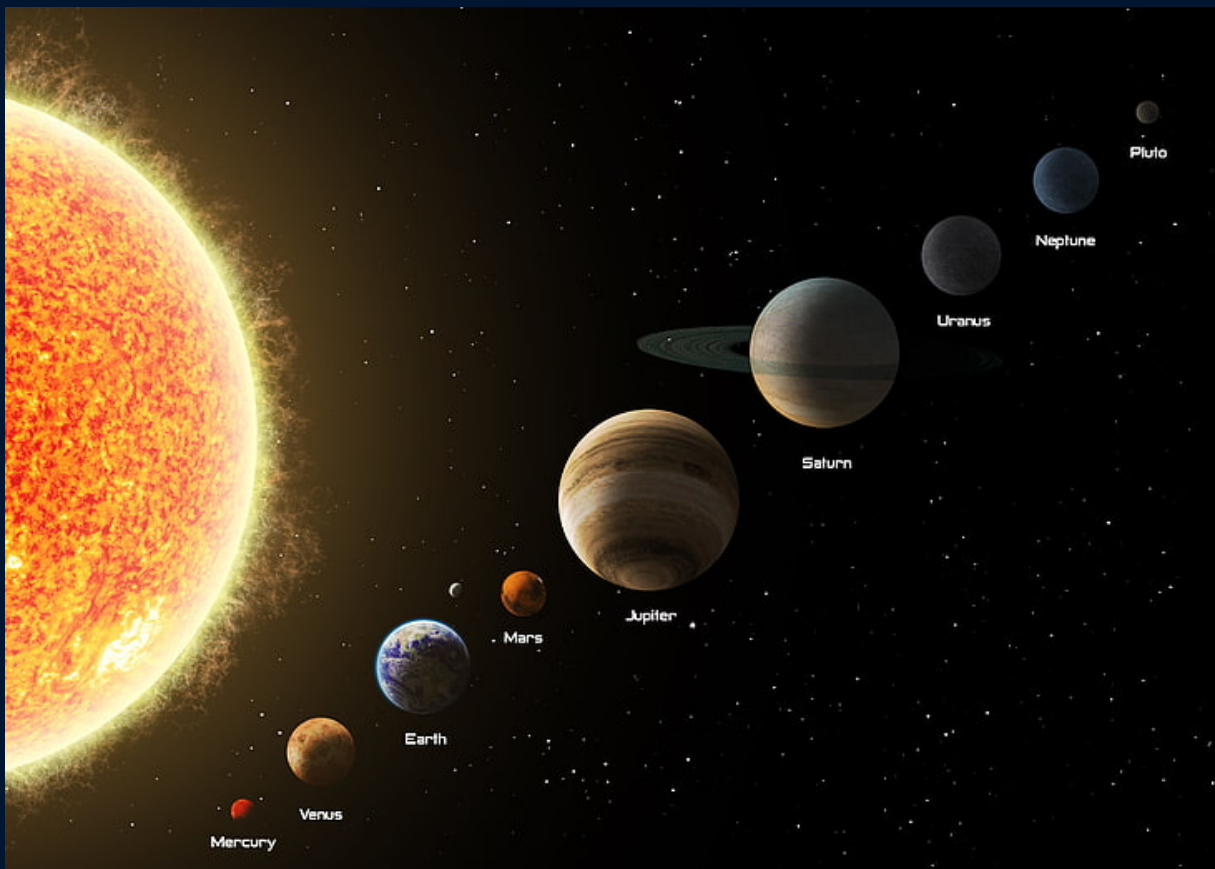


# Solar System Explorer

*Knowledge Representation and Reasoning*



**Instructor:** Shahzeb Khan

# Team Members:

Muhammad Shafeen

Tazmeen Afroz

Khizar Ali

Ahmad Mohsin

Aiman Arif

Zabiullah Zahir

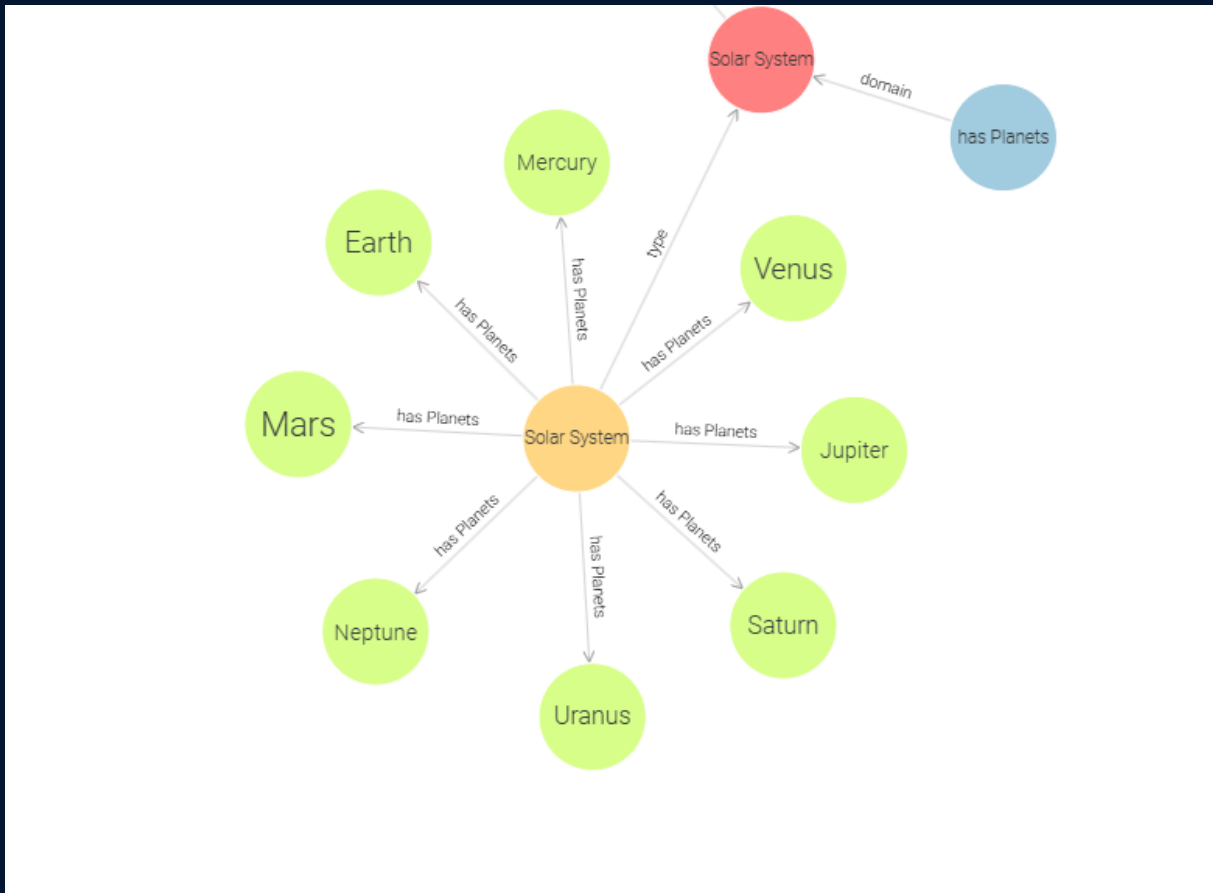
Amber Khurshid

Humna Khan

Sarmad Khan

Saad Karim

# Domain Description



The **Solar System Explorer Knowledge Graph** is an intricate and dynamic representation of our Solar System, meticulously designed to illuminate the vastness and complexity of celestial bodies and their interrelationships. This project harnesses the power of linked data and semantic technologies to provide an interactive and comprehensive understanding of the Sun, eight planets, their natural satellites (moons), and a myriad of smaller objects such as asteroids and comets.

## Key Features:

- **Interconnected Data:** Seamlessly links information about planets, and moons, enabling users to explore their characteristics and relationships effortlessly.
- **Rich Semantic Queries:** Utilizes SPARQL queries to fetch and manipulate data, allowing for complex and insightful explorations of the Solar System's structure.
- **Dynamic Visualization:** Presents data in an engaging format, making it easier to comprehend the vast distances, sizes, and unique attributes of each celestial body.
- **Comprehensive RDF Models:** Employs Resource Description Framework (RDF) to create detailed and standardized representations of each planet and moon, ensuring data consistency and interoperability.

## Project Objectives:

1. **Enhanced Understanding:** Provide a deeper insight into the Solar System's architecture and the intricate relationships between its components.

2. **Educational Tool:** Serve as a valuable resource for educators and students to explore and learn about astronomy and planetary science.
3. **Data Integration:** Combine diverse datasets from various sources to create a unified and comprehensive knowledge base.
4. **Scalability and Flexibility:** Design the knowledge graph to accommodate future expansions, including additional celestial bodies and more detailed information.

**Why a Knowledge Graph?** Traditional databases often fall short in representing the complex and interconnected nature of astronomical data. A knowledge graph, with its ability to model relationships and enable semantic queries, offers a more intuitive and powerful way to explore and analyze the Solar System. By leveraging linked data principles, this project ensures that information is not only easily accessible but also contextually meaningful.

