: Aggregate<ReferencingEntity> r
// Where:
// e<-r.referencing_attribute
// OPT r.qualifying_attribute=value
// OPT r.qualifying_attribute2->e2
// OPT r.qualifying_attribute3->e3

// Returns an aggregate of entities of type ReferencingEntity that references the given entity e of type GivenEntity through the attribute
// referencing_attribute. Optionally, the referencing entities may be qualified through the additional requirement(s) that
// r.qualifying_attribute = value, r.qualifying_attribute2->e2, and r.qualifying_attribute3->e3
// If there are no entities that satisfies these requirements, returns null.

Aggregate<ReferencingEntity> a_r = referencingEntitiesOp(GivenEntity e)
  where {ReferencingEntity r}
    {e <- r.referencing_attribute}
    OPT {r.qualifying_attribute=value}
    OPT {r.qualifying_attribute2->e2}
    OPT {r.qualifying_attribute3->e3}
{
  // implementation
  return Aggregate<ReferencingEntity> a_r
}

```



```

// Given: GivenEntity e
// Returns: RelatedEntity r
// Where r is related to e through RelatingEntity re
// e<-re.given_attribute
// re.related_attribute->r
// OPT re.qualifying_attribute=value

```

```

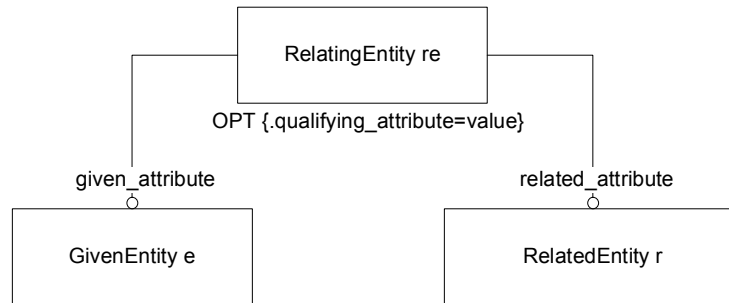
// Returns an entity r of type RelatedEntity that is related to the given entity e of type GivenEntity through the a relating entitiy
// re of type RelatingEntity that references GivenEntity through the attribute given_attribute and RelatedEntity through the
// attribute related_attribute. Optionally, the relating entity may be qualified through the additional requirement that
// re.qualifying_attribute = value.
// If there is no entity that satisfies this requirement, returns null.

```

```

RelatedEntity r = relatedEntityOp(GivenEntity e)
  where {RelatingEntity re}
        {e <- re.given_attribute}
        {re.related_attribute -> r}
        OPT {re.qualifying_attribute=value}
{
  // implementation
  return RelatedEntity r ....
}

```



```

// Given: GivenEntity e
// Returns: Aggregate<RelatedEntity> a_r
// Where r is related to e through RelatingEntity re
// e<-re.given_attribute
// re.related_attribute->r
// OPT re.qualifying_attribute=value

```

// Returns an aggregate of entities of type RelatedEntity that are related to the given entity e of type GivenEntity through a relating entity of type RelatingEntity that references GivenEntity through the attribute given_attribute and RelatedEntity through the attribute related_attribute. Optionally, the relating entity may be qualified through the additional requirement that re.qualifying_attribute = value.
 // If there are no entities that satisfies this requirement, returns null.

```

Aggregate<RelatedEntity> a_r = relatedEntitiesOp(GivenEntity e)
  where {RelatedEntity r}
        {RelatingEntity re}
        {e <- re.given_attribute}
        {re.related_attribute -> r}
        OPT {re.qualifying_attribute=value}
{
  // implementation
  return Aggregate<RelatedEntity> a_r
}

```