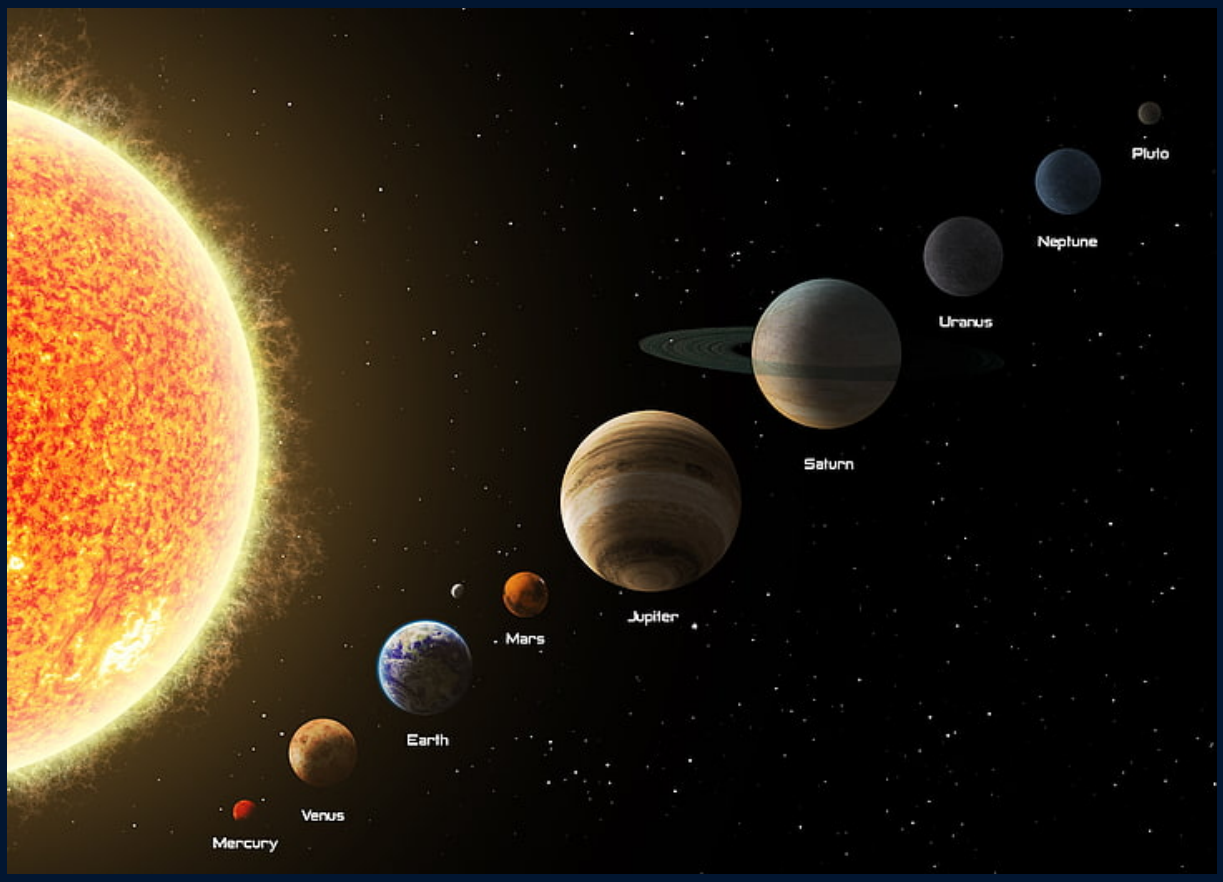
Solar System Explorer

Knowledge Representation and Reasoning



Instructor: Shahzeb Khan

Team Members:

Muhammad Shafeen

Tazmeen Afroz

Khizar Ali

Ahmad Mohsin

Aiman Arif

Zabiullah Zahir

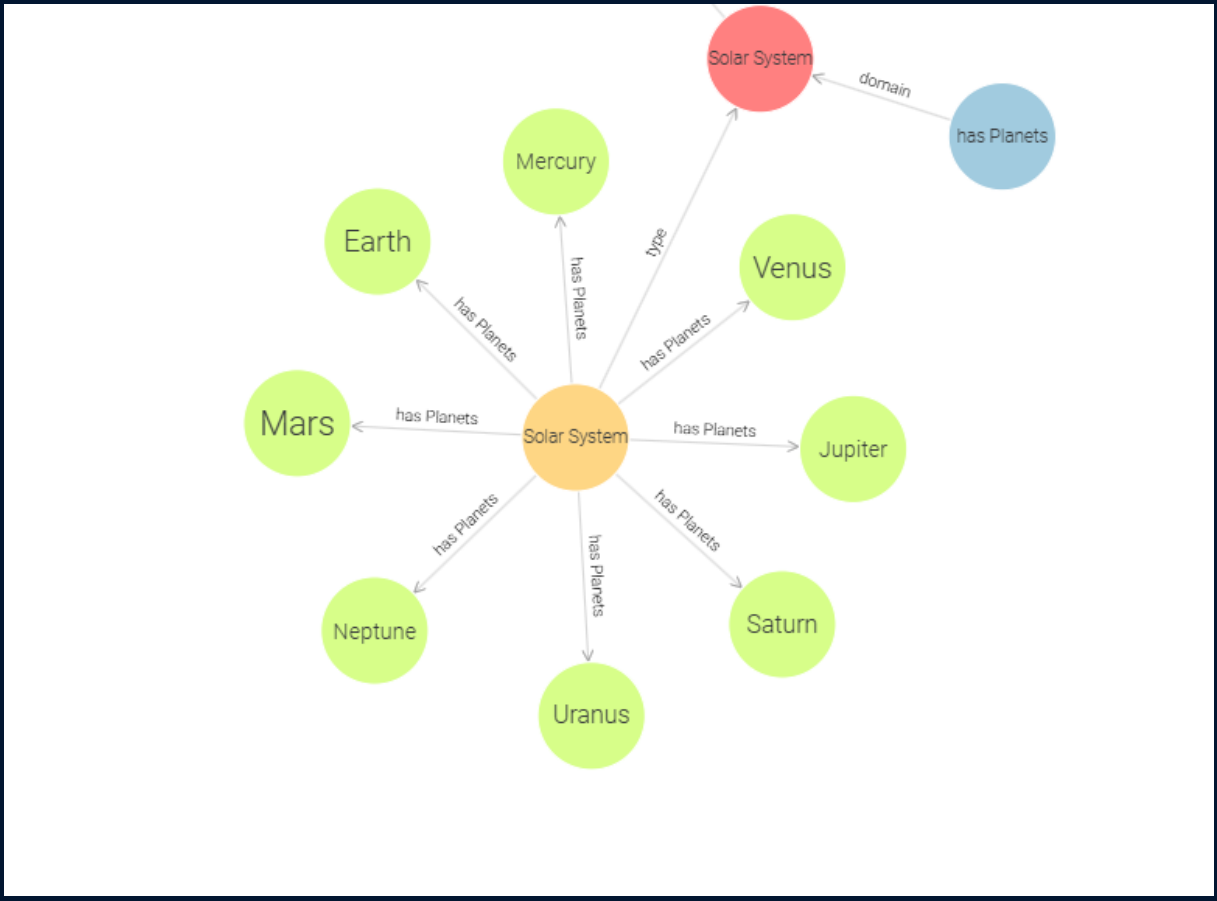
Amber Khurshid

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:

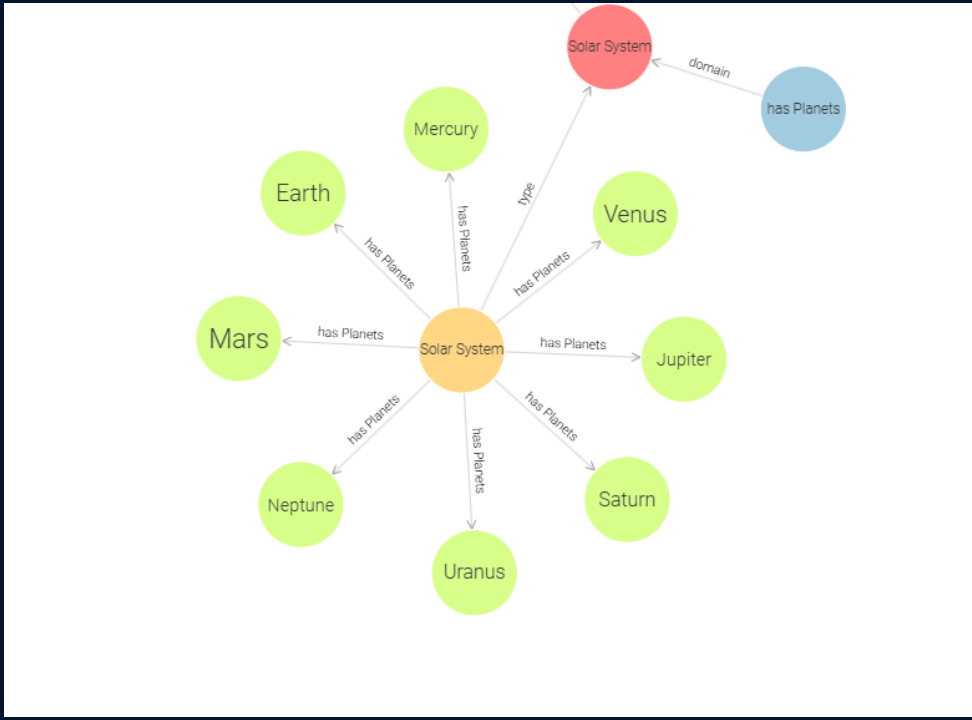


Figure 1: Illustrative Diagram of the Solar System Explorer Knowledge Graph

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	Question Creation, SPARQL Queries, Vocabularies
Ahmad Mohsin & Aiman Arif	RDF Creation (Mars and Satrun)
Zabiullah Zahir & Saad Karim	RDF Creation (Earth & Jupiter)
Amber Khurshid , Humna Khan & Sarmad Khan	RDF Creation (Mercury , Venus , Uranus & Neptune)

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.

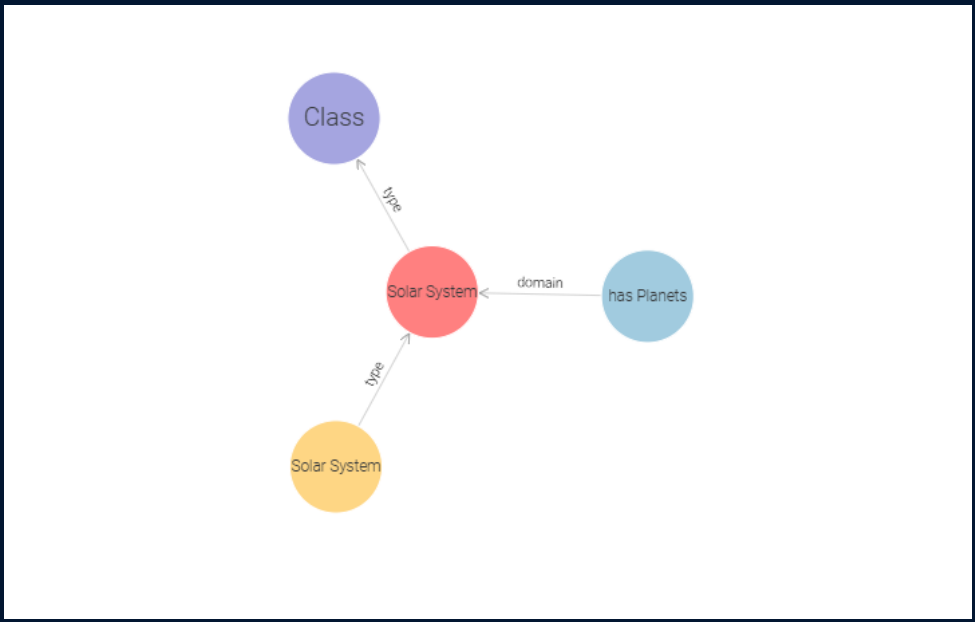
48. List all moons of Uranus with a radius less than 100 km.

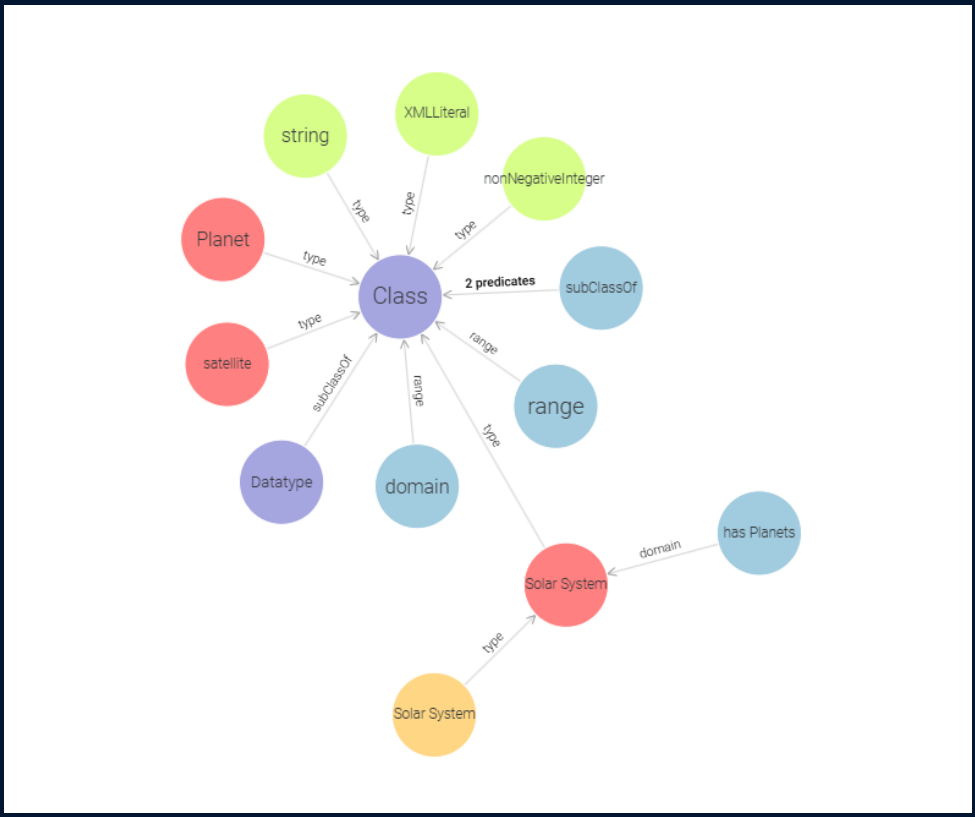
49. Count the number of moons of Uranus.