### Visual Representation:

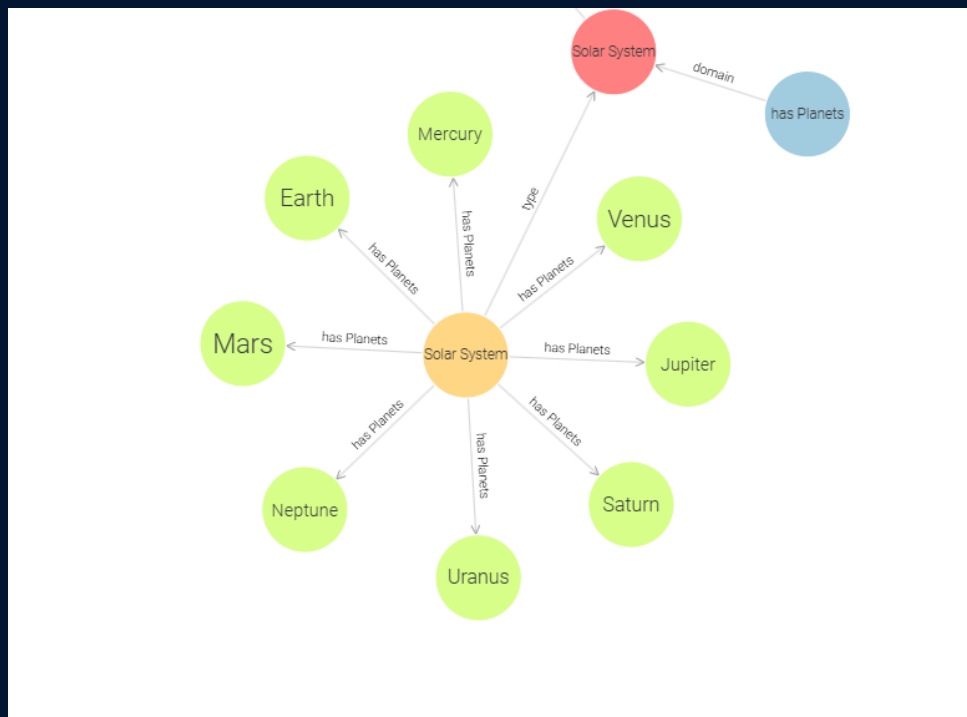


Figure 1: Illustrative Diagram of the Solar System Explorer Knowledge Graph

**Conclusion:** The Solar System Explorer Knowledge Graph stands as a testament to the fusion of astronomy and advanced data technologies. It not only maps out the celestial bodies within our Solar System but also uncovers the intricate web of relationships that define their existence. This project paves the way for innovative explorations and discoveries, fostering a greater appreciation for the wonders of our cosmic neighborhood.

### Future Directions:

- **Integration with Real-Time Data:** Incorporate live data feeds from space missions and telescopes to keep the knowledge graph updated.

- **User Interactivity Enhancements:** Develop interactive interfaces and visualization tools to allow users to engage with the data more dynamically.
- **Expansion Beyond the Solar System:** Extend the knowledge graph to include exoplanets and other stellar systems, broadening the scope of exploration.

**Acknowledgments:** This project is a collaborative effort, bringing together expertise in linked data, semantic web technologies, and astronomical sciences to create a resource that inspires curiosity and facilitates learning.

## Work Distribution

Team Member	Tasks/Responsibilities
Khizar Ali	Linked Data, Saved Queries, Managing GraphDB, SPARQL Queries
Tazmeen Afroz	Linked Data, SPARQL Queries, Vocabularies
Ahmad Mohsin	SPARQL Queries, Satellite Queries (Mars), Code Correction, RDF Creation
Aiman Arif	SPARQL Queries, Satellite Queries (Saturn), Code Correction, RDF Creation
Zabiullah Zahir	SPARQL Queries, Satellite Queries (Jupiter), Code Correction, RDF Creation
Amber Khurshid	SPARQL Queries, Satellite Queries (Venus), Code Correction, RDF Creation
Humna Khan	SPARQL Queries, Satellite Queries (Mercury), Code Correction, RDF Creation
Sarmad Khan	SPARQL Queries, Satellite Queries (Uranus, Neptune), Code Correction, RDF Creation
Saad Karim	SPARQL Queries, Satellite Queries (Earth), Code Correction, Code Correction, RDF Creation

### Moons:

Planets	Team Members
Jupiter & Earth	Saad Karim & Zabiullah Zahir
Mars & Saturn	Ahmad Mohsin & Aiman Arif
Mercury & Venus & Uranus & Neptune	Sarmad Khan & Amber Khurshid & Humna Khan

# Questions

## General Planetary Queries

1. Find the nth Smallest Planet.
2. List All Planet Names Containing a Specific Color.
3. Find Planets with Specific Geological Features.
4. Find Planets Closer to the Sun than Earth's Closest Approach.
5. Group Planets by Composition Types and Count Them.
6. Find the nth Coldest Planet.
7. Find Distance Between Any Two Planets.
8. Find the nth Closest Planet to the Sun.
9. Find Planets with Multiple Composition Types.
10. Find Temperature Difference Between Any Two Planets.
11. List All Planets with Specific Atmospheric Composition.
12. Find the Difference in Day Length Between Planets.
13. Which is the red planet in the Solar System?
14. What is the orbital period of Saturn, and how does it compare to Earth's orbital period?
15. What are the main components of Saturn's atmosphere?
16. What are the surface features of Saturn?
17. Orbital and Rotation Details of Venus.
18. Temperature and Pressure of Venus.
19. What are the Surface Features of Venus?
20. What are the atmospheric composition and mean surface temperature of Mercury?
21. What is the surface gravity of Mercury, and how does it compare to Earth's?
22. What is the composition of Mercury?

23. Which planet has no moon?

24. What are the colors of Earth?

25. How many Earths could fit inside the Sun?

26. What is the number of moons and surface features of Uranus and Neptune?

27. Which is the coldest planet in the solar system? **SPARQL Query?**

28. What is the orbital period and orbital velocity of Uranus and Neptune?

29. What are the main components of Uranus' atmosphere?

30. What are the surface features of Neptune? **SPARQL Query:**

31. Which is the biggest planet?

32. Which planet in the solar system has more than 75 moons?

33. Which planet is made up of Hydrogen and Helium?

## Moon-Related Queries

38. What are the names of all the moons of Mars?

39. Analyze the size difference between Mars' two moons.

40. Identify the smallest and largest moons of Jupiter.

41. List all moons of Jupiter with a magnitude greater than 10.

42. Which moon of Saturn has the largest radius?

43. Find the moon of Saturn with the highest magnitude.

44. Which moon has the closest density to that of Earth's Moon?

45. Find the planet with only one moon.

46. Find the moons of Neptune with an albedo greater than 0.5.

47. Find the moon of Neptune with the lowest albedo.

48. List all moons of Uranus with a radius less than 100 km.

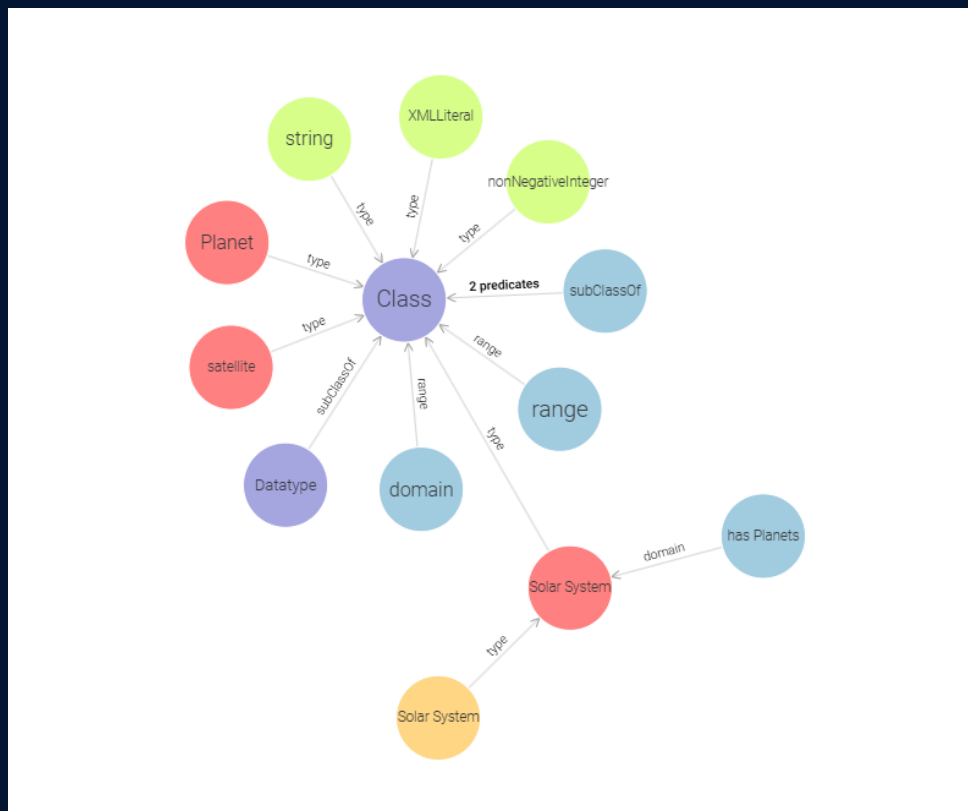
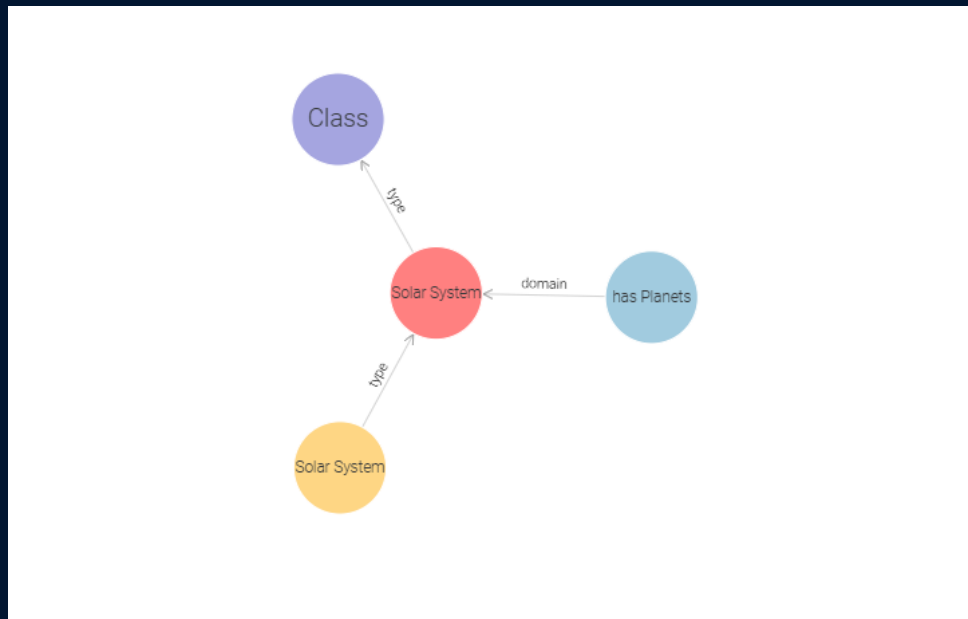
49. Count the number of moons of Uranus.

