

# D2 - Competency Questions

Giulio Billi & Cono Cirone

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## Competency Questions List

### Group Member: Giulio Billi

1. **Question:** Which outdoor activities in Berlin have a “Free” budget?
  - **Rationale:** Verifies the system can filter by the intersection of three distinct parameters (Location, Setting, Budget).
  - **Type:** Selection
  - **Predicate Arity:** N-ary
  - **Relation Type:** Object Property
  - **Domain-Independent Elements:** Spatial (“Berlin”)
2. **Question:** Is there any Museum in Munich that operates on Sundays?
  - **Rationale:** Verifies the ability to link venues to specific days of the week while filtering by location.
  - **Type:** Binary
  - **Predicate Arity:** N-ary
  - **Relation Type:** Object Property
  - **Domain-Independent Elements:** Spatial (“Munich”), Temporal (“Sunday”)
3. **Question:** What is the category of the “Mercedes-Benz Museum”?
  - **Rationale:** Verifies that a specific venue is correctly linked to its classification in the taxonomy.
  - **Type:** Selection
  - **Predicate Arity:** Binary
  - **Relation Type:** Object Property
  - **Domain-Independent Elements:** None

### Group Member: Cono Cirone

4. **Question:** How many indoor Nightlife Venues in Hamburg have a “Medium” budget?
  - **Rationale:** Tests the aggregation of specific venue types with budget and location filters.
  - **Type:** Counting
  - **Predicate Arity:** N-ary
  - **Relation Type:** Object Property
  - **Domain-Independent Elements:** Spatial (“Hamburg”)
5. **Question:** Which park in Hamburg close after 18:00?
  - **Rationale:** Tests the data property logic required for filtering by specific hours. (Day independent)

- **Type:** Selection
  - **Predicate Arity:** N-ary
  - **Relation Type:** Datatype Property
  - **Domain-Independent Elements:** Spatial (“Hamburg”), Temporal (“18:00”, “after”)
6. **Question:** What is the duration of the guided tour “Old Town Walk”?
- **Rationale:** Ensures that the system can display the length of a tour.
  - **Type:** Selection
  - **Predicate Arity:** Binary
  - **Relation Type:** Object Property
  - **Domain-Independent Elements:** Temporal

## Improvements from previous submission

Addressing the feedback from the first submission, we renamed the **WeatherSuitability** class to **LocationSetting** to better reflect the possible values (Indoor and Outdoor). Consequently, we also updated the relationship with Activity from **hasWeatherSuitability** to **hasLocationSetting**.