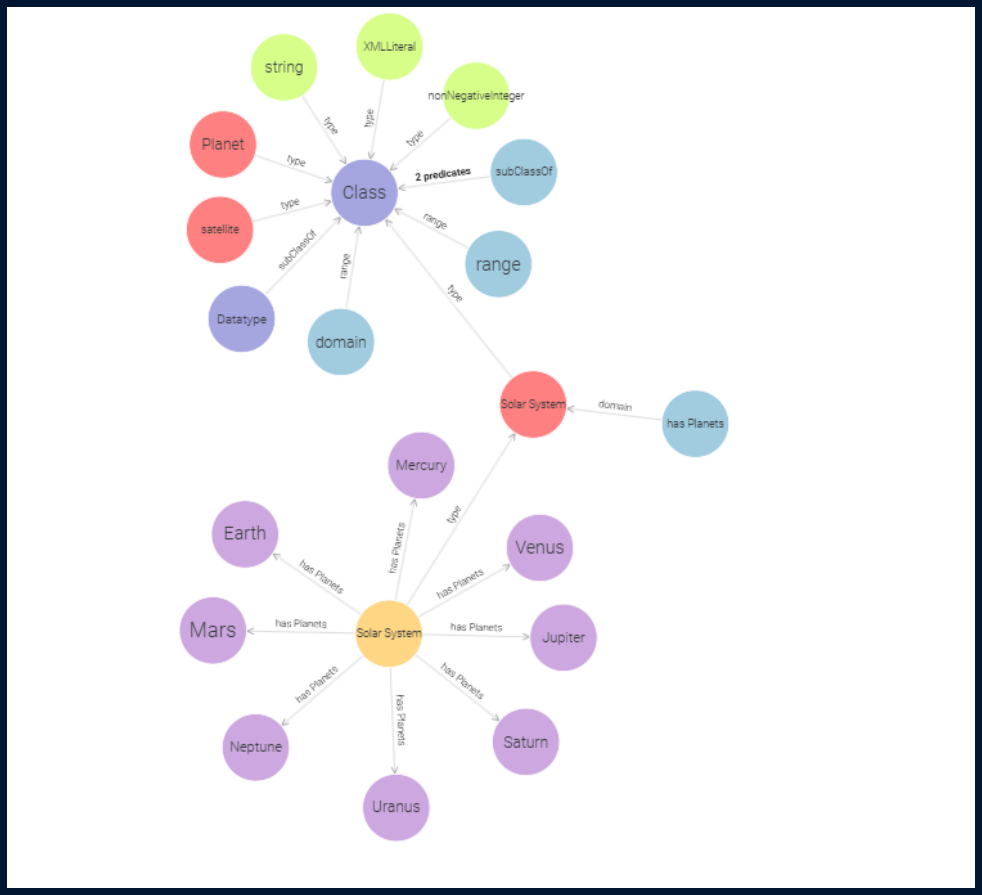
Vocabularies & Entities

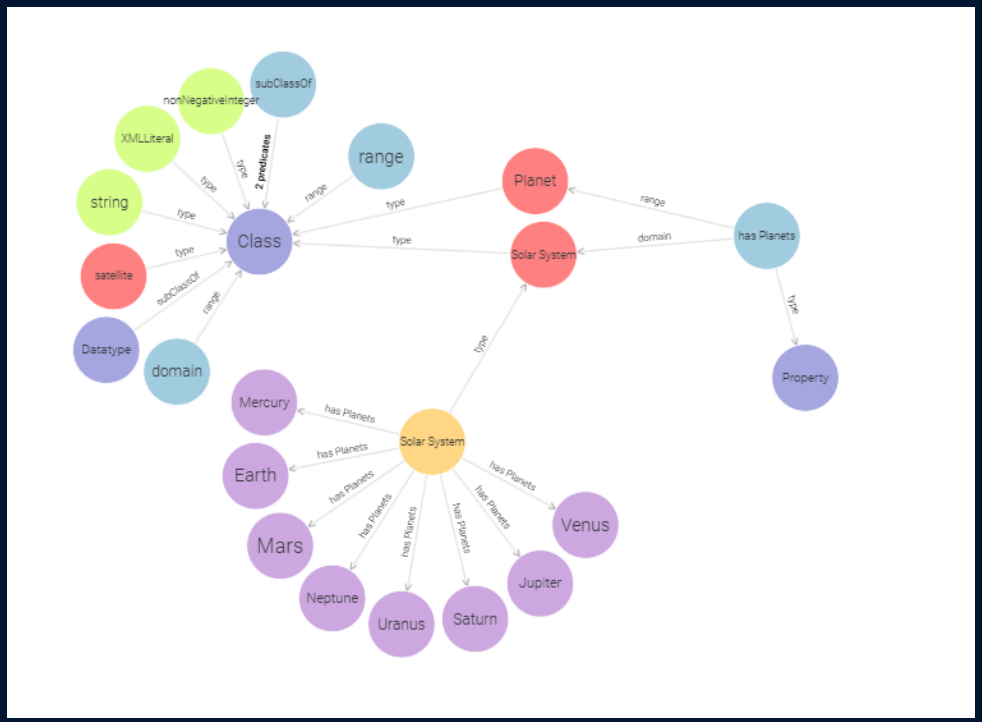
Category	Properties
General Planetary Properties	• :colorPlanet • :atmosphericComposition • :mass • :diameter • :density • :surfaceGravity • :escapeVelocity • :rotationPeriod • :lengthOfDay • :distanceFromSun • :meanTemperature • :numberOfMoons • :ringSystem • :globalMagneticField
Orbital Parameters	• :perihelion • :aphelion • :orbitalPeriod • :orbitalVelocity • :orbitalEccentricity • :obliquityToOrbit
Surface and Atmospheric Data	• :surfacePressure • :surfaceTemperature • :atmosphericPressure • :surfaceFeatures • :composition
Moons Information	• :hasMoons

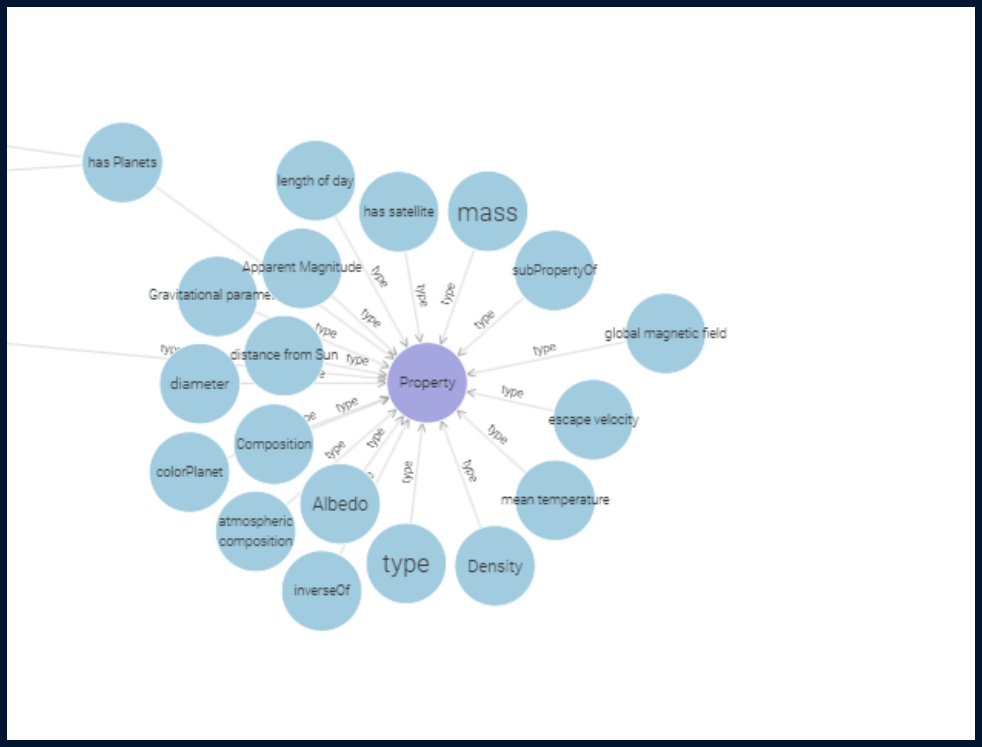
GraphDB Visualization

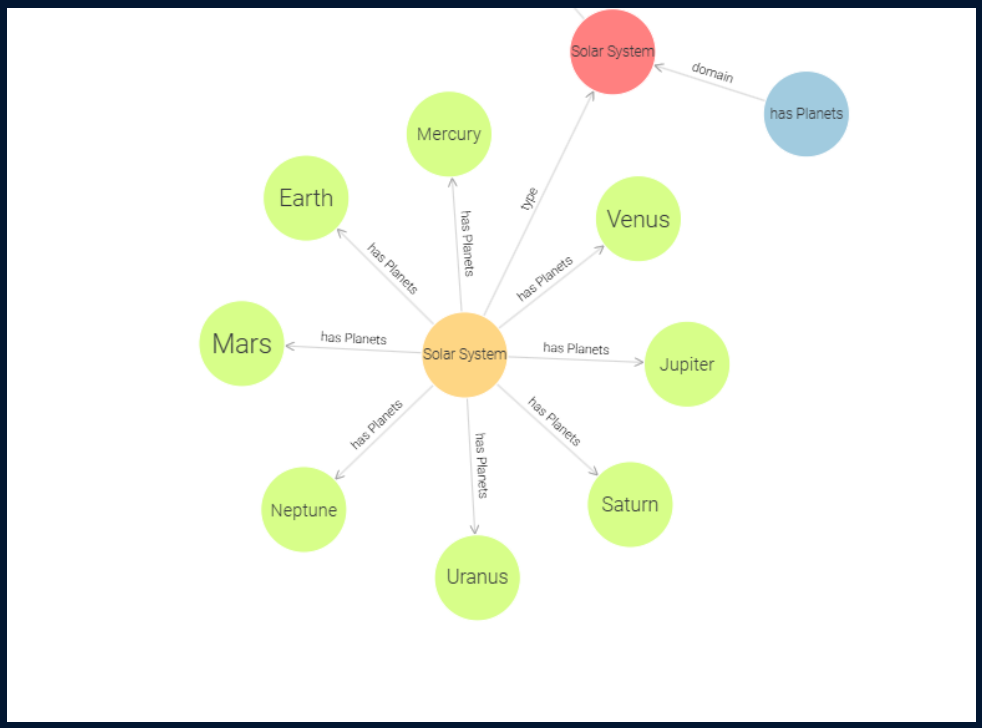


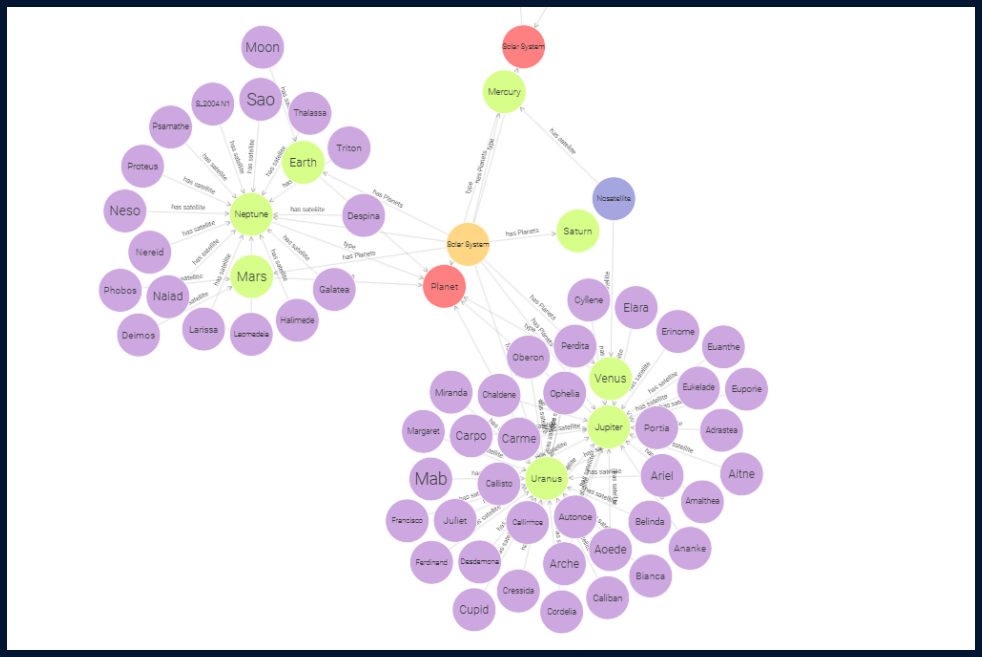


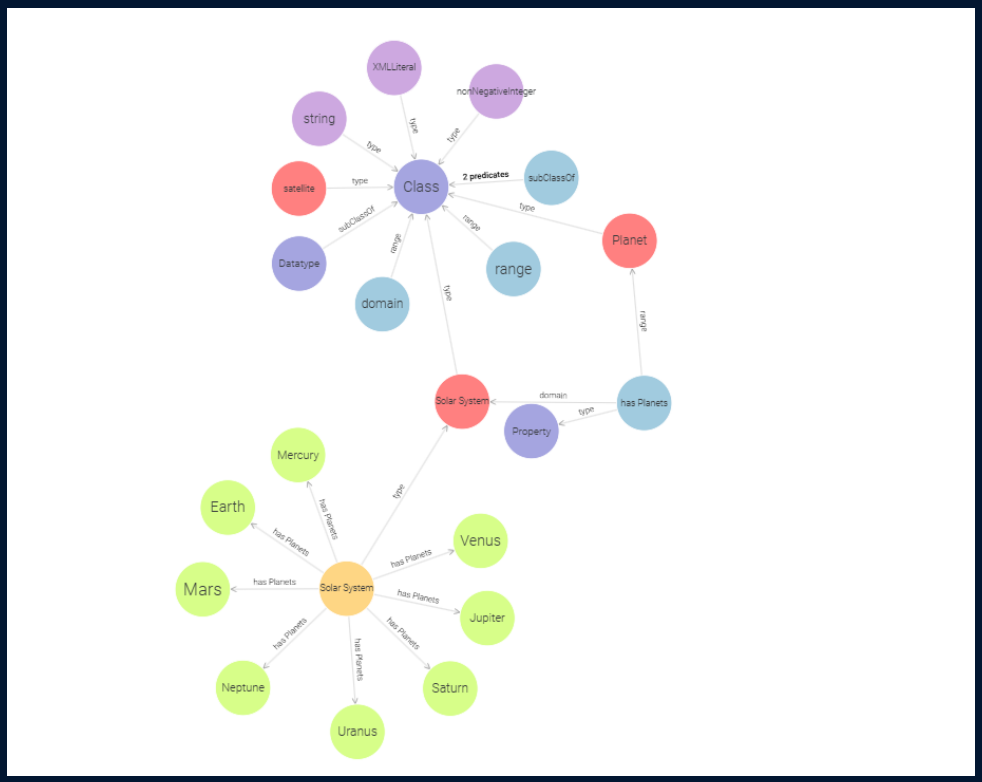

string
XMLLiteral
nonNegativeInteger
Planet
Class
subClassOf
satellite
range
Datatype
domain
Solar System
has Planets
Mercury
Earth
Venus
Mars
Jupiter
Neptune
Saturn
Uranus
type
2 predicates
subClassOf
range
domain
has Planets