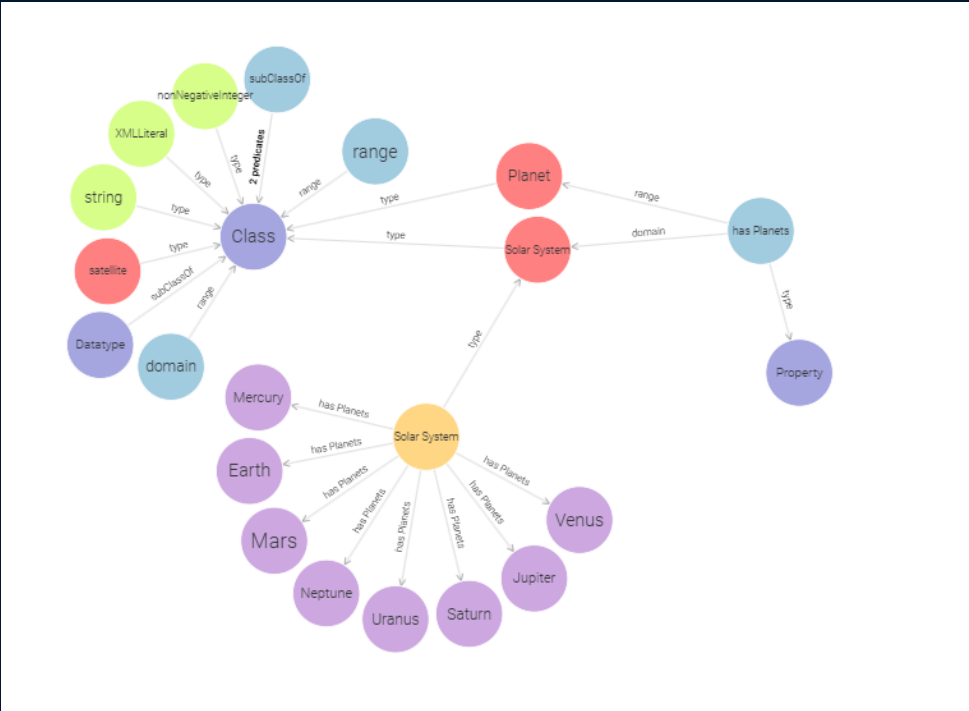
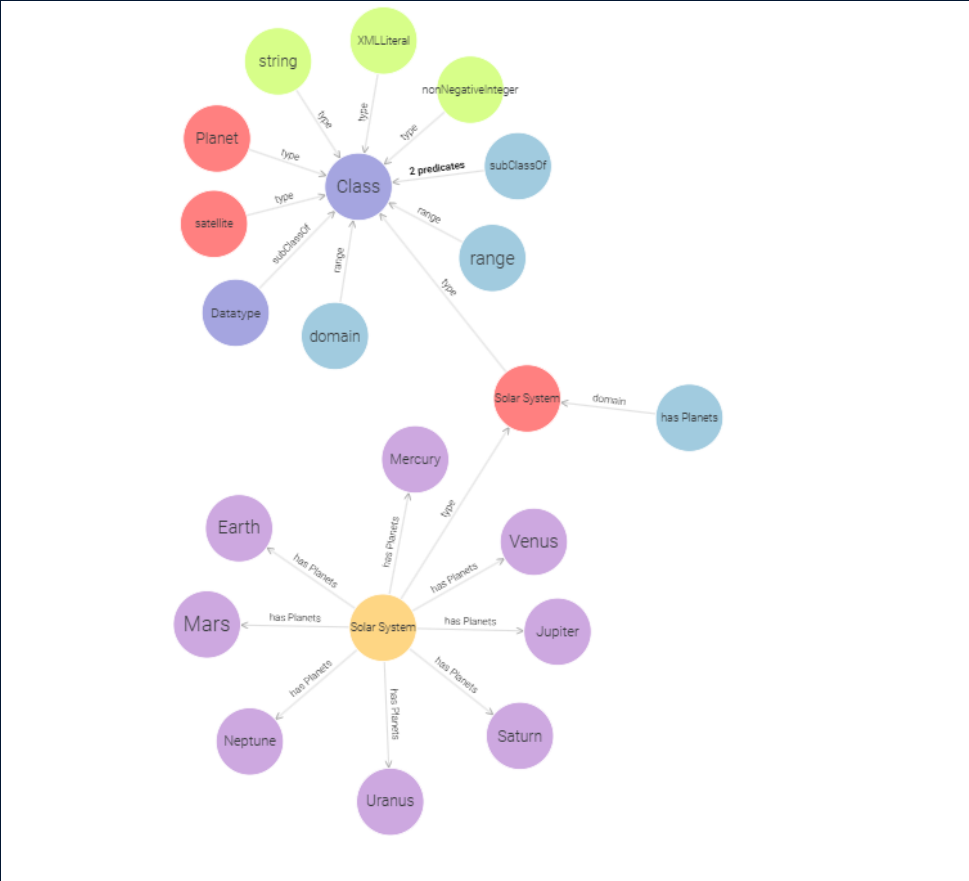
# Vocabularies & Entities

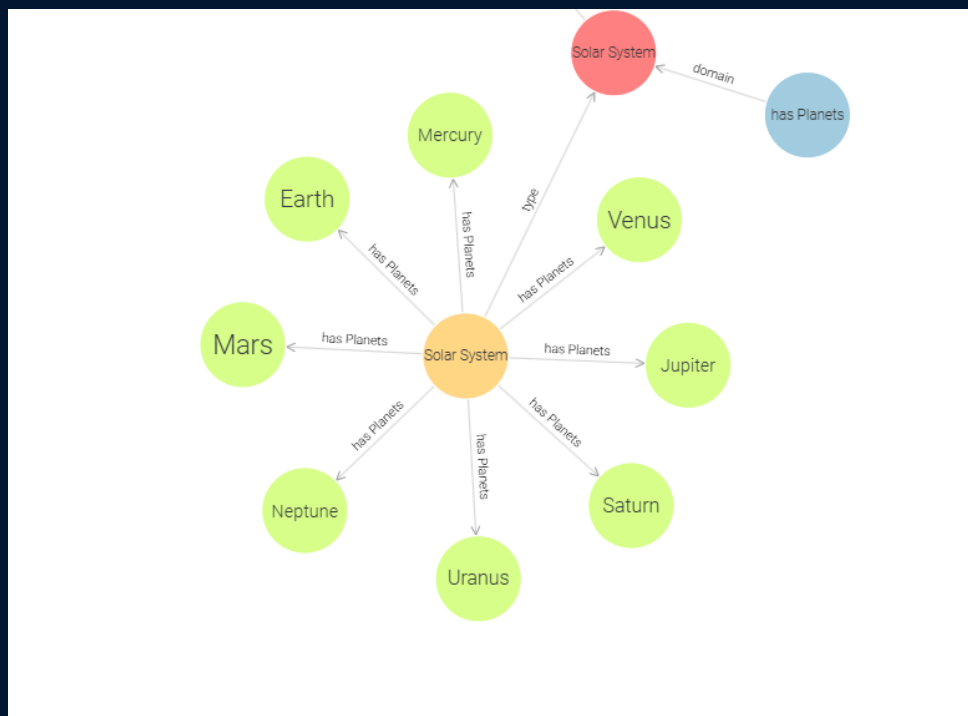
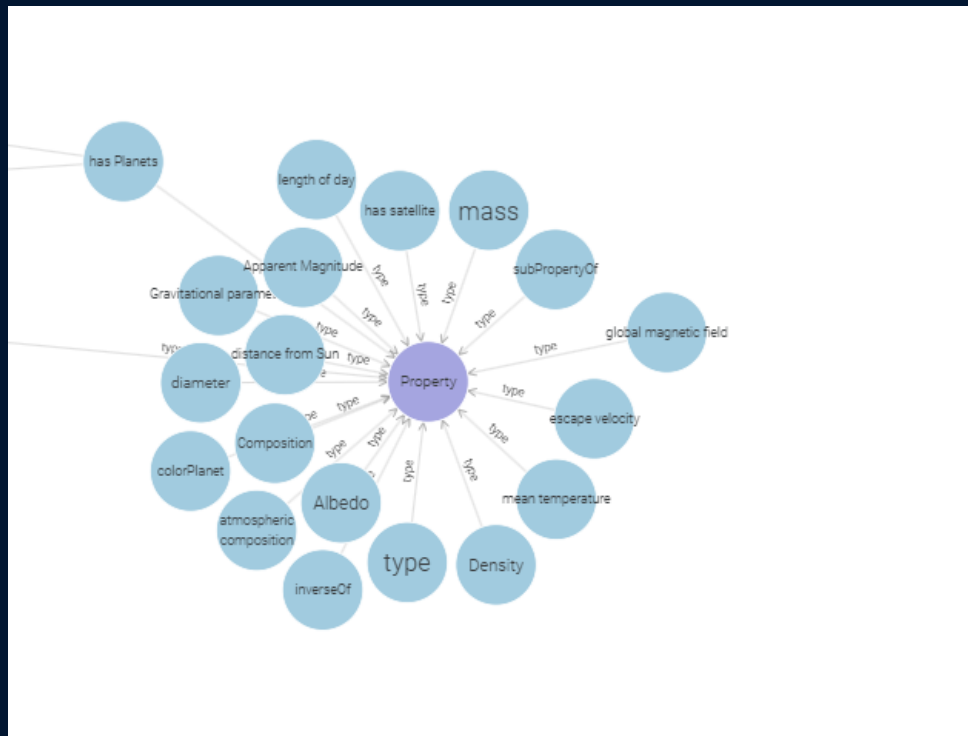
Category	Properties
General Planetary Properties	<ul style="list-style-type: none"><li>• :colorPlanet</li><li>• :atmosphericComposition</li><li>• :mass</li><li>• :diameter</li><li>• :density</li><li>• :surfaceGravity</li><li>• :escapeVelocity</li><li>• :rotationPeriod</li><li>• :lengthOfDay</li><li>• :distanceFromSun</li><li>• :meanTemperature</li><li>• :numberOfMoons</li><li>• :ringSystem</li><li>• :globalMagneticField</li></ul>
Orbital Parameters	<ul style="list-style-type: none"><li>• :perihelion</li><li>• :aphelion</li><li>• :orbitalPeriod</li><li>• :orbitalVelocity</li><li>• :orbitalEccentricity</li><li>• :obliquityToOrbit</li></ul>
Surface and Atmospheric Data	<ul style="list-style-type: none"><li>• :surfacePressure</li><li>• :surfaceTemperature</li><li>• :atmosphericPressure</li><li>• :surfaceFeatures</li><li>• :composition</li></ul>
Moons Information	<ul style="list-style-type: none"><li>• :hasMoons</li></ul>

