Validation Steps for All SPARQL Queries

G1: Project Initiation

Query 1: List projects with maximum allowed partners

PREFIX fyp: <http://.../FYP_Process_Ontology#>

SELECT ?Project ?maxPartners

WHERE {

  ?Project a fyp:Project ;

       fyp:maxPartners ?maxPartners .

}

1. Expected Result: Projects like `AI_Chatbot_Project` with `maxPartners = 2`.

Query 2: Supervisors with expertise in "Artificial Intelligence"

sparql

PREFIX fyp: <http://.../FYP_Process_Ontology#>

SELECT ?Supervisor

WHERE {

  ?Supervisor fyp:hasExpertise fyp:Artificial_Intelligence .

}

1. Expected Result: `Dr_Sarah_Lee` listed as a supervisor.

G2: Project Proposal

Query 3: Required formats for proposal documents

sparql

PREFIX fyp: <http://.../FYP_Process_Ontology#>

SELECT ?Document ?requiredFormat

WHERE {

  ?Document a fyp:ProjectProposalDocument ;

```
    fyp:requiredFormat ?requiredFormat .
}
```

1. Expected Result: `Proposal_Draft_1` with `requiredFormat = "PDF"`.

Query 4: Proposal deadlines for semesters**

sparql

```
PREFIX fyp: <http://.../FYP_Process_Ontology#>
SELECT ?Deadline ?date
WHERE {
  ?Deadline a fyp:ProposalDeadline ;
        fyp:deadlineDate ?date .
}
```

1. Expected Result: `Proposal_Deadline` with `date = "2023-10-15T23:59:59"`.

G3: Project Execution

Query 5: Phases of a project

sparql

```
PREFIX fyp: <http://.../FYP_Process_Ontology#>
SELECT ?Project ?Phase
WHERE {
  ?Project a fyp:Project ;
        fyp:hasPhase ?Phase .
}
```

Validation Steps:

1. Expected Result: `AI_Chatbot_Project` linked to phases like `Testing_Phase_1`.

Query 6: Milestone dates for a project

sparql

```
PREFIX fyp: <http://.../FYP_Process_Ontology#>
```

```sparql
SELECT ?Milestone ?date
WHERE {
  ?Milestone a fyp:Milestone ;
        fyp:milestoneDate ?date .
}
```

Validation Steps:

1. Expected Result: `Proposal_Deadline` and `Final_Submission_2023` with valid dates.

G4: Documentation and Deliverables

Query 7: Final report format requirements

sparql

```sparql
PREFIX fyp: <http://.../FYP_Process_Ontology#>
SELECT ?Report ?format
WHERE {
  ?Report a fyp:FinalReport ;
       fyp:requiredFormat ?format .
}
```

1. Expected Result: `Final_Report_1` with `format = "PDF with LaTeX"`.

Query 8: Submission deadlines for deliverables

sparql

```sparql
PREFIX fyp: <http://.../FYP_Process_Ontology#>
SELECT ?Document ?deadline
WHERE {
  ?Document a fyp:Document ;
       fyp:submissionDeadline ?deadline .
}
```

1. Expected Result: All documents (e.g., proposals, reports) with deadlines.

G5: Supervision and Support

Query 9: Responsibilities of internal supervisors

sparql

```
PREFIX fyp: <http://.../FYP_Process_Ontology#>

SELECT ?Supervisor ?responsibility

WHERE {

  ?Supervisor a fyp:InternalSupervisor ;

        fyp:hasResponsibility ?responsibility .

}
```

1. Expected Result: `Dr_Sarah_Lee` with responsibility descriptions.

Query 10: Maximum projects per supervisor

sparql

```
PREFIX fyp: <http://.../FYP_Process_Ontology#>

SELECT ?Supervisor ?maxProjects

WHERE {

  ?Supervisor a fyp:Supervisor ;

        fyp:maxProjects ?maxProjects .

}
```

1. Expected Result: Dr_Sarah_Lee with `maxProjects = 3.

G6: Evaluation and Assessment

Query 11: Evaluation criteria for projects

sparql

```
PREFIX fyp: <http://.../FYP_Process_Ontology#>

SELECT ?Criterion

WHERE {

  ?Criterion a fyp:EvaluationCriteria .

}
```

1. Expected Result: `DocumentationCompleteness`, `TechnicalQuality`.

Query 12: Individual scores in group projects

```sparql
PREFIX fyp: <http://.../FYP_Process_Ontology#>

SELECT ?Member ?score

WHERE {

  ?Member a fyp:GroupMember ;

      fyp:individualScore ?score .

}
```

1. Expected Result: `Alice_Smith` with `score = 85.0`.

G7: Project Timeline and Scheduling

Query 13: All deadlines in the project

```sparql
PREFIX fyp: <http://.../FYP_Process_Ontology#>

SELECT ?Deadline ?date

WHERE {

  ?Deadline a fyp:Milestone ;

       fyp:milestoneDate ?date .

}
```

1. Expected Result: All milestones (e.g., proposal, final submission) with dates.

Query 14: Missed deadlines triggering exceptions

```sparql
PREFIX fyp: <http://.../FYP_Process_Ontology#>

SELECT ?Exception ?resolutionDate

WHERE {

  ?Exception a fyp:DeadlineException ;

      fyp:resolutionDate ?resolutionDate .

}
```

1. Expected Result: `Conflict_1` with `resolutionDate = "2023-11-01T14:30:00"`.