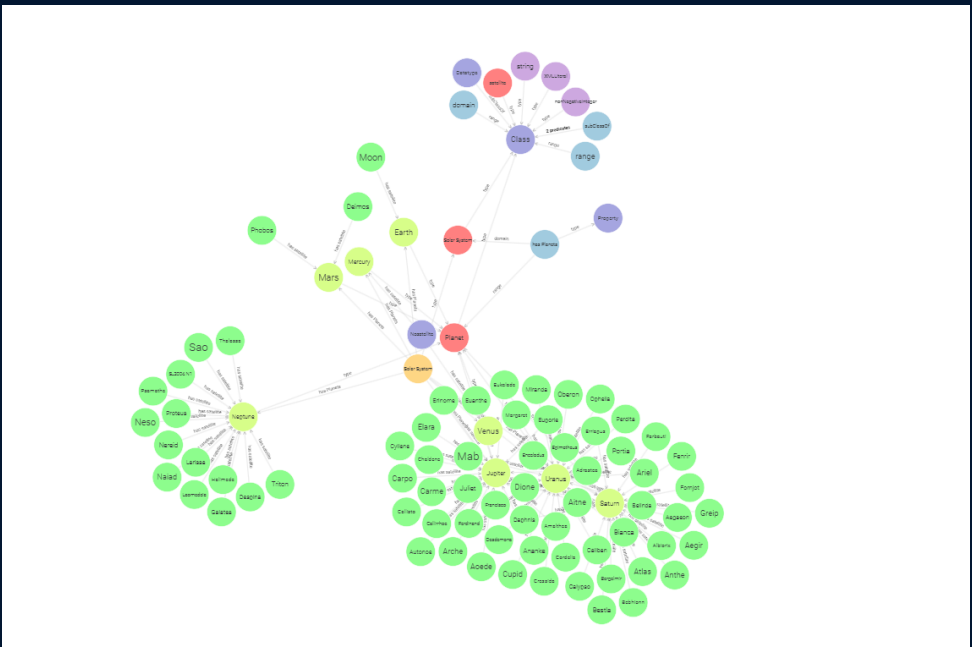

subClassOf
nonNegativeInteger
XMLLiteral
range
string
Class
Planet
Solar System
has Planets
satellite
Datatype
domain
Property
Mercury
Earth
Mars
Venus
Jupiter
Neptune
Uranus
Saturn
type
2 predicates
range
domain
has Planets

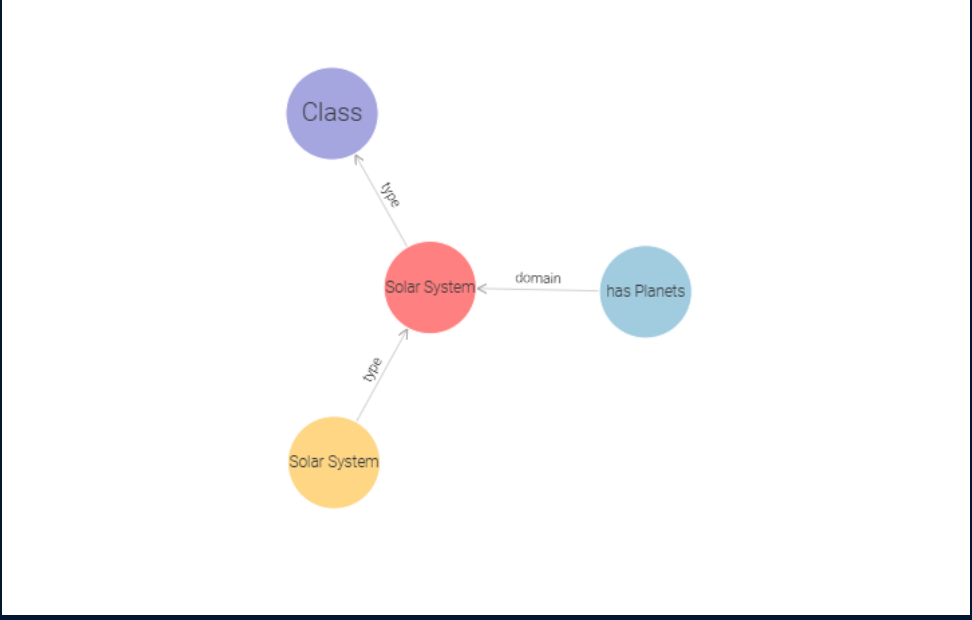

has Planets
length of day
has satellite
mass
Apparent Magnitude
subPropertyOf
Gravitational parame.
global magnetic field
distance from Sun
diameter
Property
escape velocity
Composition
colorPlanet
Albedo
mean temperature
atmospheric composition
type
Density
inverseOf
type


Solar System
domain
has Planets
Mercury
Earth
Venus
type
has Planets
has Planets
has Planets
Mars
has Planets
Solar System
has Planets
Jupiter
has Planets
has Planets
has Planets
Neptune
Saturn
Uranus


Moon
Sao
S_2004 N1
Thalassa
Psamathe
Triton
Earth
Proteus
Neso
Neptune
Despina
Nereid
Mars
Galatea
Phobos
Naiad
Halimede
Deimos
Larissa
Laomedeia
Solar System
Mercury
Nosatellite
Saturn
Planet
Cyllene
Elara
Erinome
Euanthe
Perdita
Oberon
Venus
Eukelade
Euporie
Miranda
Chaldene
Ophelia
Margaret
Carpo
Carme
Jupiter
Portia
Adrastea
Mab
Callisto
Uranus
Ariel
Aitne
Amalthea
Francisco
Juliet
Callirrhoe
Autonoe
Belinda
Aoede
Ananke
Ferdinand
Desdemona
Arche
Bianca
Cressida
Caliban
Cupid
Cordelia
has satellite
has Planets
type

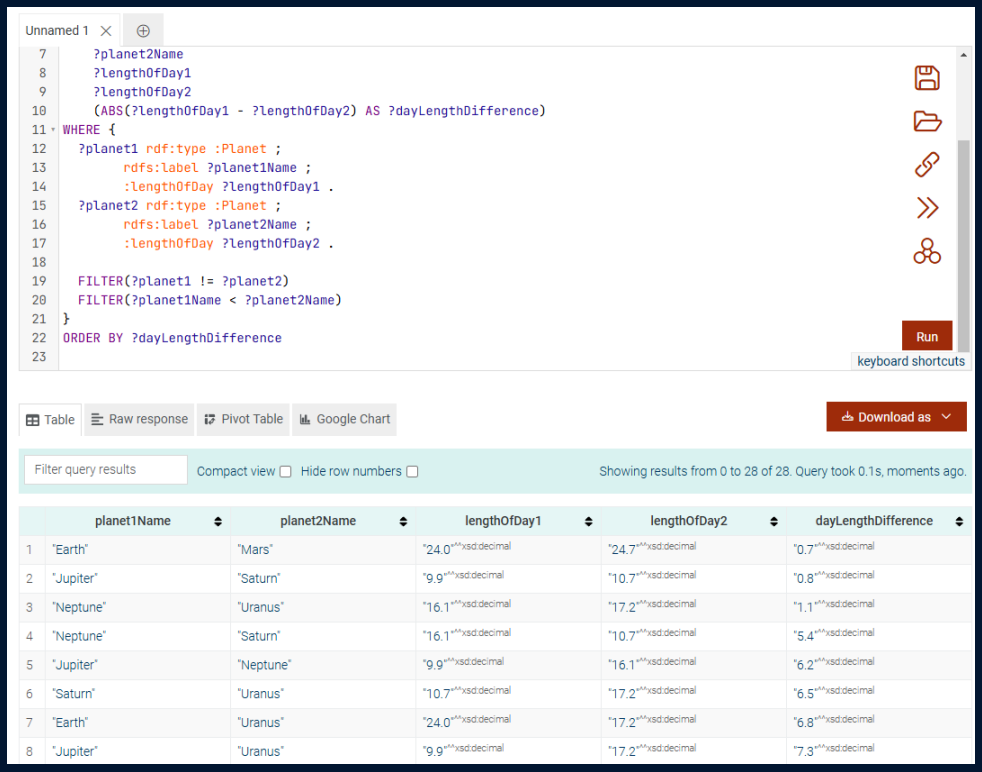

XMLLiteral
nonNegativeInteger
string
type
Class
2 predicates
subClassOf
satellite
Datatype
domain
range
Planet
has Planets
Solar System
Property
Mercury
Earth
Venus
Mars
Jupiter
Neptune
Saturn
Uranus


Class
range
Moon
Deimos
Phobos
Earth
Mars
Mercury
has Planets
Planet
Sao
Neso
Nereid
Naiad
Larissa
Triton
Despina
Galatea
Venus
Mab
Juliet
Carme
Carpo
Elara
Dylana
Jupiter
Uranus
Dione
Arthe
Saturn
Ariel
Belinda
Aegaeon
Greip
Bianca
Aegir
Atlas
Anthe
Cupid
Arche
Aoede
Beetle
Proteus
Neptune
Oberon
Ophelia
Portia
Pandr
Rompot
Umbriel
Miranda


Class
type
Solar System
domain
has Planets
type
Solar System

SPARQL Answers to Competency Questions

General Questions :



Unnamed 1

```
    ?planet2Name
    ?lengthOfDay1
    ?lengthOfDay2
    (ABS(?lengthOfDay1 - ?lengthOfDay2) AS ?dayLengthDifference)
WHERE {
  ?planet1 rdf:type :Planet ;
        rdfs:label ?planet1Name ;
        :lengthOfDay ?lengthOfDay1 .
  ?planet2 rdf:type :Planet ;
        rdfs:label ?planet2Name ;
        :lengthOfDay ?lengthOfDay2 .

  FILTER(?planet1 != ?planet2)
  FILTER(?planet1Name < ?planet2Name)
}
ORDER BY ?dayLengthDifference
```

Run

keyboard shortcuts

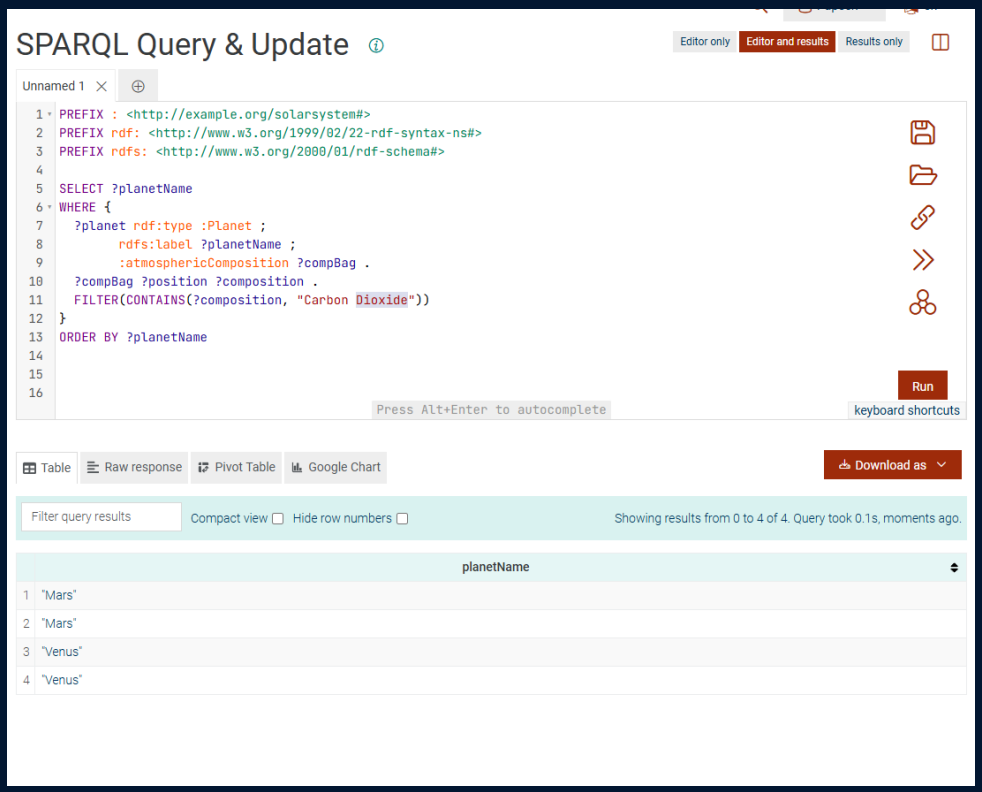
Table | Raw response | Pivot Table | Google Chart

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

```
PREFIX : <http://example.org/solarsystem#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>

SELECT ?planetName
WHERE {
  ?planet rdf:type :Planet ;
        rdfs:label ?planetName ;
        :atmosphericComposition ?compBag .
  ?compBag ?position ?composition .
  FILTER(CONTAINS(?composition, "Carbon Dioxide"))
}
ORDER BY ?planetName
```

Run

Press Alt+Enter to autocomplete

keyboard shortcuts

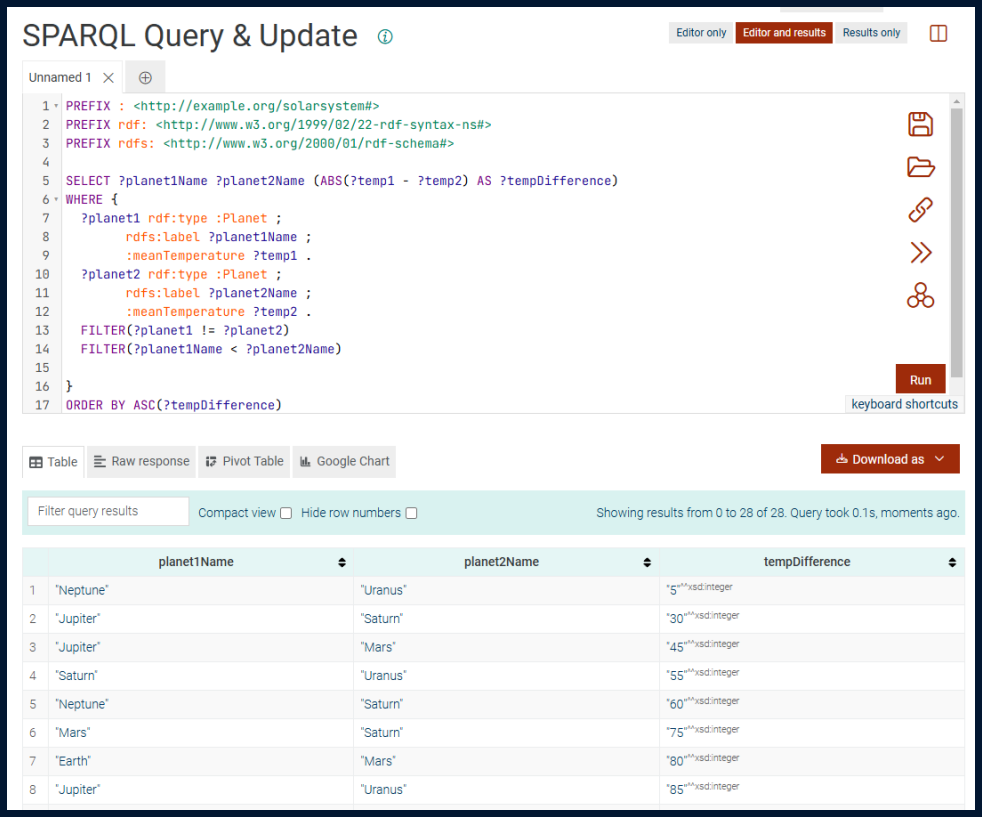
Table | Raw response | Pivot Table | Google Chart