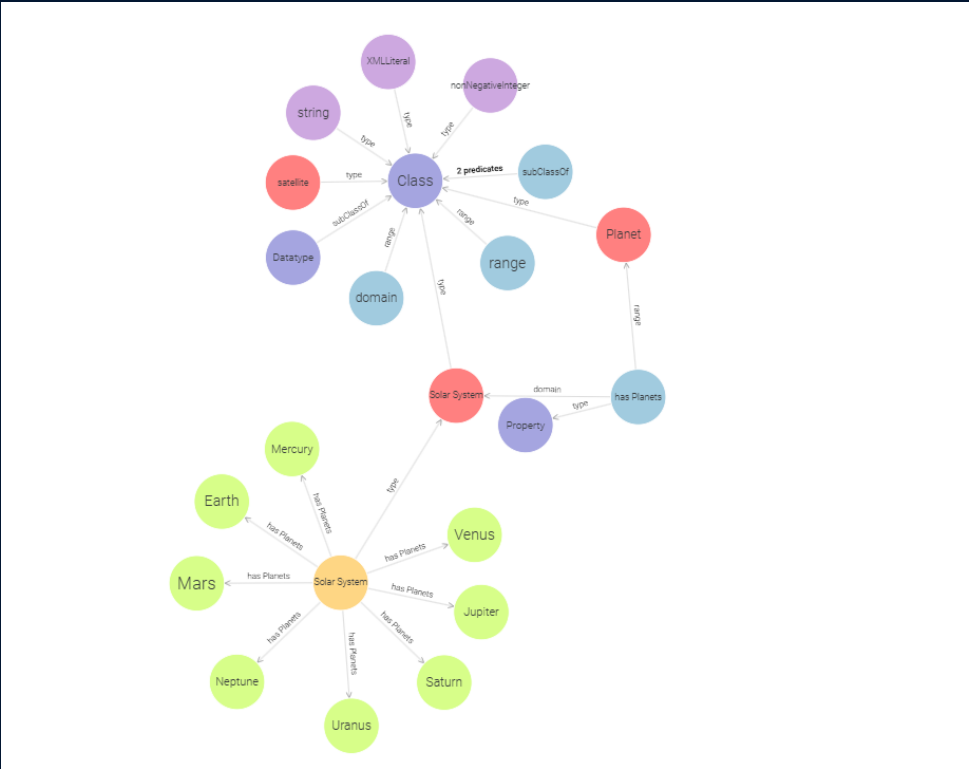
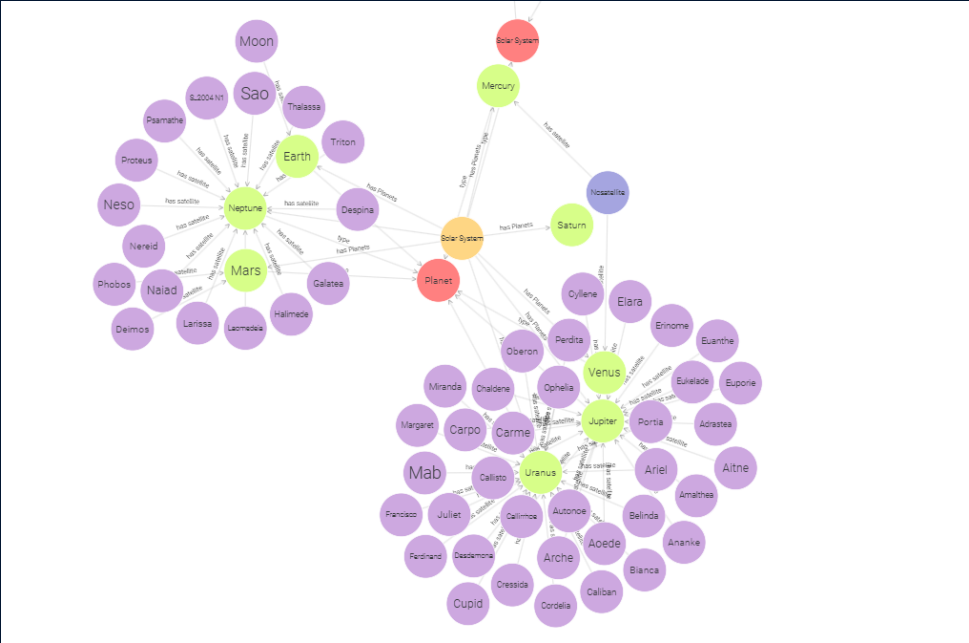


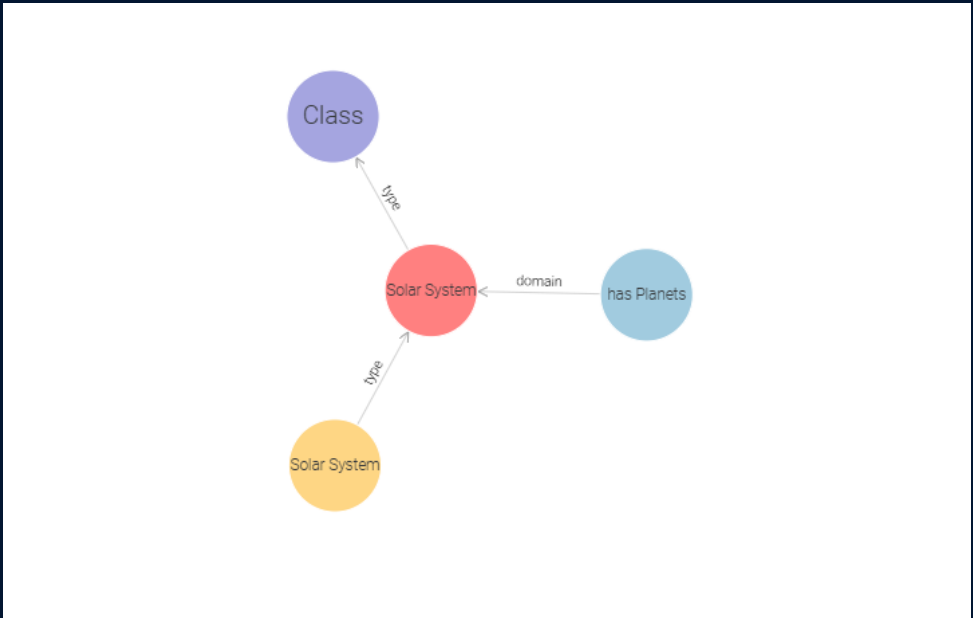
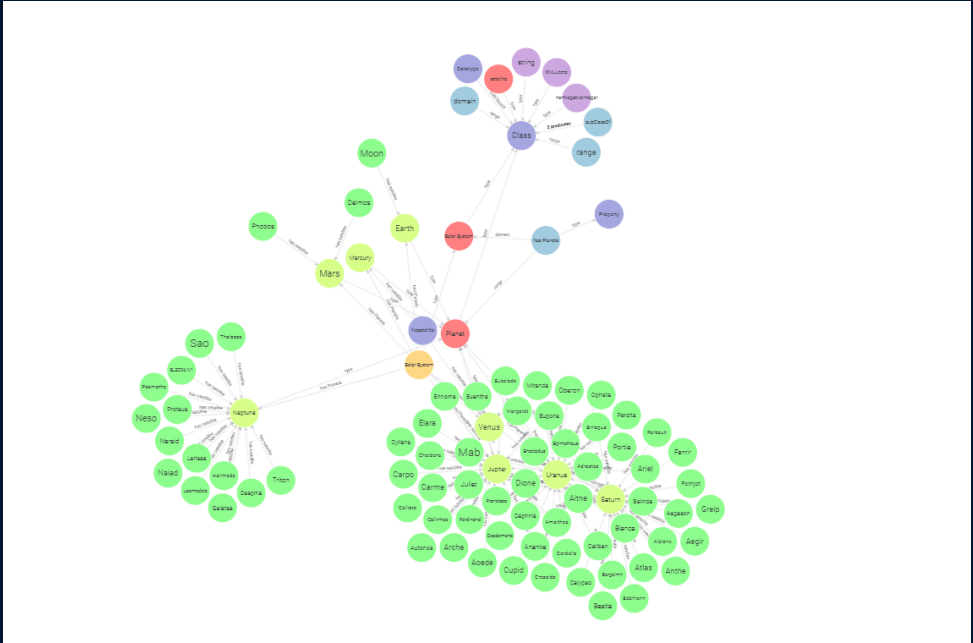
# GraphDB Visualization











