

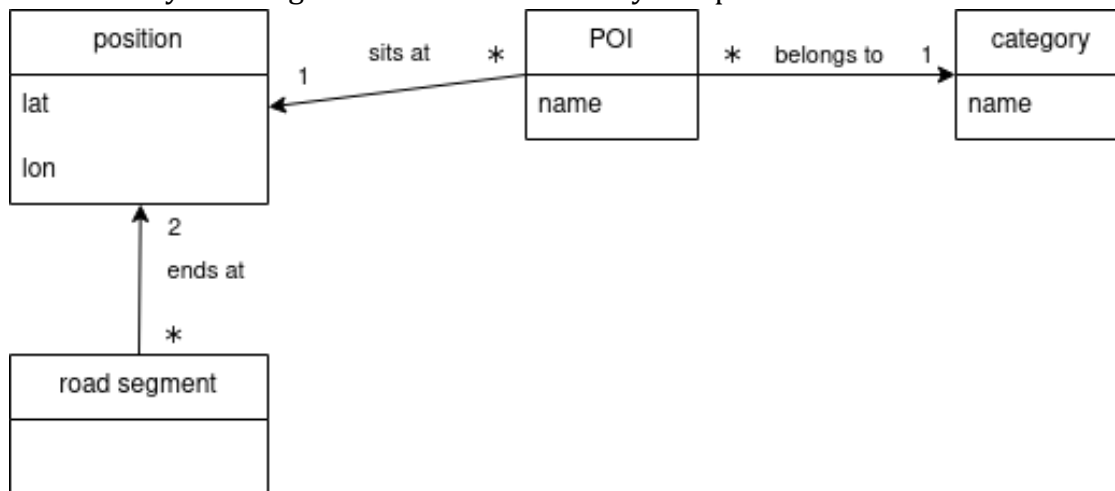
## Entity-Relation Diagram

Many categories contain several POIs, and we filter POIs by categories. Thus “category” (of POI) is an entity and not an attribute.

The reason that “position” became an entity is that we search for shortest paths and POIs at a position are indistinguishable for this search.

The relation between “road segment” and “position” has the following restrictions:

- every position is related to any number of road segments,
- every road segment is related to exactly two positions.



### Entity-Relation Diagram

The definitions of entities in “planner.rkt”:

- “position”:
  - PosAttr, line 391
  - TripPlanner.\_pos\_to\_pos\_attr, line 404
  - TripPlanner.\_pos\_i\_to\_pos\_attr, line 405
- “road segment”:
  - RawSeg?, line 220
  - TripPlanner.\_graph, line 406
- “POI”:
  - RawPOI?, line 224
  - TripPlanner.\_poi\_to\_pos\_attr, line 403
- “category”:
  - Cat?, line 209
  - TripPlanner.\_cat\_to\_set\_pos, line 401