Download as

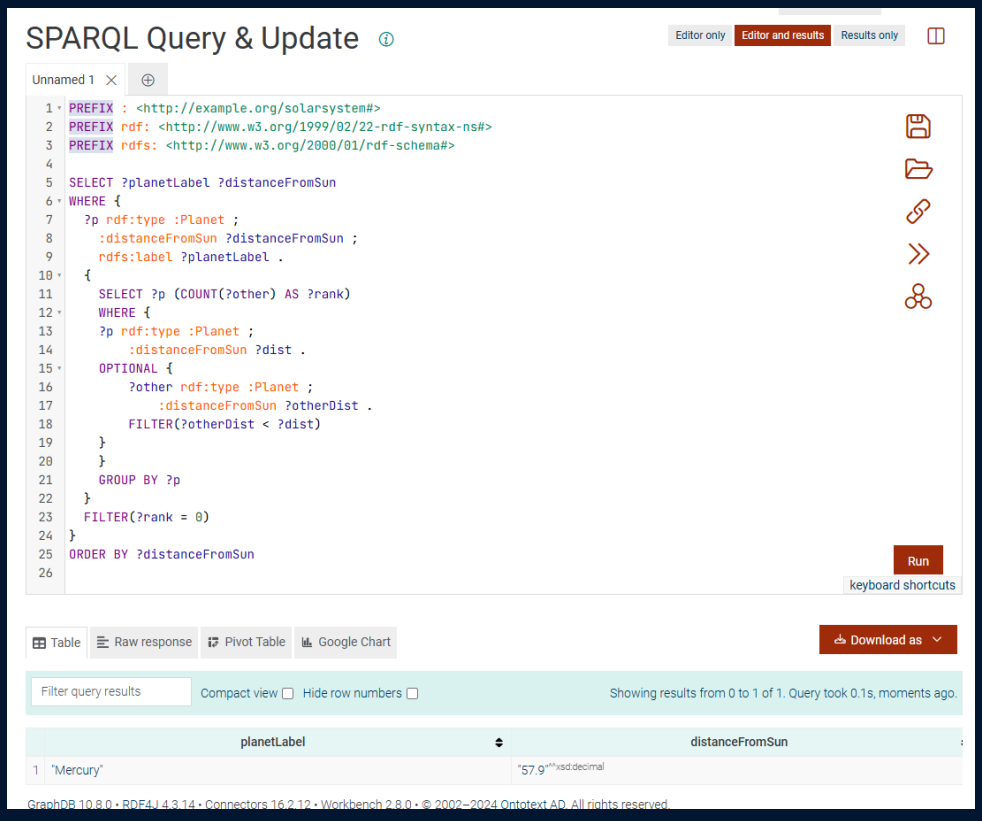
Filter query results | Compact view | Hide row numbers

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

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

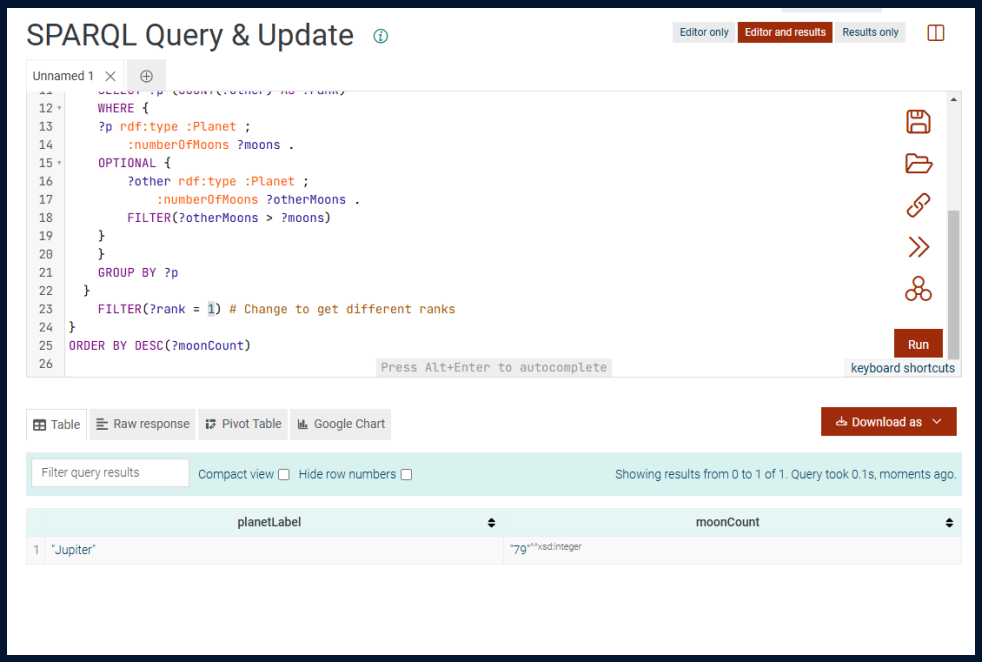


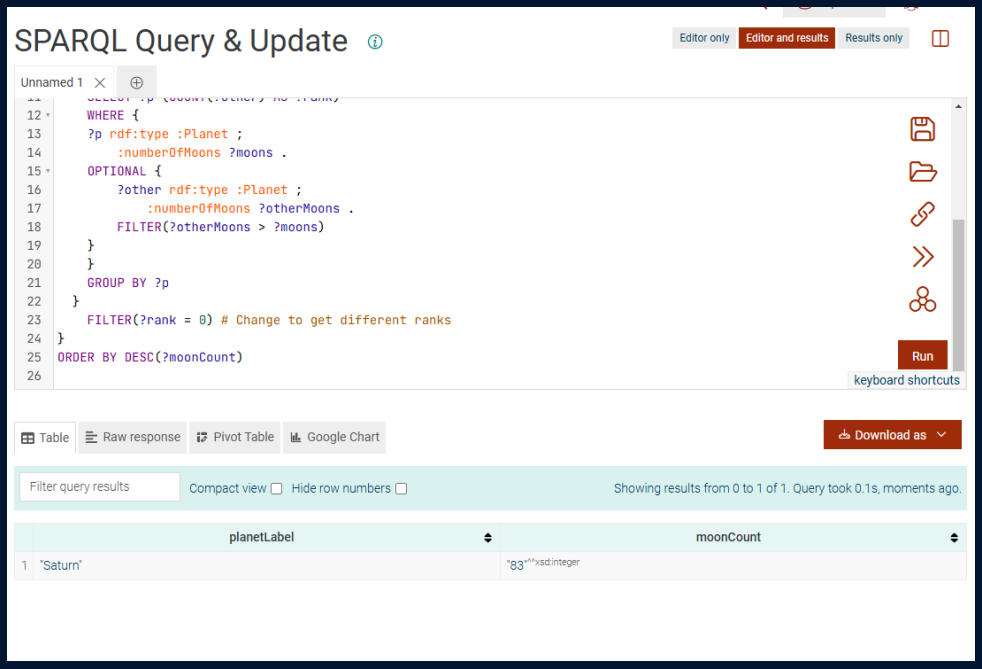
	planet1Name	planet2Name	tempDifference
1	"Neptune"	"Uranus"	"5"^^xsd:integer
2	"Jupiter"	"Saturn"	"30"^^xsd:integer
3	"Jupiter"	"Mars"	"45"^^xsd:integer
4	"Saturn"	"Uranus"	"55"^^xsd:integer
5	"Neptune"	"Saturn"	"60"^^xsd:integer
6	"Mars"	"Saturn"	"75"^^xsd:integer
7	"Earth"	"Mars"	"80"^^xsd:integer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

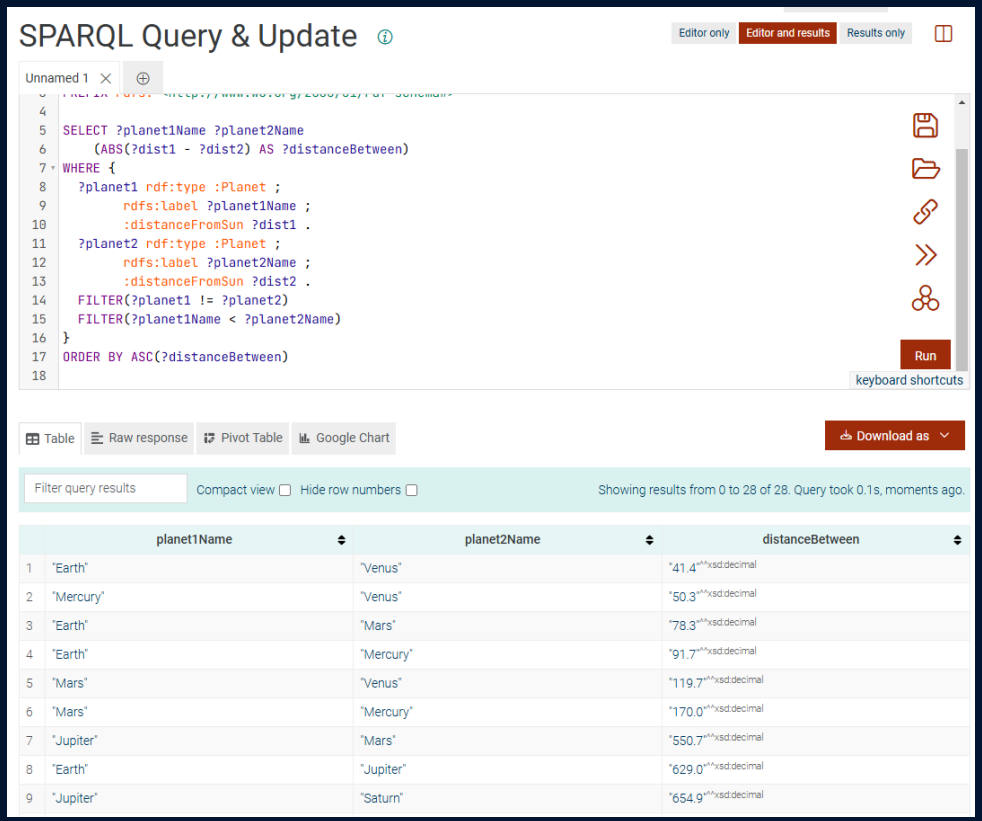


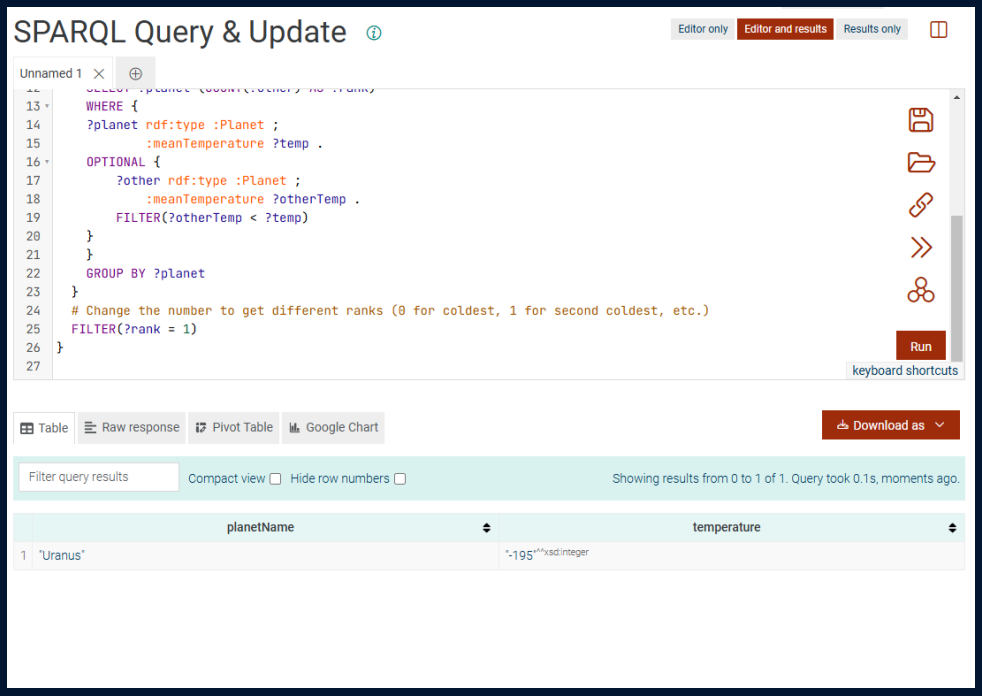
	planetLabel	distanceFromSun
1	"Mercury"	"57.9"^^xsd:decimal

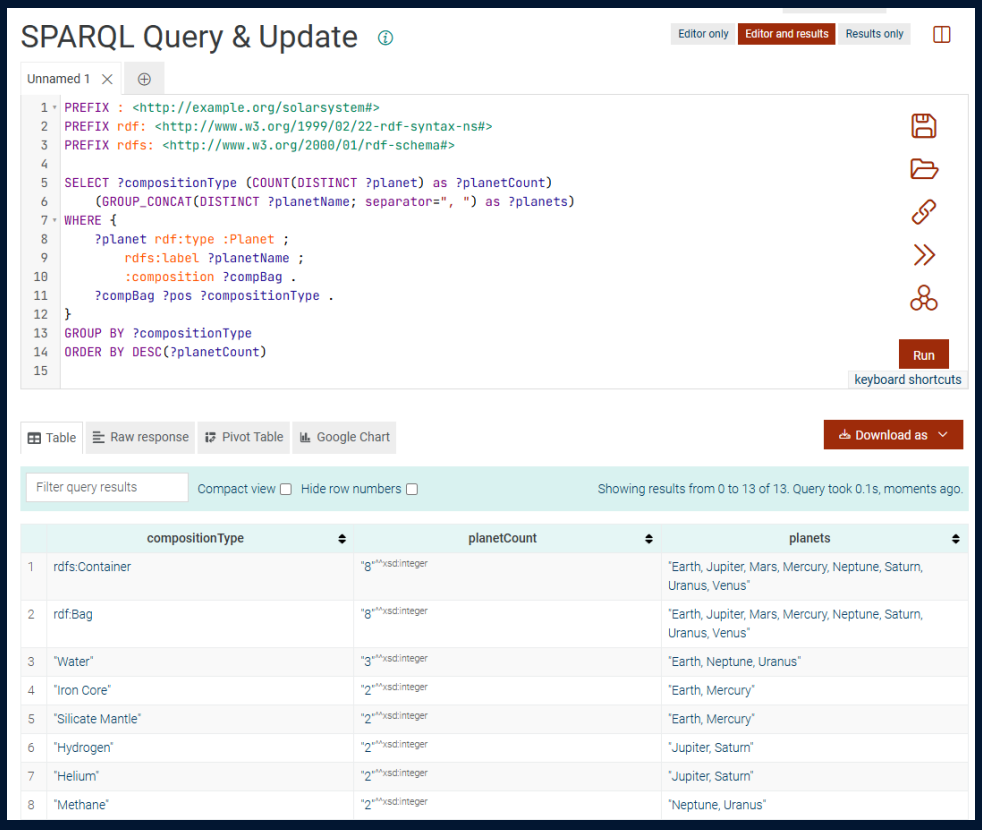

Unnamed 1
WHERE {
?p rdf:type :Planet ;
:distanceFromSun ?dist .
OPTIONAL {
?other rdf:type :Planet ;
:distanceFromSun ?otherDist .
FILTER(?otherDist < ?dist)
}
}
GROUP BY ?p
}
FILTER(?rank = 0)
}
ORDER BY ?distanceFromSun
Run
keyboard shortcuts
Table
Raw response
Pivot Table
Google Chart
Download as
Filter query results
Compact view
Hide row numbers
Showing results from 0 to 1 of 1. Query took 0.1s, moments ago.
planetLabel
distanceFromSun
1
"Mercury"
"57.9"^^xsd:decimal