# SPARQL Answers to Competency Questions

## General Questions :

Unnamed 1 × ⊕

```
7 ?planet2Name
8 ?lengthOfDay1
9 ?lengthOfDay2
10 (ABS(?lengthOfDay1 - ?lengthOfDay2) AS ?dayLengthDifference)
11 WHERE {
12 ?planet1 rdf:type :Planet ;
13     rdfs:label ?planet1Name ;
14     :lengthOfDay ?lengthOfDay1 .
15 ?planet2 rdf:type :Planet ;
16     rdfs:label ?planet2Name ;
17     :lengthOfDay ?lengthOfDay2 .
18
19 FILTER(?planet1 != ?planet2)
20 FILTER(?planet1Name < ?planet2Name)
21 }
22 ORDER BY ?dayLengthDifference
23
```

Run keyboard shortcuts

Table Raw response Pivot Table Google Chart Download as

Filter query results Compact view ☐ Hide row numbers ☐ Showing results from 0 to 28 of 28. Query took 0.1s, moments ago.

	planet1Name	planet2Name	lengthOfDay1	lengthOfDay2	dayLengthDifference
1	"Earth"	"Mars"	"24.0"xsd:decimal	"24.7"xsd:decimal	"0.7"xsd:decimal
2	"Jupiter"	"Saturn"	"9.9"xsd:decimal	"10.7"xsd:decimal	"0.8"xsd:decimal
3	"Neptune"	"Uranus"	"16.1"xsd:decimal	"17.2"xsd:decimal	"1.1"xsd:decimal
4	"Neptune"	"Saturn"	"16.1"xsd:decimal	"10.7"xsd:decimal	"5.4"xsd:decimal
5	"Jupiter"	"Neptune"	"9.9"xsd:decimal	"16.1"xsd:decimal	"6.2"xsd:decimal
6	"Saturn"	"Uranus"	"10.7"xsd:decimal	"17.2"xsd:decimal	"6.5"xsd:decimal
7	"Earth"	"Uranus"	"24.0"xsd:decimal	"17.2"xsd:decimal	"6.8"xsd:decimal
8	"Jupiter"	"Uranus"	"9.9"xsd:decimal	"17.2"xsd:decimal	"7.3"xsd:decimal

SPARQL Query & Update ⓘ

Editor only Editor and results Results only

Unnamed 1 × ⊕

```
1 PREFIX : <http://example.org/solarsystem#>
2 PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
3 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
4
5 SELECT ?planetName
6 WHERE {
7 ?planet rdf:type :Planet ;
8     rdfs:label ?planetName ;
9     :atmosphericComposition ?compBag .
10 ?compBag ?position ?composition .
11 FILTER(CONTAINS(?composition, "Carbon Dioxide"))
12 }
13 ORDER BY ?planetName
14
15
16
```

Run keyboard shortcuts

Table Raw response Pivot Table Google Chart Download as

Filter query results Compact view ☐ Hide row numbers ☐ Showing results from 0 to 4 of 4. Query took 0.1s, moments ago.

	planetName
1	"Mars"
2	"Mars"
3	"Venus"
4	"Venus"

SPARQL Query & Update

Editor onlyEditor and resultsResults only

Unnamed 1

1PREFIX : <http://example.org/solarsystem#>

2PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>

3PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>

4

5SELECT ?planet1Name ?planet2Name (ABS(?temp1 - ?temp2) AS ?tempDifference)

6WHERE {

7  ?planet1 rdf:type :Planet ;

8      rdfs:label ?planet1Name ;

9      :meanTemperature ?temp1 .

10  ?planet2 rdf:type :Planet ;

11      rdfs:label ?planet2Name ;

12      :meanTemperature ?temp2 .

13  FILTER(?planet1 != ?planet2)

14  FILTER(?planet1Name < ?planet2Name)

15

16}

17ORDER BY ASC(?tempDifference)

Run

keyboard shortcuts

TableRaw responsePivot TableGoogle Chart

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Filter query results

Compact viewHide row numbers

Showing results from 0 to 28 of 28. Query took 0.1s, moments ago.

	planet1Name	planet2Name	tempDifference
1	"Neptune"	"Uranus"	"5"xsd:integer
2	"Jupiter"	"Saturn"	"30"xsd:integer
3	"Jupiter"	"Mars"	"45"xsd:integer
4	"Saturn"	"Uranus"	"55"xsd:integer
5	"Neptune"	"Saturn"	"60"xsd:integer
6	"Mars"	"Saturn"	"75"xsd:integer
7	"Earth"	"Mars"	"80"xsd:integer
8	"Jupiter"	"Uranus"	"85"xsd:integer

SPARQL Query & Update

Editor onlyEditor and resultsResults only

Unnamed 1

1PREFIX : <http://example.org/solarsystem#>

2PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>

3PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>

4

5SELECT ?planetLabel ?distanceFromSun

6WHERE {

7  ?p rdf:type :Planet ;

8      :distanceFromSun ?distanceFromSun ;

9      rdfs:label ?planetLabel .

10  {

11    SELECT ?p (COUNT(?other) AS ?rank)

12    WHERE {

13      ?p rdf:type :Planet ;

14      :distanceFromSun ?dist .

15    OPTIONAL {

16      ?other rdf:type :Planet ;

17      :distanceFromSun ?otherDist .

18      FILTER(?otherDist < ?dist)

19    }

20  }

21  GROUP BY ?p

22  }

23  FILTER(?rank = 0)

24}

25ORDER BY ?distanceFromSun

26

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Showing results from 0 to 1 of 1. Query took 0.1s, moments ago.

	planetLabel	distanceFromSun
1	"Mercury"	"57.9"xsd:decimal

GraphDB 10.8.0 • RDF4J 4.3.14 • Connectors 16.2.12 • Workbench 2.8.0 • © 2002–2024 Ontotext AD. All rights reserved.

## SPARQL Query & Update

Unnamed 1

```
12 *  
13 WHERE {  
14   ?p rdf:type :Planet ;  
15     :distanceFromSun ?dist .  
16   OPTIONAL {  
17     ?other rdf:type :Planet ;  
18       :distanceFromSun ?otherDist .  
19     FILTER(?otherDist < ?dist)  
20   }  
21   GROUP BY ?p  
22 }  
23 FILTER(?rank = 0)  
24 }  
25 ORDER BY ?distanceFromSun  
26
```

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Link

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Table

Raw response

Pivot Table

Google Chart

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Filter query results

Compact view

Hide row numbers

Showing results from 0 to 1 of 1. Query took 0.1s, moments ago.

	planetLabel	distanceFromSun
1	"Mercury"	"57.9"^^xsd:decimal

## SPARQL Query & Update

Unnamed 1

```
12 *  
13 WHERE {  
14   ?p rdf:type :Planet ;  
15     :numberOfMoons ?moons .  
16   OPTIONAL {  
17     ?other rdf:type :Planet ;  
18       :numberOfMoons ?otherMoons .  
19     FILTER(?otherMoons > ?moons)  
20   }  
21   GROUP BY ?p  
22 }  
23 FILTER(?rank = 1) # Change to get different ranks  
24 }  
25 ORDER BY DESC(?moonCount)  
26
```

Save

Open

Link

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Table

Raw response

Pivot Table

Google Chart

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Filter query results

Compact view

Hide row numbers

Showing results from 0 to 1 of 1. Query took 0.1s, moments ago.

	planetLabel	moonCount
1	"Jupiter"	"79"^^xsd:integer



## SPARQL Query & Update ?

Editor only Editor and results Results only ⌵

Unnamed 1 × ⊕

```
11 SELECT ?p (COUNT(?other) AS ?moonCount)
12 WHERE {
13   ?p rdf:type :Planet ;
14   :numberOfMoons ?moons .
15   OPTIONAL {
16     ?other rdf:type :Planet ;
17     :numberOfMoons ?otherMoons .
18     FILTER(?otherMoons > ?moons)
19   }
20 }
21 GROUP BY ?p
22 }
23 FILTER(?rank = 0) # Change to get different ranks
24 }
25 ORDER BY DESC(?moonCount)
26
```

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Filter query results Compact view ☐ Hide row numbers ☐ Showing results from 0 to 1 of 1. Query took 0.1s, moments ago.

	planetLabel	moonCount
1	"Saturn"	"83"^^xsd:integer

## SPARQL Query & Update ?

Editor only Editor and results Results only ⌵

Unnamed 1 × ⊕

```
4
5 SELECT ?planet1Name ?planet2Name
6   (ABS(?dist1 - ?dist2) AS ?distanceBetween)
7 WHERE {
8   ?planet1 rdf:type :Planet ;
9   rdfs:label ?planet1Name ;
10  :distanceFromSun ?dist1 .
11  ?planet2 rdf:type :Planet ;
12  rdfs:label ?planet2Name ;
13  :distanceFromSun ?dist2 .
14  FILTER(?planet1 != ?planet2)
15  FILTER(?planet1Name < ?planet2Name)
16 }
17 ORDER BY ASC(?distanceBetween)
18
```

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Filter query results Compact view ☐ Hide row numbers ☐ Showing results from 0 to 28 of 28. Query took 0.1s, moments ago.

	planet1Name	planet2Name	distanceBetween
1	"Earth"	"Venus"	"41.4"^^xsd:decimal
2	"Mercury"	"Venus"	"50.3"^^xsd:decimal
3	"Earth"	"Mars"	"78.3"^^xsd:decimal
4	"Earth"	"Mercury"	"91.7"^^xsd:decimal
5	"Mars"	"Venus"	"119.7"^^xsd:decimal
6	"Mars"	"Mercury"	"170.0"^^xsd:decimal
7	"Jupiter"	"Mars"	"550.7"^^xsd:decimal
8	"Earth"	"Jupiter"	"629.0"^^xsd:decimal
9	"Jupiter"	"Saturn"	"654.9"^^xsd:decimal

SPARQL Query & Update

Editor onlyEditor and resultsResults only

Unnamed 1

```
12 SELECT ?planet (COUNT(?other) AS ?rank)
13 WHERE {
14   ?planet rdf:type :Planet ;
15           :meanTemperature ?temp .
16   OPTIONAL {
17     ?other rdf:type :Planet ;
18            :meanTemperature ?otherTemp .
19     FILTER(?otherTemp < ?temp)
20   }
21 }
22 GROUP BY ?planet
23 }
24 # Change the number to get different ranks (0 for coldest, 1 for second coldest, etc.)
25 FILTER(?rank = 1)
26 }
27
```

Run

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Filter query results

Compact viewHide row numbers

Showing results from 0 to 1 of 1. Query took 0.1s, moments ago.

	planetName	temperature
1	"Uranus"	"-195"^^xsd:integer

SPARQL Query & Update

Editor onlyEditor and resultsResults only

Unnamed 1

```
1 PREFIX : <http://example.org/solarsystem#>
2 PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
3 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
4
5 SELECT ?compositionType (COUNT(DISTINCT ?planet) as ?planetCount)
6      (GROUP_CONCAT(DISTINCT ?planetName; separator=", ") as ?planets)
7 WHERE {
8   ?planet rdf:type :Planet ;
9           rdfs:label ?planetName ;
10          :composition ?compBag .
11   ?compBag ?pos ?compositionType .
12 }
13 GROUP BY ?compositionType
14 ORDER BY DESC(?planetCount)
15
```

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Filter query results

Compact viewHide row numbers

Showing results from 0 to 13 of 13. Query took 0.1s, moments ago.

	compositionType	planetCount	planets
1	rdfs:Container	"8"^^xsd:integer	"Earth, Jupiter, Mars, Mercury, Neptune, Saturn, Uranus, Venus"
2	rdf:Bag	"8"^^xsd:integer	"Earth, Jupiter, Mars, Mercury, Neptune, Saturn, Uranus, Venus"
3	"Water"	"3"^^xsd:integer	"Earth, Neptune, Uranus"
4	"Iron Core"	"2"^^xsd:integer	"Earth, Mercury"
5	"Silicate Mantle"	"2"^^xsd:integer	"Earth, Mercury"
6	"Hydrogen"	"2"^^xsd:integer	"Jupiter, Saturn"
7	"Helium"	"2"^^xsd:integer	"Jupiter, Saturn"
8	"Methane"	"2"^^xsd:integer	"Neptune, Uranus"

SPARQL Query & Update

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Unnamed 1

```
1 PREFIX : <http://example.org/solarsystem#>
2 PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
3 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
4 SELECT ?planetName ?feature
5 WHERE {
6   ?planet rdf:type :Planet ;
7           rdfs:label ?planetName ;
8           :surfaceFeatures ?featureBag .
9   ?featureBag ?position ?feature .
10  FILTER(CONTAINS(?feature, "Mountains") ||
11         CONTAINS(?feature, "Volcanoes") ||
12         CONTAINS(?feature, "Plains"))
13 }
14 ORDER BY ?planetName
15
```

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keyboard shortcuts

TableRaw responsePivot TableGoogle Chart

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Filter query results

Compact viewHide row numbers

Showing results from 0 to 10 of 10. Query took 0.1s, moments ago.

	planetName	feature
1	"Earth"	"Mountains"
2	"Earth"	"Plains"
3	"Earth"	"Mountains"
4	"Earth"	"Plains"
5	"Mars"	"Volcanoes"
6	"Mars"	"Volcanoes"
7	"Venus"	"Volcanoes"
8	"Venus"	"Lava Plains"
9	"Venus"	"Volcanoes"
10	"Venus"	"Lava Plains"

SPARQL Query & Update

Editor onlyEditor and resultsResults only

Unnamed 1

```
1 PREFIX : <http://example.org/solarsystem#>
2 PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
3 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
4
5 SELECT ?planetName
6 WHERE {
7   ?planet rdf:type :Planet ;
8           rdfs:label ?planetName ;
9           :colorPlanet ?colorBag .
10  ?colorBag ?position ?color .
11  FILTER(?color = "Red")
12 }
13 ORDER BY ?planetName
14
```

Run

Press Alt+Enter to autocomplete

keyboard shortcuts

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Filter query results

Compact viewHide row numbers

Showing results from 0 to 2 of 2. Query took 0.1s, moments ago.

	planetName
1	"Mars"
2	"Mars"

SPARQL Query & Update ⓘ

Editor onlyEditor and resultsResults only⌵

Unnamed ×Tazmeen General ×⊕

1 PREFIX : <http://example.org/solarsystem#>

2 PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>

3 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>

4 SELECT ?planetLabel ?diameter

5 WHERE {

6 ?p rdf:type :Planet ;

7 :diameter ?diameter ;

8 rdfs:label ?planetLabel .

9 {

10 SELECT ?p (COUNT(?other) AS ?rank)

11 WHERE {

12 ?p rdf:type :Planet ;

13 :diameter ?diam .

14 OPTIONAL {

15 ?other rdf:type :Planet ;

16 :diameter ?otherDiam .

17 }

18 }

19 }

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Filter query resultsCompact viewHide row numbers

Showing results from 0 to 1 of 1. Query took 0.1s, moments ago.

	planetLabel	diameter
1	"Mercury"	"4879"^^xsd:integer

## Planet Questions :

SPARQL Query & Update ⓘ

Editor onlyEditor and resultsResults only⌵

Unnamed ×⊕

1 PREFIX : <http://example.org/solarsystem#>

2

3 PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>

4 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>

5 SELECT ?planetName ?diameter

6 WHERE {

7 ?planet rdf:type :Planet ;

8 rdfs:label ?planetName ;

9 :diameter ?diameter .

10 }

11 ORDER BY DESC(?diameter)

12 LIMIT 1

13

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Showing results from 0 to 1 of 1. Query took 0.5s, moments ago.

	planetName	diameter
1	"Jupiter"	"139820"^^xsd:integer

SPARQL Query & Update

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Unnamed

```
1 PREFIX : <http://example.org/solarsystem#>
2
3 PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
4 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
5 SELECT ?planetName ?numberOfMoons
6 WHERE {
7   ?planet rdf:type :Planet ;
8           rdfs:label ?planetName ;
9           :numberOfMoons ?numberOfMoons .
10  FILTER (?numberOfMoons > 75)
11 }
12
```

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Filter query results

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Showing results from 0 to 2 of 2. Query took 0.1s, moments ago.

	planetName	numberOfMoons
1	"Jupiter"	"79"^^xsd:integer
2	"Saturn"	"83"^^xsd:integer

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Unnamed

```
1 PREFIX : <http://example.org/solarsystem#>
2
3 PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
4 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
5 SELECT ?planetName
6 WHERE {
7   ?planet rdf:type :Planet ;
8           rdfs:label ?planetName ;
9           :composition ?composition .
10  ?composition ?position ?element .
11  FILTER(STR(?element) = "Hydrogen" || STR(?element) = "Helium")
12 }
13 GROUP BY ?planetName
14 HAVING (COUNT(DISTINCT ?element) = 2)
15
```

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Filter query results

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Showing results from 0 to 2 of 2. Query took 0.1s, moments ago.

	planetName
1	"Jupiter"
2	"Saturn"

SPARQL Query & Update

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```
1 PREFIX : <http://example.org/solarsystem#>
2
3 PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
4 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
5 SELECT ?planetName
6 WHERE {
7   ?planet rdf:type :Planet ;
8           rdfs:label ?planetName ;
9           :composition ?composition .
10  ?composition ?position ?element .
11  FILTER(STR(?element) = "Hydrogen" || STR(?element) = "Helium")
12 }
13 GROUP BY ?planetName
14 HAVING (COUNT(DISTINCT ?element) = 2)
15
```

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Showing results from 0 to 2 of 2. Query took 0.1s, moments ago.

planetName
"Jupiter"
"Saturn"

SPARQL Query & Update

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Unnamed

```
1 PREFIX : <http://example.org/solarsystem#>
2 PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
3
4 SELECT ?color
5 WHERE {
6   :Earth :colorPlanet ?colorContainer .
7   ?colorContainer ?position ?color .
8   FILTER(STRSTARTS(STR(?position), STR(rdf:_)))
9 }
10
```

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Filter query results

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Showing results from 0 to 8 of 8. Query took 0.1s, moments ago.

color
"Blue"
"Brown"
"Green"
"White"
"Blue"
"Brown"
"Green"
"White"

SPARQL Query & Update

Editor onlyEditor and resultsResults only

Unnamed

1PREFIX : <http://example.org/solarsystem#>

2PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>

3

4SELECT ?color

5WHERE {

6:Earth :colorPlanet ?colorContainer .

7?colorContainer ?position ?color .

8FILTER(STRSTARTS(STR(?position), STR(rdf:\_)))

9}

10

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Filter query results

Compact viewHide row numbers

Showing results from 0 to 8 of 8. Query took 0.1s, moments ago.

	color
1	"Blue"
2	"Brown"
3	"Green"
4	"White"
5	"Blue"
6	"Brown"
7	"Green"
8	"White"

SPARQL Query & Update

Editor onlyEditor and resultsResults only

Unnamed

1PREFIX : <http://example.org/solarsystem#>

2PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>

3

4SELECT (ROUND(?sunVolume / ?earthVolume) AS ?earthsInSun)

5WHERE {

6BIND(1.412E18 AS ?sunVolume) # Sun's volume in km³

7:Earth :diameter ?diameter .

8BIND((4 / 3) \* 3.14159 \* ((?diameter / 2) \* (?diameter / 2) \* (?diameter / 2)) AS ?earthVolume) #

9Calculate Earth's volume manually

10}

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Filter query results

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Showing results from 0 to 1 of 1. Query took 0.1s, moments ago.

	earthsInSun
1	"1303538.0"^^xsd:double

SPARQL Query & Update

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UnnamedNeptune and uranus