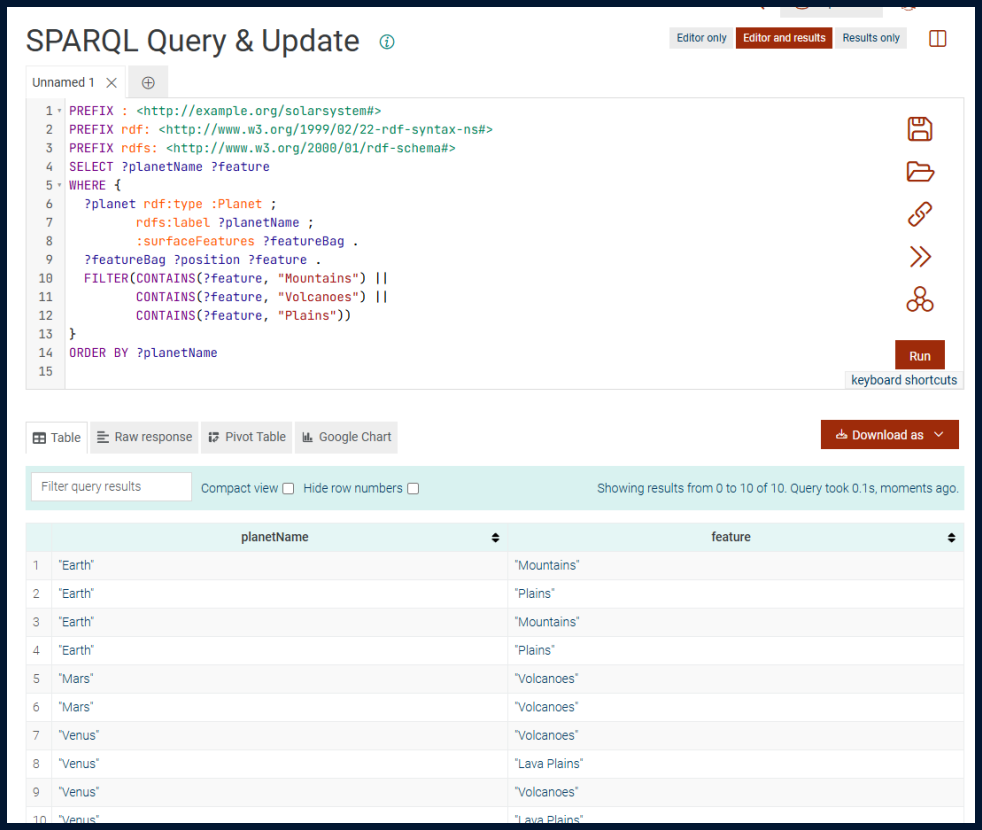

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed 1
WHERE {
?p rdf:type :Planet ;
:numberOfMoons ?moons .
OPTIONAL {
?other rdf:type :Planet ;
:numberOfMoons ?otherMoons .
FILTER(?otherMoons > ?moons)
}
}
GROUP BY ?p
}
FILTER(?rank = 1) # Change to get different ranks
}
ORDER BY DESC(?moonCount)
Press Alt+Enter to autocomplete
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.
planetLabel
moonCount
1
"Jupiter"
"79"^^xsd:integer

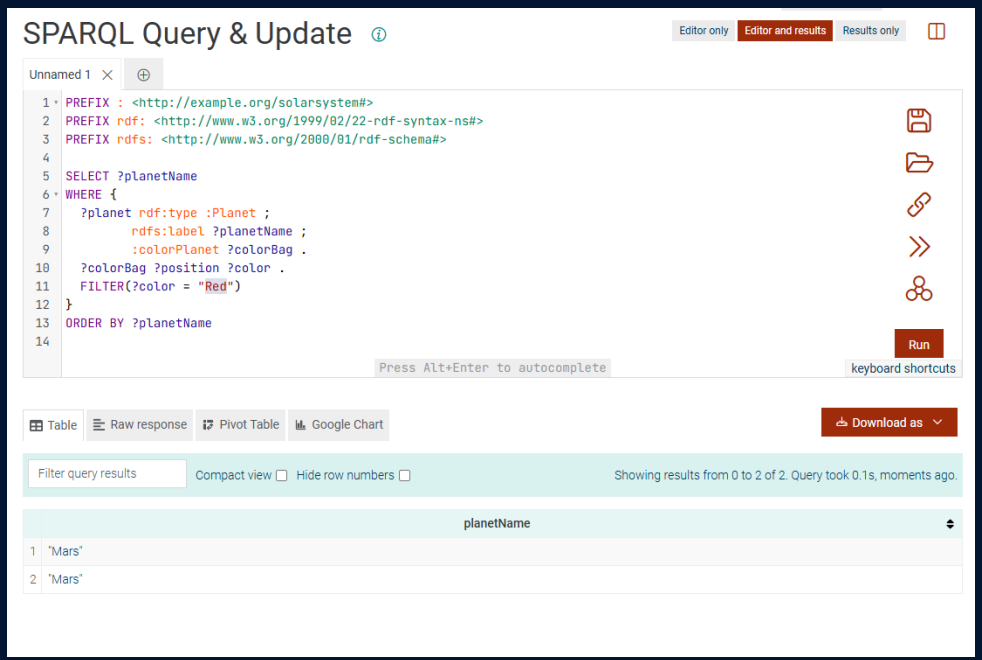

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed 1
WHERE {
?p rdf:type :Planet ;
:numberOfMoons ?moons .
OPTIONAL {
?other rdf:type :Planet ;
:numberOfMoons ?otherMoons .
FILTER(?otherMoons > ?moons)
}
}
GROUP BY ?p
}
FILTER(?rank = 0) # Change to get different ranks
}
ORDER BY DESC(?moonCount)
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.
planetLabel
moonCount
1
"Saturn"
"83"^^xsd:integer


SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed 1
SELECT ?planet1Name ?planet2Name
(ABS(?dist1 - ?dist2) AS ?distanceBetween)
WHERE {
?planet1 rdf:type :Planet ;
rdfs:label ?planet1Name ;
:distanceFromSun ?dist1 .
?planet2 rdf:type :Planet ;
rdfs:label ?planet2Name ;
:distanceFromSun ?dist2 .
FILTER(?planet1 != ?planet2)
FILTER(?planet1Name < ?planet2Name)
}
ORDER BY ASC(?distanceBetween)
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
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 only
Editor and results
Results only
Unnamed 1
WHERE {
?planet rdf:type :Planet ;
:meanTemperature ?temp .
OPTIONAL {
?other rdf:type :Planet ;
:meanTemperature ?otherTemp .
FILTER(?otherTemp < ?temp)
}
}
GROUP BY ?planet
}
# Change the number to get different ranks (0 for coldest, 1 for second coldest, etc.)
FILTER(?rank = 1)
}
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.
planetName
temperature
1
"Uranus"
"-195"^^xsd:integer


SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed 1
PREFIX : <http://example.org/solarsystem#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
SELECT ?compositionType (COUNT(DISTINCT ?planet) as ?planetCount)
(GROUP_CONCAT(DISTINCT ?planetName; separator=", ") as ?planets)
WHERE {
?planet rdf:type :Planet ;
rdfs:label ?planetName ;
:composition ?compBag .
?compBag ?pos ?compositionType .
}
GROUP BY ?compositionType
ORDER BY DESC(?planetCount)
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 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
Editor only
Editor and results
Results only
Unnamed 1
PREFIX : <http://example.org/solarsystem#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
SELECT ?planetName ?feature
WHERE {
?planet rdf:type :Planet ;
rdfs:label ?planetName ;
:surfaceFeatures ?featureBag .
?featureBag ?position ?feature .
FILTER(CONTAINS(?feature, "Mountains") ||
CONTAINS(?feature, "Volcanoes") ||
CONTAINS(?feature, "Plains"))
}
ORDER BY ?planetName
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 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 only
Editor and results
Results only
Unnamed 1
PREFIX : <http://example.org/solarsystem#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
SELECT ?planetName
WHERE {
?planet rdf:type :Planet ;
rdfs:label ?planetName ;
:colorPlanet ?colorBag .
?colorBag ?position ?color .
FILTER(?color = "Red")
}
ORDER BY ?planetName
Press Alt+Enter to autocomplete
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 2 of 2. Query took 0.1s, moments ago.
planetName
1 "Mars"
2 "Mars"

SPARQL Query & Update

Editor only | Editor and results | Results only

Unnamed | Tazmeen General

```
PREFIX : <http://example.org/solarsystem#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
SELECT ?planetLabel ?diameter
WHERE {
  ?p rdf:type :Planet ;
     :diameter ?diameter ;
     rdfs:label ?planetLabel .
  {
    SELECT ?p (COUNT(?other) AS ?rank)
    WHERE {
      ?p rdf:type :Planet ;
         :diameter ?diam .
      OPTIONAL {
        ?other rdf:type :Planet ;
```

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.

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

Planet Questions :