```
1 PREFIX : <http://example.org/solarsystem#>
2
3 PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
4 SELECT ?planet ?numberOfMoons ?surfaceFeatures
5 WHERE {
6   VALUES ?planet { :Uranus :Neptune }
7   ?planet :numberOfMoons ?numberOfMoons ;
8           :surfaceFeatures ?features .
9   ?features ?position ?surfaceFeatures .
10  FILTER(STRSTARTS(STR(?position), STR(rdf:_)))
11 }
12
```

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Filter query results

Compact viewHide row numbers

Showing results from 0 to 8 of 8. Query took 0.1s, moments ago.

	planet	numberOfMoons	surfaceFeatures
1	:Uranus	"27"xsd:integer	"Ice"
2	:Uranus	"27"xsd:integer	"Methane Clouds"
3	:Uranus	"27"xsd:integer	"Ice"
4	:Uranus	"27"xsd:integer	"Methane Clouds"
5	:Neptune	"14"xsd:integer	"Storms"
6	:Neptune	"14"xsd:integer	"Methane Clouds"
7	:Neptune	"14"xsd:integer	"Storms"
8	:Neptune	"14"xsd:integer	"Methane Clouds"

SPARQL Query & Update

Editor onlyEditor and resultsResults only

UnnamedNeptune and uranus

```
1 PREFIX : <http://example.org/solarsystem#>
2
3 SELECT ?planet ?meanTemperature
4 WHERE {
5   VALUES ?planet { :Uranus :Neptune }
6   ?planet :meanTemperature ?meanTemperature .
7 }
8 ORDER BY DESC(?meanTemperature)
9 LIMIT 1
10
```

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Filter query results

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Showing results from 0 to 1 of 1. Query took 0.1s, moments ago.

	planet	meanTemperature
1	:Uranus	"-195"xsd:integer



SPARQL Query & Update

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UnnamedNeptune and uranus

```
1 PREFIX : <http://example.org/solarsystem#>
2
3 SELECT ?planet ?orbitalPeriod ?orbitalVelocity
4 WHERE {
5   VALUES ?planet { :Uranus :Neptune }
6   ?planet :orbitalPeriod ?orbitalPeriod ;
7           :orbitalVelocity ?orbitalVelocity .
8 }
9
```

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Filter query results

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Showing results from 0 to 2 of 2. Query took 0.1s, moments ago.

	planet	orbitalPeriod	orbitalVelocity
1	:Uranus	"30687"xsd:decimal	"6.8"xsd:decimal
2	:Neptune	"60190"xsd:decimal	"5.4"xsd:decimal

SPARQL Query & Update

Editor onlyEditor and resultsResults only

UnnamedNeptune and uranus

```
1 PREFIX : <http://example.org/solarsystem#>
2 PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
3
4 SELECT ?component
5 WHERE {
6   :Uranus :atmosphericComposition ?atm .
7   ?atm ?position ?component .
8   FILTER(STRSTARTS(STR(?position), STR(rdf:_)))
9 }
10
```

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Filter query results

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Showing results from 0 to 4 of 4. Query took 0.1s, moments ago.

	component
1	"Hydrogen"
2	"Helium"
3	"Hydrogen"
4	"Helium"

SPARQL Query & Update

Editor onlyEditor and resultsResults only

UnnamedNeptune and uranus

```
1 PREFIX : <http://example.org/solarsystem#>
2 PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
3
4 SELECT ?atmosphericComposition ?meanTemp
5 WHERE {
6   :Mercury :atmosphericComposition ?atm .
7   :Mercury :meanTemperature ?meanTemp .
8   ?atm ?position ?atmosphericComposition .
9   FILTER(STRSTARTS(STR(?position), STR(rdf:_)))
10 }
11
```

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Filter query results

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Showing results from 0 to 2 of 2. Query took 0.1s, moments ago.

	atmosphericComposition	meanTemp
1	"Mostly None"	"167" <xsd:integer< td=""></xsd:integer<>
2	"Mostly None"	"167" <xsd:integer< td=""></xsd:integer<>

SPARQL Query & Update

Editor onlyEditor and resultsResults only

UnnamedNeptune and uranus

```
1 PREFIX : <http://example.org/solarsystem#>
2
3 SELECT ?planet ?gravity
4 WHERE {
5   VALUES ?planet { :Mercury :Earth }
6   ?planet :surfaceGravity ?gravity .
7 }
8 ORDER BY ?planet
9
```

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Filter query results

Compact viewHide row numbers

Showing results from 0 to 2 of 2. Query took 0.1s, moments ago.

	planet	gravity
1	:Earth	"9.8" <xsd:decimal< td=""></xsd:decimal<>
2	:Mercury	"3.7" <xsd:decimal< td=""></xsd:decimal<>

SPARQL Query & Update

Editor onlyEditor and resultsResults only

UnnamedNeptune and uranus

```
1 PREFIX solar: <http://example.org/solarsystem#>
2 PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
3
4 SELECT ?position ?component
5 WHERE {
6   solar:Mercury solar:composition ?comp .
7   ?comp ?position ?component .
8   FILTER(STRSTARTS(STR(?position), STR(rdf:_)))
9 }
10 ORDER BY ?position
11
```

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Filter query results

Compact viewHide row numbers

Showing results from 0 to 4 of 4. Query took 0.1s, moments ago.

	position	component
1	rdf_1	"Iron Core"
2	rdf_1	"Iron Core"
3	rdf_2	"Silicate Mantle"
4	rdf_2	"Silicate Mantle"

SPARQL Query & Update

Editor onlyEditor and resultsResults only

UnnamedNeptune and uranus

```
1 PREFIX solar: <http://example.org/solarsystem#>
2 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
3
4 SELECT ?planetName ?orbitalPeriod ?orbitalVelocity ?orbitalEccentricity ?rotationPeriod ?lengthOfDay
5 WHERE {
6   solar:Venus rdfs:label ?planetName ;
7               solar:orbitalPeriod ?orbitalPeriod ;
8               solar:orbitalVelocity ?orbitalVelocity ;
9               solar:orbitalEccentricity ?orbitalEccentricity ;
10              solar:rotationPeriod ?rotationPeriod ;
11              solar:lengthOfDay ?lengthOfDay .
12 }
13
```

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Filter query results

Compact viewHide row numbers

Showing results from 0 to 4 of 4. Query took 0.1s, moments ago.

	position	component
1	rdf_1	"Iron Core"
2	rdf_1	"Iron Core"
3	rdf_2	"Silicate Mantle"
4	rdf_2	"Silicate Mantle"

SPARQL Query & Update

Editor onlyEditor and resultsResults only

UnnamedNeptune and uranus

```
1 PREFIX solar: <http://example.org/solarsystem#>
2 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
3
4 SELECT ?planetName ?surfaceTemp ?surfacePressure ?atmosphericPressure ?meanTemp
5 WHERE {
6   solar:Venus rdfs:label ?planetName ;
7               solar:surfaceTemperature ?surfaceTemp ;
8               solar:surfacePressure ?surfacePressure ;
9               solar:atmosphericPressure ?atmosphericPressure ;
10              solar:meanTemperature ?meanTemp .
11 }
12
```

Run

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Filter query results

Compact viewHide row numbers

Showing results from 0 to 4 of 4. Query took 0.1s, moments ago.

	position	component
1	rdf_1	"Iron Core"
2	rdf_1	"Iron Core"
3	rdf_2	"Silicate Mantle"
4	rdf_2	"Silicate Mantle"

SPARQL Query & Update

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UnnamedNeptune and uranus

```
1 PREFIX solar: <http://example.org/solarsystem#>
2 PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
3 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
4
5 SELECT ?planetName ?feature
6 WHERE {
7   solar:Venus rdfs:label ?planetName ;
8               solar:surfaceFeatures ?features .
9   ?features ?position ?feature .
10  FILTER(STRSTARTS(STR(?position), STR(rdf:_)))
11 }
12 ORDER BY ?position
13
```

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Filter query results

Compact viewHide row numbers

Showing results from 0 to 4 of 4. Query took 0.1s, moments ago.

	position	component
1	rdf_1	"Iron Core"
2	rdf_1	"Iron Core"
3	rdf_2	"Silicate Mantle"
4	rdf_2	"Silicate Mantle"

SPARQL Query & Update

Editor onlyEditor and resultsResults only

UnnamedNeptune and uranus

```
1 PREFIX : <http://example.org/solarsystem#>
2 PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
3
4 SELECT ?feature
5 WHERE {
6   :Mars :surfaceFeatures ?features .
7   ?features ?position ?feature .
8   FILTER(STRSTARTS(STR(?position), STR(rdf:_)))
9 }
10
```

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Filter query resultsCompact viewHide row numbersShowing results from 0 to 4 of 4. Query took 0.1s, moments ago.

	position	component
1	rdf_1	"Iron Core"
2	rdf_1	"Iron Core"
3	rdf_2	"Silicate Mantle"
4	rdf_2	"Silicate Mantle"

SPARQL Query & Update

Editor onlyEditor and resultsResults only

UnnamedNeptune and uranus