SPARQL Query & Update

Editor only | Editor and results | Results only

Unnamed

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

PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
SELECT ?planetName ?diameter
WHERE {
  ?planet rdf:type :Planet ;
          rdfs:label ?planetName ;
          :diameter ?diameter .
}
ORDER BY DESC(?diameter)
LIMIT 1
```

Run

keyboard shortcuts

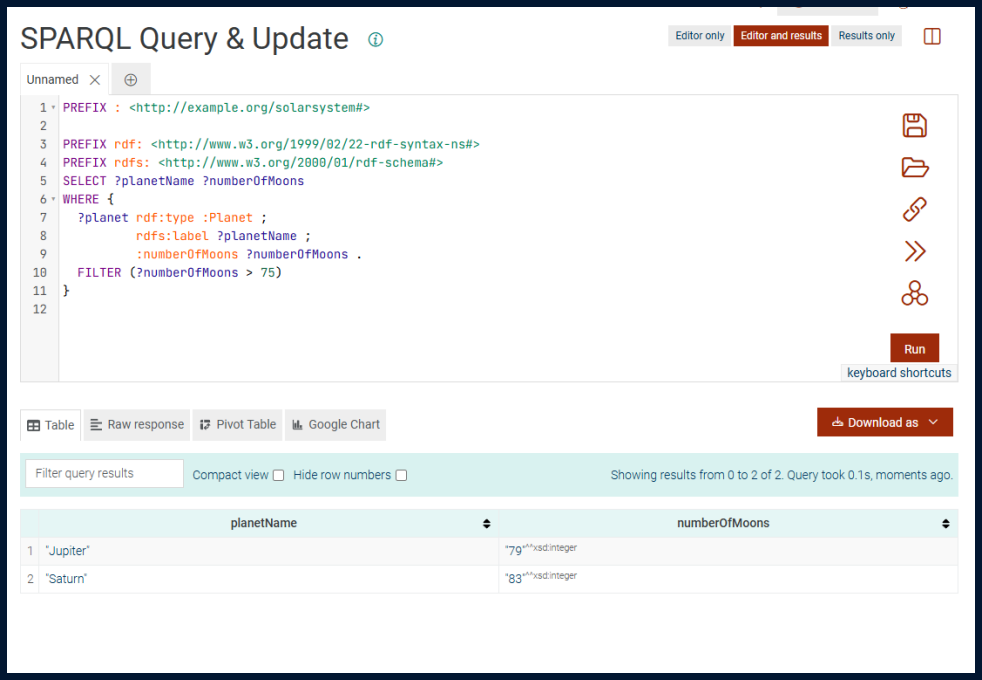
Table | Raw response | Pivot Table | Google Chart

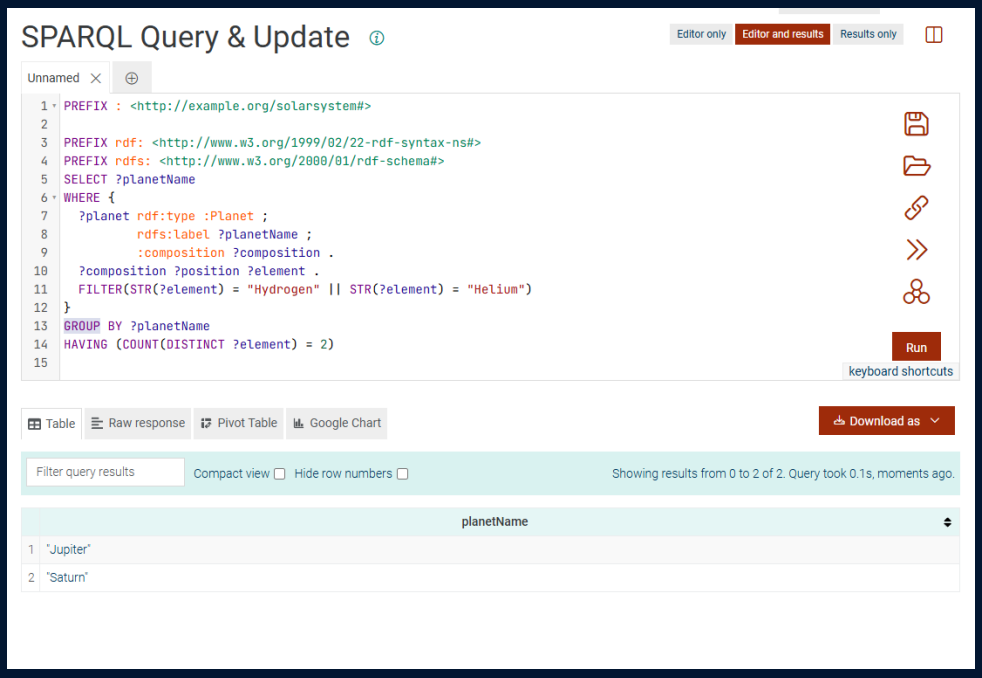
Download as

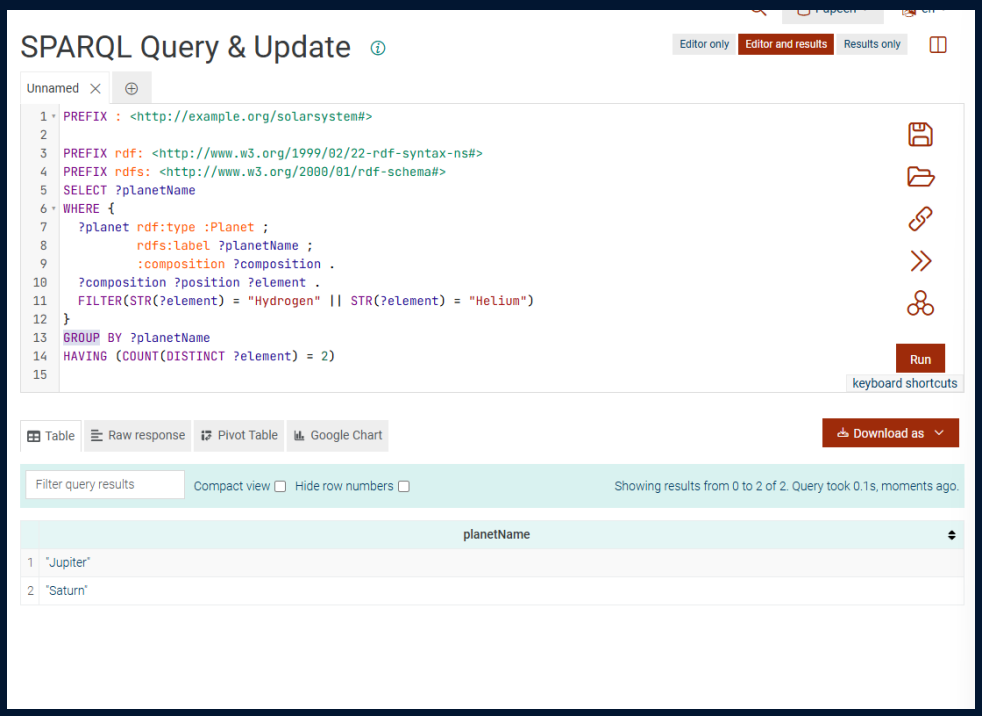
Filter query results | Compact view | Hide row numbers

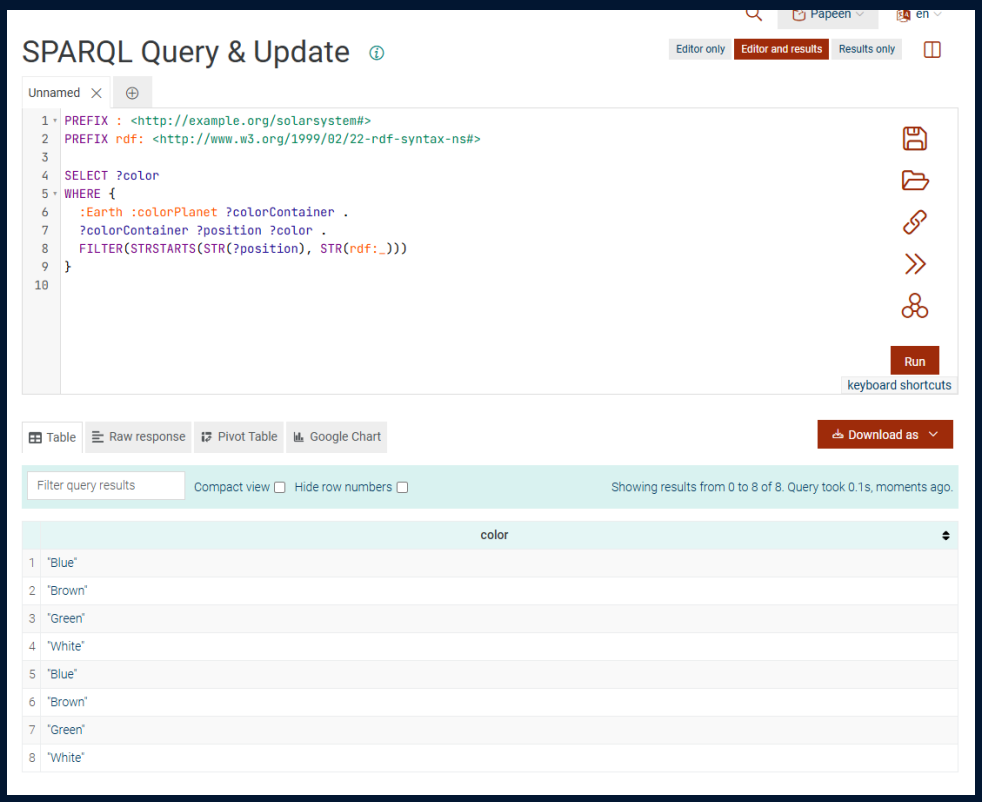
Showing results from 0 to 1 of 1. Query took 0.5s, moments ago.

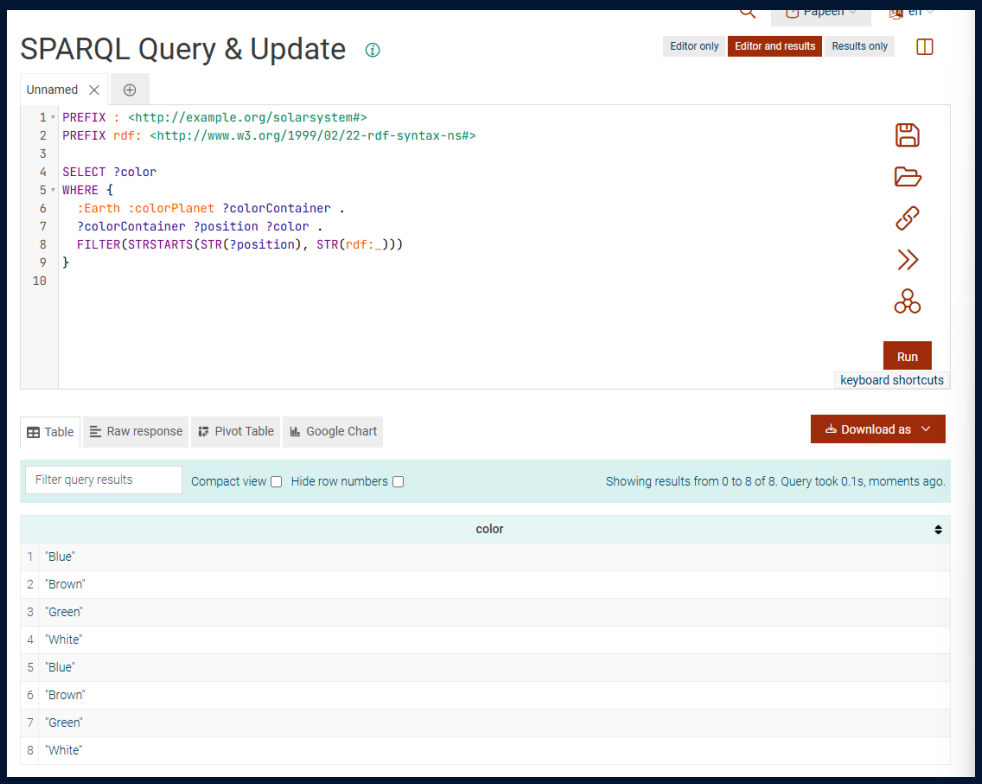
	planetName	diameter
1	"Jupiter"	"139820"^^xsd:integer

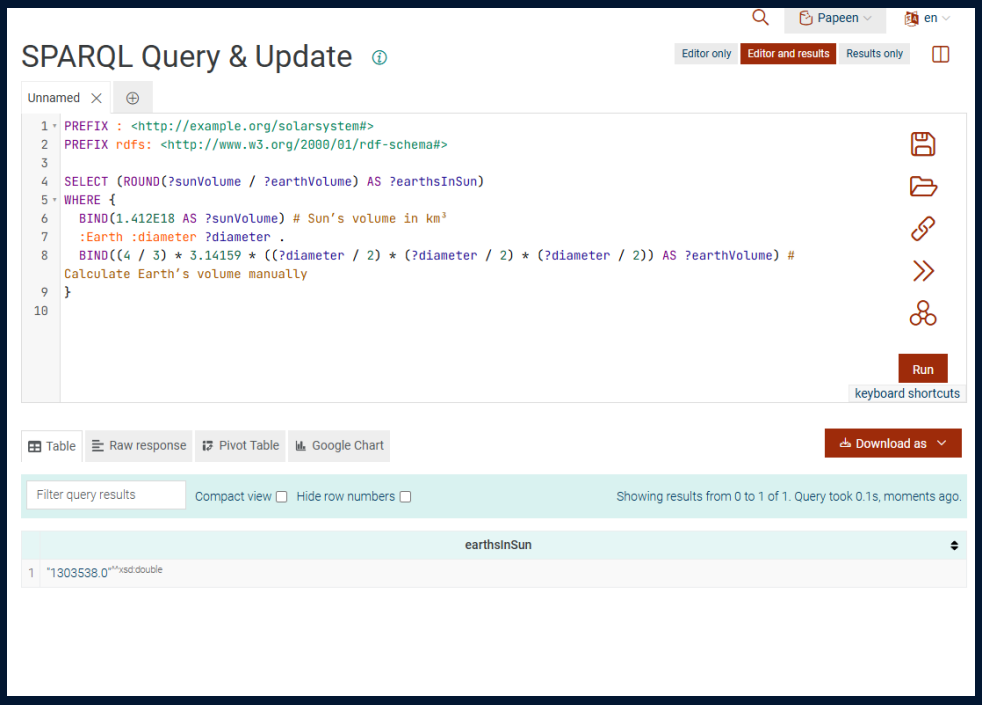

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
PREFIX : <http://example.org/solarsystem#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
SELECT ?planetName ?numberOfMoons
WHERE {
?planet rdf:type :Planet ;
rdfs:label ?planetName ;
:numberOfMoons ?numberOfMoons .
FILTER (?numberOfMoons > 75)
}
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 2 of 2. Query took 0.1s, moments ago.
planetName
numberOfMoons
"Jupiter"
"79"^^xsd:integer
"Saturn"
"83"^^xsd:integer

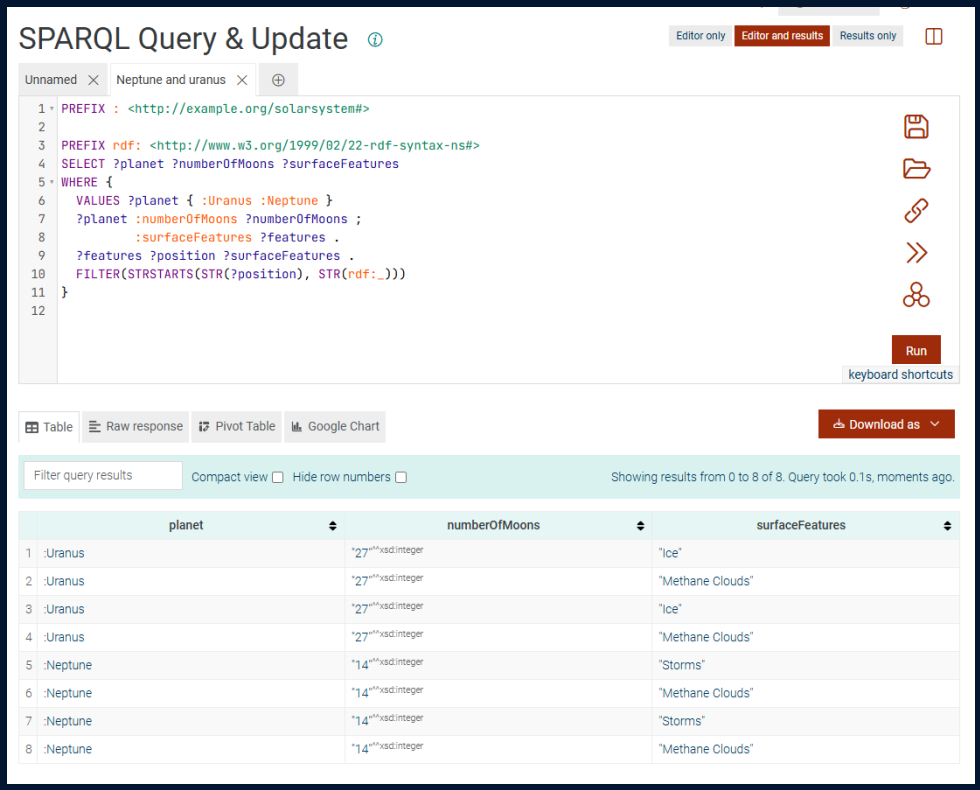

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
PREFIX : <http://example.org/solarsystem#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
SELECT ?planetName
WHERE {
?planet rdf:type :Planet ;
rdfs:label ?planetName ;
:composition ?composition .
?composition ?position ?element .
FILTER(STR(?element) = "Hydrogen" || STR(?element) = "Helium")
}
GROUP BY ?planetName
HAVING (COUNT(DISTINCT ?element) = 2)
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 2 of 2. Query took 0.1s, moments ago.
planetName
"Jupiter"
"Saturn"

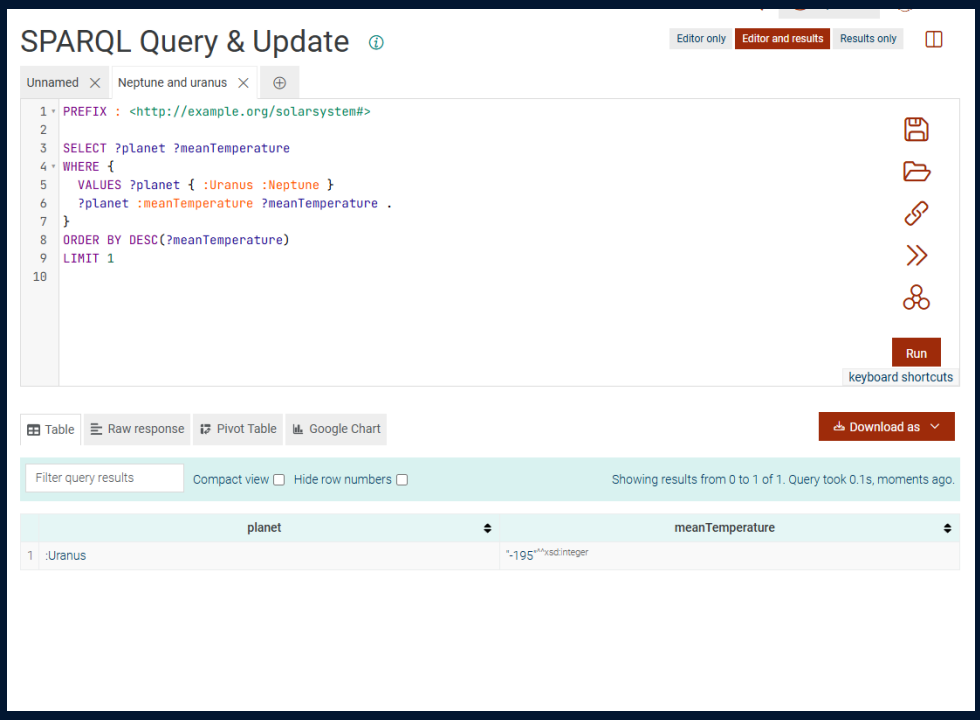

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
PREFIX : <http://example.org/solarsystem#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
SELECT ?planetName
WHERE {
?planet rdf:type :Planet ;
rdfs:label ?planetName ;
:composition ?composition .
?composition ?position ?element .
FILTER(STR(?element) = "Hydrogen" || STR(?element) = "Helium")
}
GROUP BY ?planetName
HAVING (COUNT(DISTINCT ?element) = 2)
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 2 of 2. Query took 0.1s, moments ago.
planetName
1 "Jupiter"
2 "Saturn"

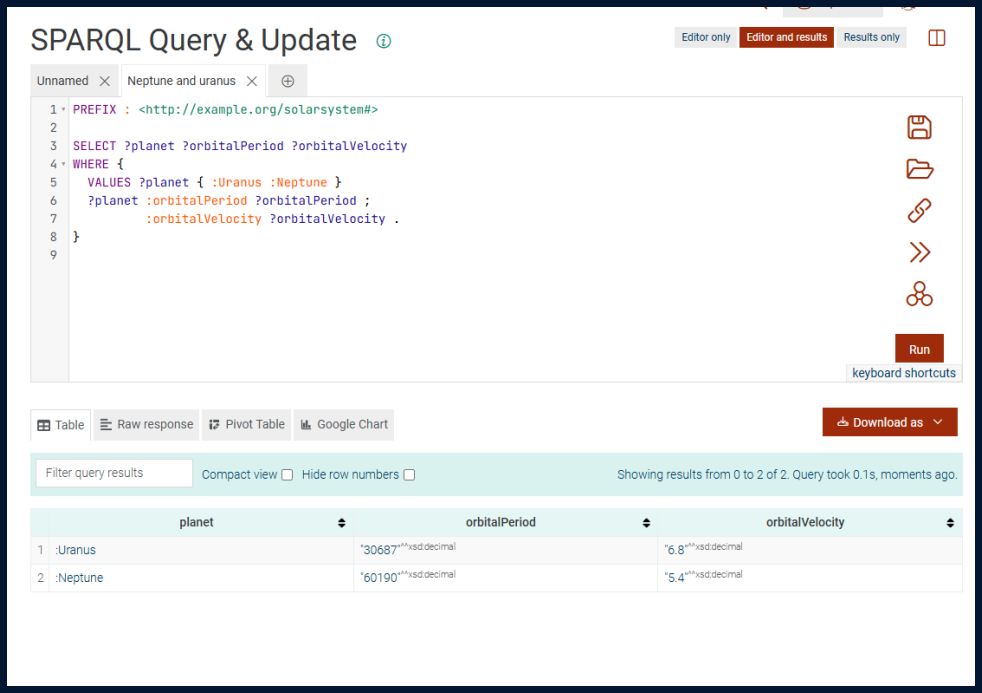

Papeen
en
SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
PREFIX : <http://example.org/solarsystem#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
SELECT ?color
WHERE {
:Earth :colorPlanet ?colorContainer .
?colorContainer ?position ?color .
FILTER(STRSTARTS(STR(?position), STR(rdf:_)))
}
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 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"