```
1 PREFIX : <http://example.org/solarsystem#>
2 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
3
4 SELECT ?numberOfMoons
5 WHERE {
6   :Mars :numberOfMoons ?numberOfMoons .
7 }
8
```

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Filter query resultsCompact viewHide row numbersShowing results from 0 to 1 of 1. Query took 0.1s, moments ago.

	numberOfMoons
1	"2"^^xsd:integer

SPARQL Query & Update ⓘ

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Unnamed × Neptune and uranus × ⊕

1 PREFIX : <http://example.org/solarsystem#>

2 PREFIX rdfs: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>

3

4 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>

5 SELECT ?planetName

6 WHERE {

7 ?planet :colorPlanet ?colorContainer .

8 ?colorContainer ?position ?color .

9 ?planet rdfs:label ?planetName .

10 FILTER(STRSTARTS(STR(?color), "Red"))

11 }

12

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Filter query results

Compact view Hide row numbers

Showing results from 0 to 2 of 2. Query took 0.1s, moments ago.

	planetName
1	"Mars"
2	"Mars"

SPARQL Query & Update ⓘ

Editor onlyEditor and resultsResults only

Unnamed × Neptune and uranus × ⊕

1 PREFIX : <http://example.org/solarsystem#>

2

3 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>

4 SELECT ?planetName ?orbitalPeriod

5 WHERE {

6 VALUES ?planet { :Saturn :Earth }

7 ?planet rdfs:label ?planetName ;

8 :orbitalPeriod ?orbitalPeriod .

9 }

10 ORDER BY ?planetName

11

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Filter query results

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Showing results from 0 to 2 of 2. Query took 0.1s, moments ago.

	planetName
1	"Mars"
2	"Mars"

SPARQL Query & Update

Editor onlyEditor and resultsResults only

UnnamedNeptune and uranusSaturnSaturn 2Saturn 3

```
1 PREFIX : <http://example.org/solarsystem#>
2 PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
3
4 SELECT ?feature
5 WHERE {
6   :Saturn :surfaceFeatures ?features .
7   ?features ?position ?feature .
8   FILTER(STRSTARTS(STR(?position), STR(rdf:_)))
9 }
10
```

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Filter query resultsCompact viewHide row numbersShowing results from 0 to 4 of 4. Query took 0.1s, moments ago.

	feature
1	"Rings"
2	"Hexagonal Storm"
3	"Rings"
4	"Hexagonal Storm"

SPARQL Query & Update

Editor onlyEditor and resultsResults only

Unnamed

```
1 PREFIX : <http://example.org/solarsystem#>
2 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
3
4 SELECT ?moonName
5 WHERE {
6   ?moon a :satellite ;
7         :hasSatellite :Mars ;
8         rdfs:label ?moonName .
9 }
10
```

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Filter query resultsCompact viewHide row numbersShowing results from 0 to 2 of 2. Query took 0.1s, moments ago.

	moonName
1	"Phobos"
2	"Deimos"

SPARQL Query & Update

The SPARQL Query & Update view is a unified editor for queries and updates. Enter any SPARQL query or update and click Run to execute it. The view also allows you to save queries for future retrieval and execution in the SPARQL editor.

[Learn more in the GraphDB documentation](#)

SPARQL Query & Update

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Unnamed

1PREFIX : <http://example.org/solarsystem#>

2PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>

3

4SELECT ?moonName ?radius

5WHERE {

6  ?moon a :satellite ;

7      :hasSatellite :Mars ;

8      rdfs:label ?moonName ;

9      :radius ?radius .

10}

11

Run

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Filter query results

Compact viewHide row numbers

Showing results from 0 to 2 of 2. Query took 0.1s, moments ago.

	moonName	radius
1	"Phobos"	"11.1±0.15"
2	"Deimos"	"6.2±0.18"

SPARQL Query & Update

Editor onlyEditor and resultsResults only

Unnamed

1PREFIX : <http://example.org/solarsystem#>

2PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>

3

4SELECT ?moonName ?radius

5WHERE {

6  {

7    SELECT (MIN(?radiusValue) AS ?minRadius) (MAX(?radiusValue) AS ?maxRadius)

8    WHERE {

9      ?moon a :satellite ;

10      :hasSatellite :Jupiter ;

11      :radius ?radiusValue .

12    }

13  }

14  ?moon a :satellite ;

15      :hasSatellite :Jupiter ;

16      :radius ?radius .

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Showing results from 0 to 3 of 3. Query took 0.1s, moments ago.



SPARQL Query & Update

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Unnamed

```
1 PREFIX : <http://example.org/solarsystem#>
2 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
3 PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
4
5 SELECT ?moonName ?magnitude
6 WHERE {
7   ?moon a :satellite ;
8         :hasSatellite :Jupiter ;
9         :magnitude ?magnitude ;
10        rdfs:label ?moonName .
11   FILTER(xsd:decimal(?magnitude) > 10)
12 }
13
```

Run

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Filter query results

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Showing results from 0 to 3 of 3. Query took 0.1s, moments ago.

	moonName	magnitude
1	"Thebe"	"16.0"
2	"Adrastea"	"18.7"
3	"Metis"	"17.5"

SPARQL Query & Update

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Unnamed

```
6 {
7   SELECT (MAX(?radiusValue) AS ?maxRadius)
8   WHERE {
9     ?moon a :satellite ;
10           :hasSatellite :Saturn ;
11           :radius ?radiusValue .
12   }
13 }
14 ?moon a :satellite ;
15       :hasSatellite :Saturn ;
16       :radius ?radius ;
17       rdfs:label ?moonName .
18 FILTER(?radius = ?maxRadius)
19 }
20
```

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Filter query results

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Showing results from 0 to 1 of 1. Query took 0.1s, moments ago.

	moonName	radius
1	"Ymir"	"9"

## SPARQL Query & Update

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Unnamed × ⊕

```
7 {  
8   SELECT (MAX(xsd:decimal(?magnitude)) AS ?maxMagnitude)  
9   WHERE {  
10    ?moon a :satellite ;  
11          :hasSatellite :Saturn ;  
12          :magnitude ?magnitude .  
13   }  
14 }  
15 ?moon a :satellite ;  
16       :hasSatellite :Saturn ;  
17       :magnitude ?magnitude ;  
18       rdfs:label ?moonName .  
19 FILTER(xsd:decimal(?magnitude) = ?maxMagnitude)  
20 }  
21
```

Run keyboard shortcuts

Table Raw response Pivot Table Google Chart

Filter query results Compact view ☐ Hide row numbers ☐ Showing results from 0 to 1 of 1. Query took 0.1s, moments ago.

	moonName	magnitude
1	"Pan"	"19.4"

## SPARQL Query & Update

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Unnamed × ⊕

```
1 PREFIX : <http://example.org/solarsystem#>  
2 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>  
3 PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>  
4  
5 SELECT ?moonName ?density (ABS(xsd:decimal(?density) - 3.34) AS ?densityDifference)  
6 WHERE {  
7   ?moon a :satellite ;  
8         :density ?density ;  
9         rdfs:label ?moonName .  
10  FILTER(xsd:decimal(?density) > 0)  
11 }  
12 ORDER BY ?densityDifference  
13 LIMIT 1  
14
```

Run keyboard shortcuts

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Filter query results Compact view ☐ Hide row numbers ☐ Showing results from 0 to 1 of 1. Query took 0.1s, moments ago.

	moonName	density	densityDifference
1	"Thebe"	"3.0"	"0.34" <sup>xsd:decimal</sup>

# SPARQL Query & Update

Editor onlyEditor and resultsResults only

Unnamed X +

```
1 PREFIX : <http://example.org/solarsystem#>
2 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
3 PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
4
5 SELECT ?moonName ?albedo
6 WHERE {
7   ?moon a :satellite ;
8         :hasSatellite :Neptune ;
9         :albedo ?albedo ;
10        rdfs:label ?moonName .
11   FILTER(xsd:decimal(?albedo) > 0.5)
12 }
13
```

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	moonName	albedo
1	"Triton"	"0.719"

# SPARQL Query & Update

Editor onlyEditor and resultsResults only

Unnamed X +

```
7 {
8   SELECT (MIN(xsd:decimal(?albedo)) AS ?minAlbedo)
9   WHERE {
10     ?moon a :satellite ;
11           :hasSatellite :Neptune ;
12           :albedo ?albedo .
13   }
14 }
15 ?moon a :satellite ;
16       :hasSatellite :Neptune ;
17       :albedo ?albedo ;
18       rdfs:label ?moonName .
19 FILTER(xsd:decimal(?albedo) = ?minAlbedo)
20 }
21
```

Run

keyboard shortcuts

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	moonName	albedo
1	"Psamathe"	"0.04"
2	"Sao"	"0.04"
3	"Laomedeia"	"0.04"
4	"Neso"	"0.04"
5	"Halimede"	"0.04"

SPARQL Query & Update

Editor only

Unnamed

1 PREFIX : <http://example.org/solarsystem#>

2 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>

3 PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>

4

5 SELECT ?moonName ?radius

6 WHERE {

7 ?moon a :satellite ;

8 :hasSatellite :Uranus ;

9 :radius ?radius ;

10 rdfs:label ?moonName .

11 FILTER(xsd:decimal(?radius) < 100)

12 }

13

Run

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Filter query results

Compact view

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Showing results from 0 to 9 of 9. Query took 0.1s, moments ago.

	moonName	radius
1	"Caliban"	"36"
2	"Sycorax"	"75"
3	"Prospero"	"25"
4	"Setebos"	"24"
5	"Stephano"	"16"
6	"Trinculo"	"9"
7	"Francisco"	"11"
8	"Margaret"	"10"
9	"Ferdinand"	"10"

Saved query Neptune and uranus Satellite 3 was saved.

SPARQL Query & Update

Editor only

Editor and results

Results only

Unnamed

1 PREFIX : <http://example.org/solarsystem#>

2 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>

3

4 SELECT (COUNT(?moon) AS ?moonCount)

5 WHERE {

6 ?moon a :satellite ;

7 :hasSatellite :Uranus .

8 }

9

Run

keyboard shortcuts

Table

Raw response

Pivot Table

Google Chart

Download as

Filter query results

Compact view

Hide row numbers

Showing results from 0 to 1 of 1. Query took 0.1s, moments ago.

	moonCount
1	"27"^^xsd:integer