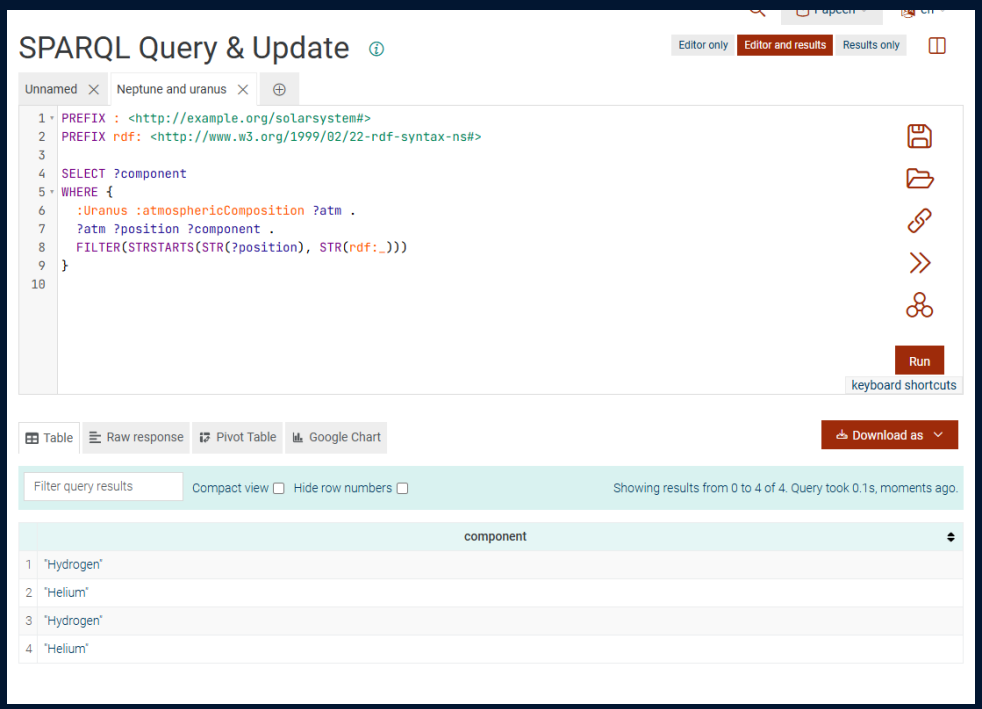

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
PREFIX : <http://example.org/solarsystem#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
SELECT ?color
WHERE {
:Earth :colorPlanet ?colorContainer .
?colorContainer ?position ?color .
FILTER(STRSTARTS(STR(?position), STR(rdf:_)))
}
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 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"

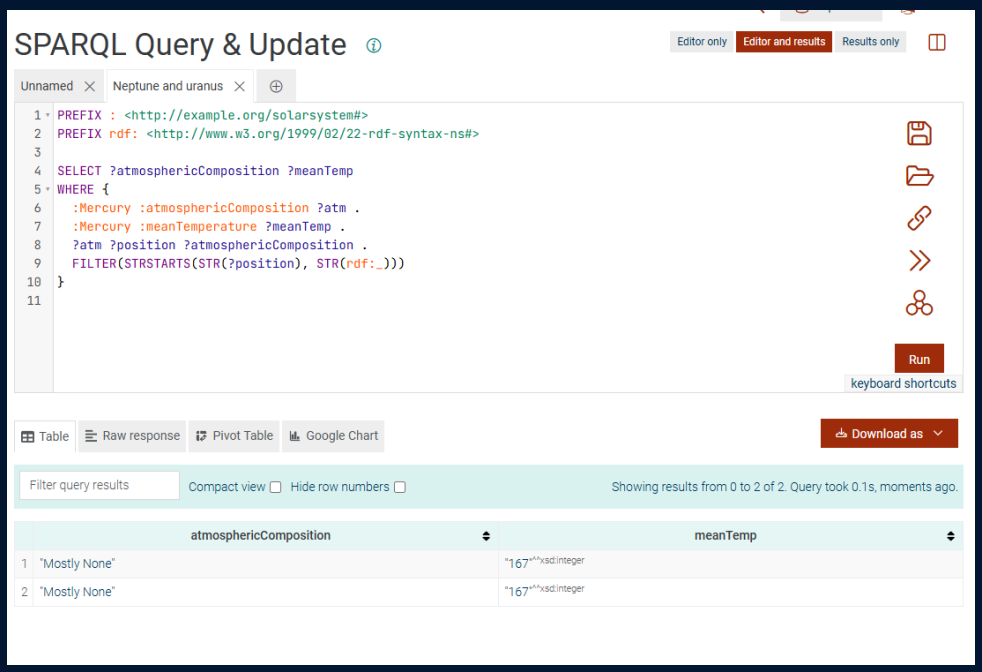

Papeen
en
SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
PREFIX : <http://example.org/solarsystem#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
SELECT (ROUND(?sunVolume / ?earthVolume) AS ?earthsInSun)
WHERE {
BIND(1.412E18 AS ?sunVolume) # Sun's volume in km³
:Earth :diameter ?diameter .
BIND((4 / 3) * 3.14159 * ((?diameter / 2) * (?diameter / 2) * (?diameter / 2)) AS ?earthVolume) #
Calculate Earth's volume manually
}
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.
earthsInSun
1 "1303538.0"^^xsd:double

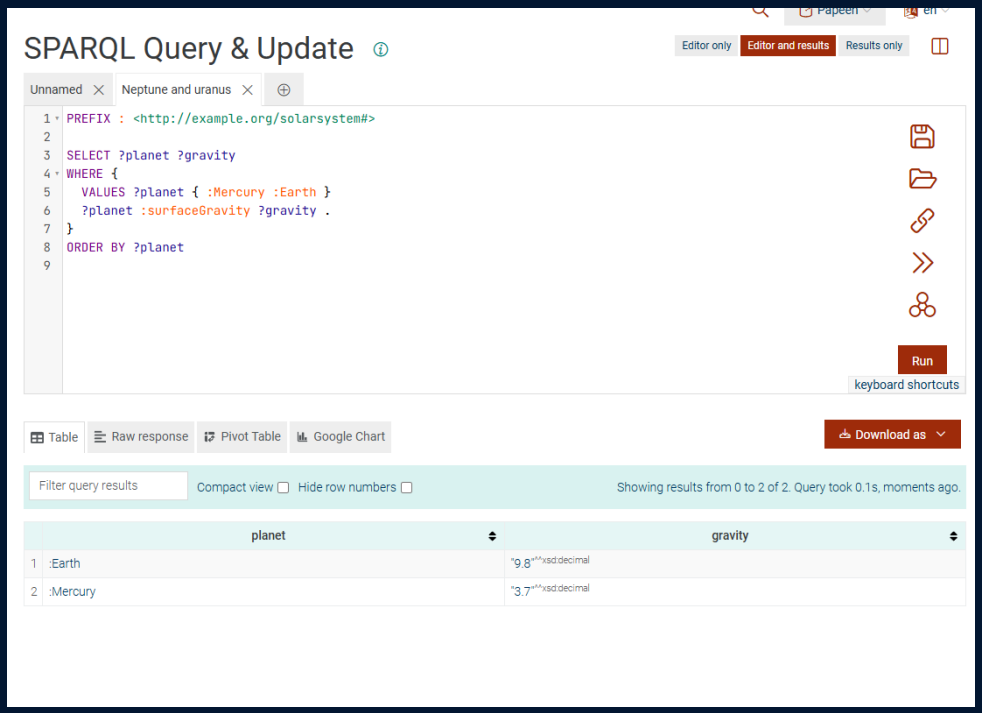

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
Neptune and uranus
PREFIX : <http://example.org/solarsystem#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
SELECT ?planet ?numberOfMoons ?surfaceFeatures
WHERE {
VALUES ?planet { :Uranus :Neptune }
?planet :numberOfMoons ?numberOfMoons ;
:surfaceFeatures ?features .
?features ?position ?surfaceFeatures .
FILTER(STRSTARTS(STR(?position), STR(rdf:_)))
}
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 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"

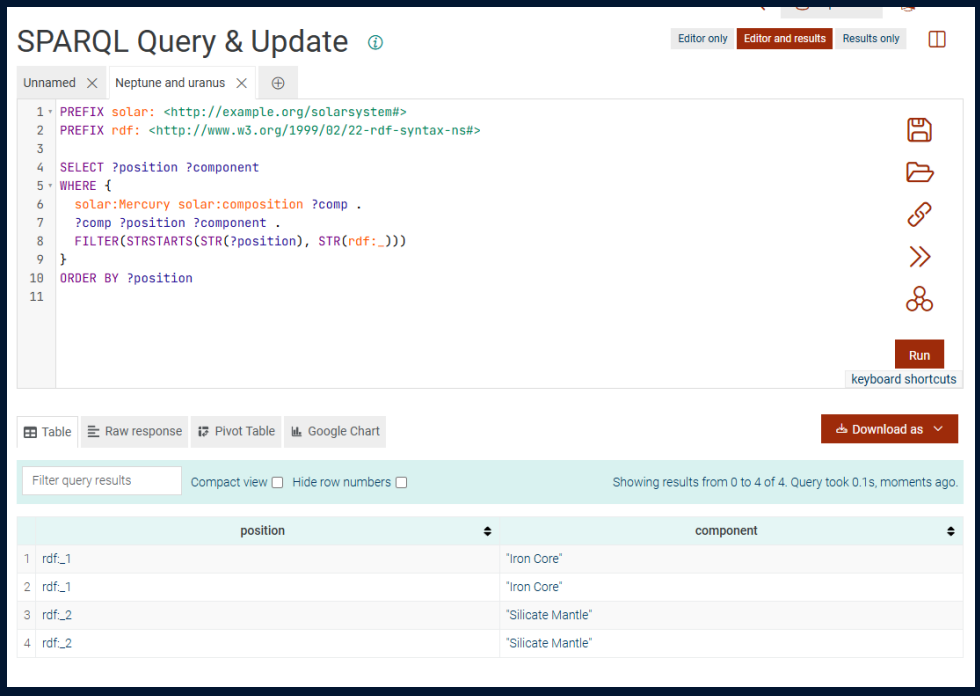

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
Neptune and uranus
PREFIX : <http://example.org/solarsystem#>
SELECT ?planet ?meanTemperature
WHERE {
VALUES ?planet { :Uranus :Neptune }
?planet :meanTemperature ?meanTemperature .
}
ORDER BY DESC(?meanTemperature)
LIMIT 1
Run
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.
planet
meanTemperature
1 :Uranus "-195"^^xsd:integer

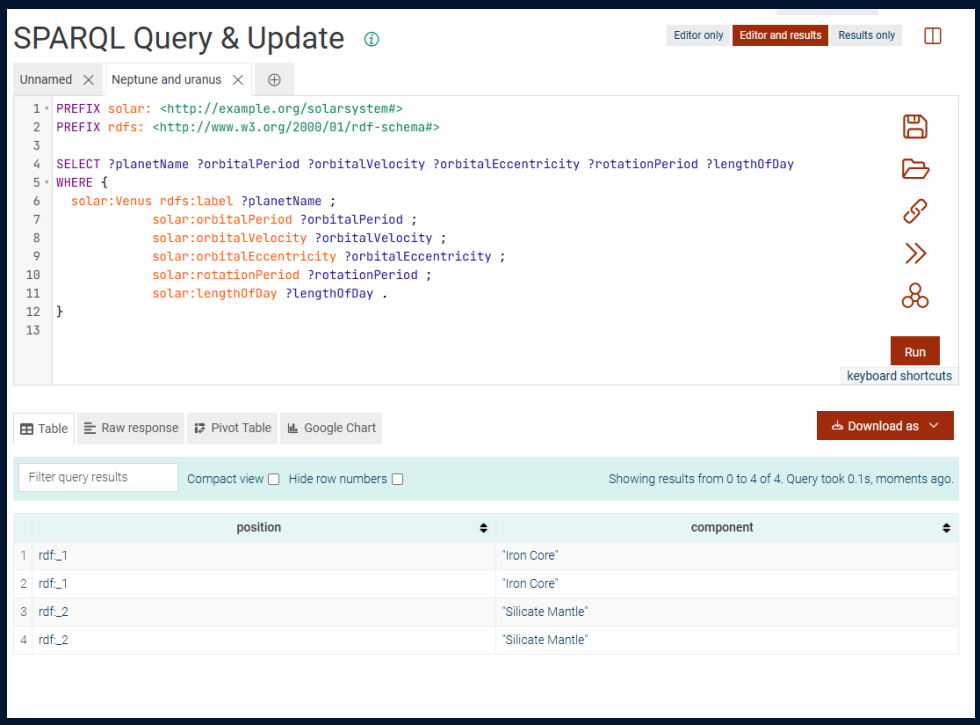

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
Neptune and uranus
PREFIX : <http://example.org/solarsystem#>
SELECT ?planet ?orbitalPeriod ?orbitalVelocity
WHERE {
VALUES ?planet { :Uranus :Neptune }
?planet :orbitalPeriod ?orbitalPeriod ;
:orbitalVelocity ?orbitalVelocity .
}
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 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

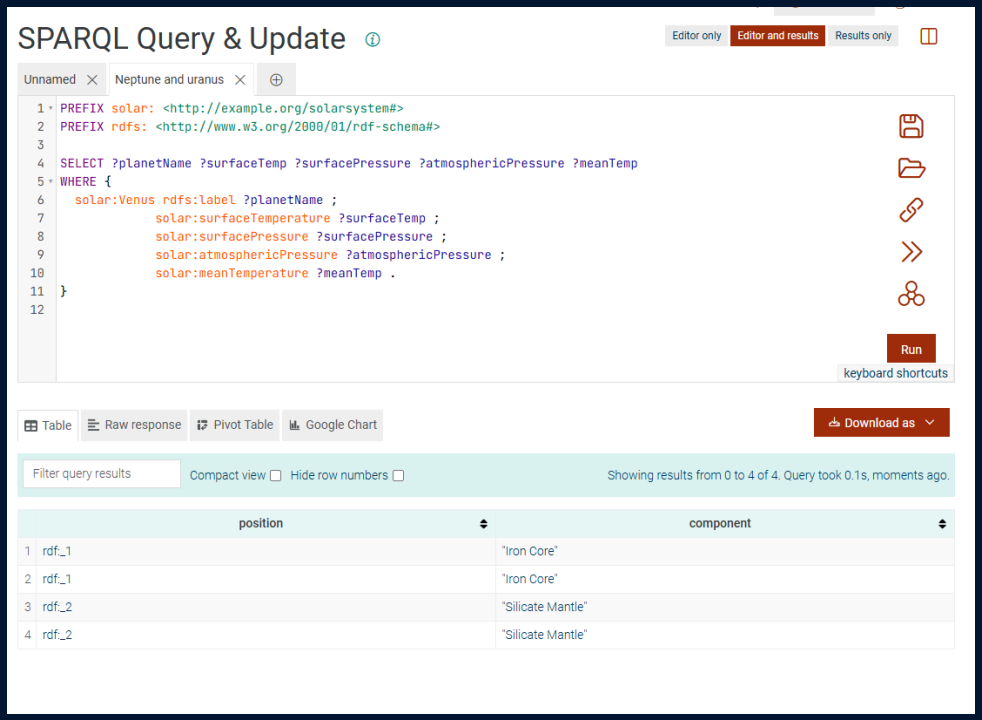

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
Neptune and uranus
PREFIX : <http://example.org/solarsystem#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
SELECT ?component
WHERE {
:Uranus :atmosphericComposition ?atm .
?atm ?position ?component .
FILTER(STRSTARTS(STR(?position), STR(rdf:_)))
}
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.
component
1 "Hydrogen"
2 "Helium"
3 "Hydrogen"
4 "Helium"

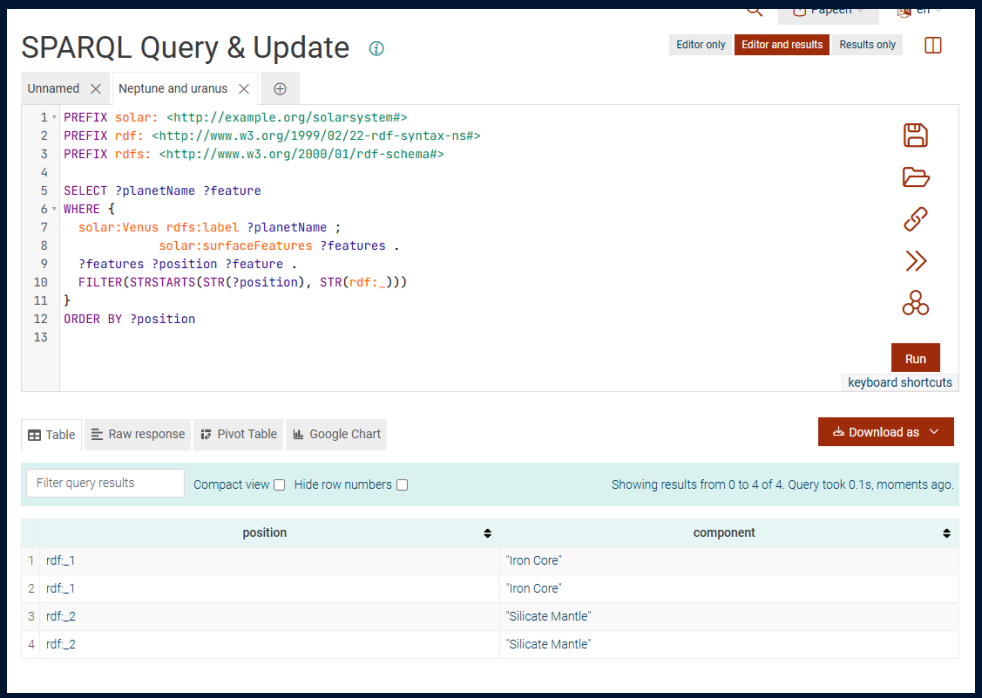

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
Neptune and uranus
PREFIX : <http://example.org/solarsystem#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
SELECT ?atmosphericComposition ?meanTemp
WHERE {
:Mercury :atmosphericComposition ?atm .
:Mercury :meanTemperature ?meanTemp .
?atm ?position ?atmosphericComposition .
FILTER(STRSTARTS(STR(?position), STR(rdf:_)))
}
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 2 of 2. Query took 0.1s, moments ago.
atmosphericComposition
meanTemp
1 "Mostly None" "167"^^xsd:integer
2 "Mostly None" "167"^^xsd:integer

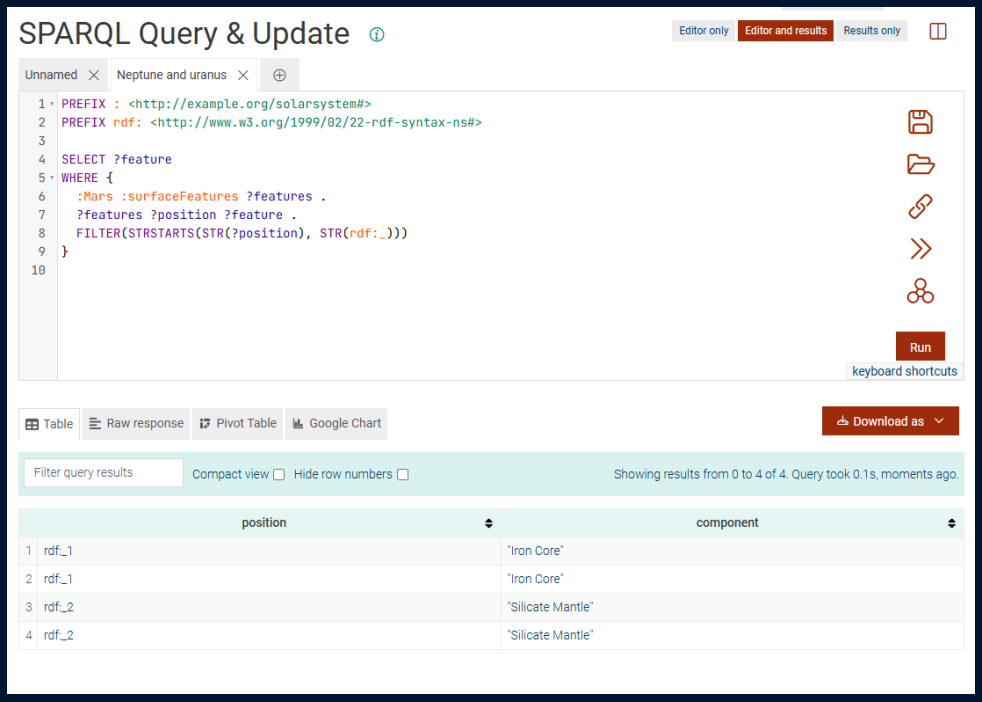

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
Neptune and uranus
PREFIX : <http://example.org/solarsystem#>
SELECT ?planet ?gravity
WHERE {
VALUES ?planet { :Mercury :Earth }
?planet :surfaceGravity ?gravity .
}
ORDER BY ?planet
Run
keyboard shortcuts
Table
Raw response
Pivot Table
Google Chart
Download as
Filter query results
Compact view
Hide row numbers
Showing results from 0 to 2 of 2. Query took 0.1s, moments ago.
planet
gravity
1 :Earth "9.8"^^xsd:decimal
2 :Mercury "3.7"^^xsd:decimal

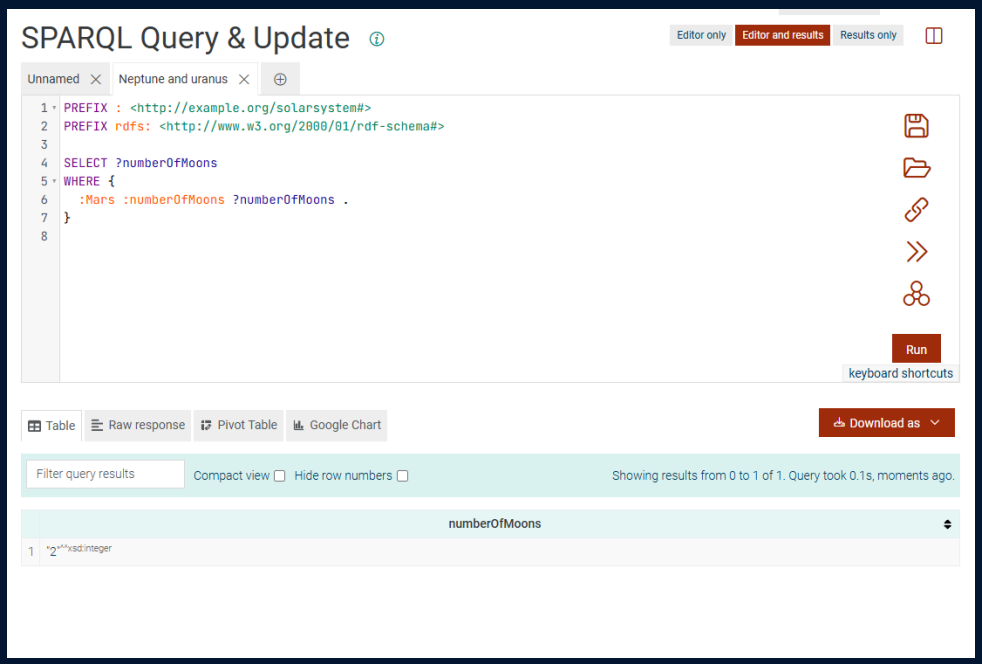

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
Neptune and uranus
PREFIX solar: <http://example.org/solarsystem#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
SELECT ?position ?component
WHERE {
solar:Mercury solar:composition ?comp .
?comp ?position ?component .
FILTER(STRSTARTS(STR(?position), STR(rdf:_)))
}
ORDER BY ?position
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.
position
component
1 rdf:_1 "Iron Core"
2 rdf:_1 "Iron Core"
3 rdf:_2 "Silicate Mantle"
4 rdf:_2 "Silicate Mantle"

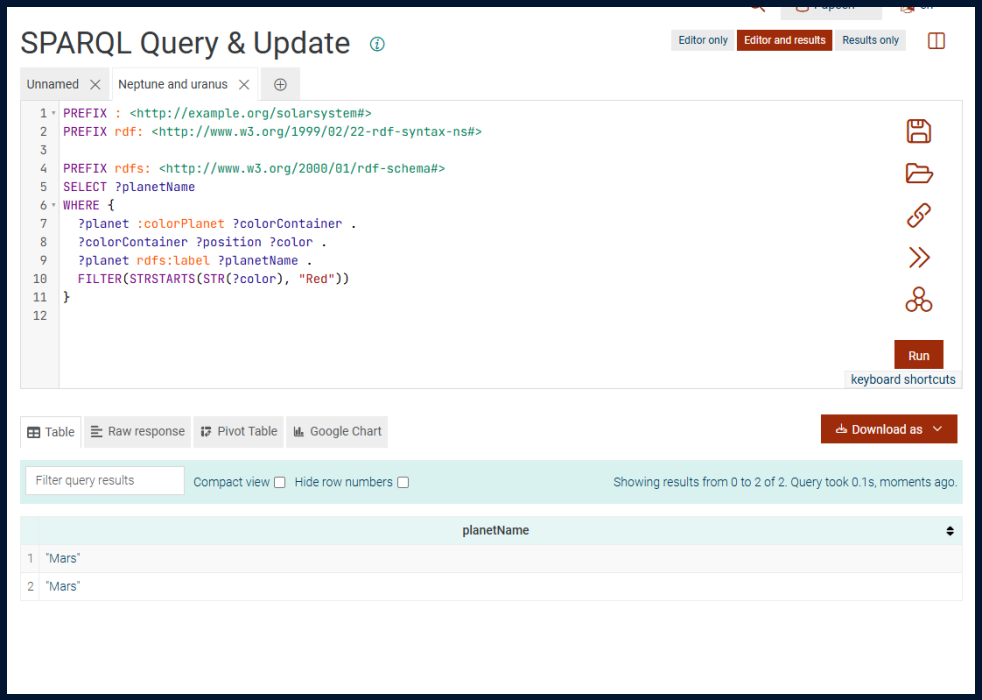

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
Neptune and uranus
PREFIX solar: <http://example.org/solarsystem#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
SELECT ?planetName ?orbitalPeriod ?orbitalVelocity ?orbitalEccentricity ?rotationPeriod ?lengthOfDay
WHERE {
solar:Venus rdfs:label ?planetName ;
solar:orbitalPeriod ?orbitalPeriod ;
solar:orbitalVelocity ?orbitalVelocity ;
solar:orbitalEccentricity ?orbitalEccentricity ;
solar:rotationPeriod ?rotationPeriod ;
solar:lengthOfDay ?lengthOfDay .
}
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.
position
component
1 rdf:_1 "Iron Core"
2 rdf:_1 "Iron Core"
3 rdf:_2 "Silicate Mantle"
4 rdf:_2 "Silicate Mantle"

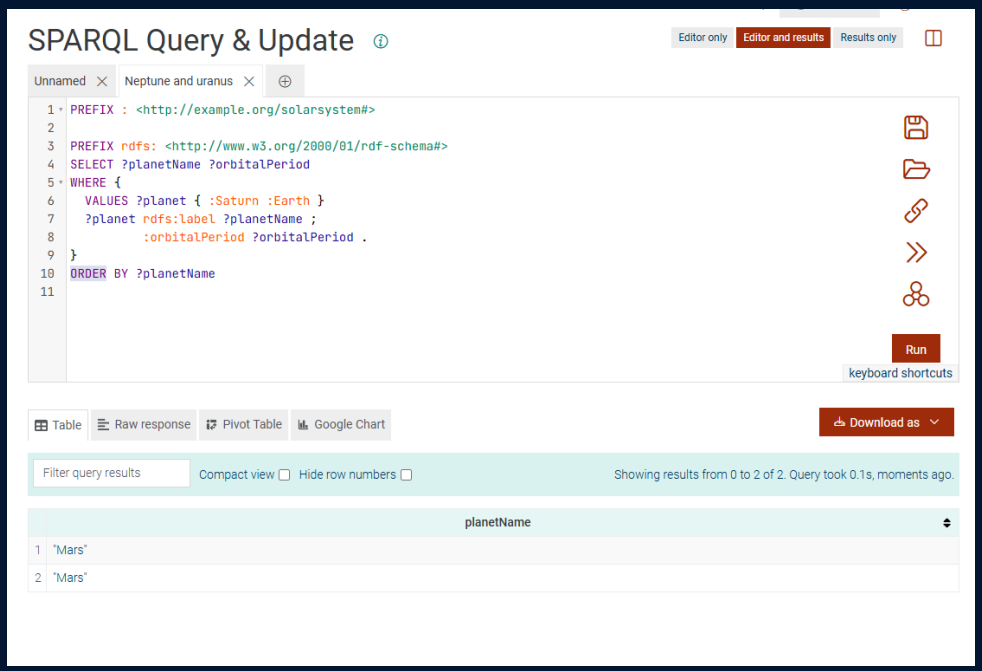

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
Neptune and uranus
PREFIX solar: <http://example.org/solarsystem#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
SELECT ?planetName ?surfaceTemp ?surfacePressure ?atmosphericPressure ?meanTemp
WHERE {
solar:Venus rdfs:label ?planetName ;
solar:surfaceTemperature ?surfaceTemp ;
solar:surfacePressure ?surfacePressure ;
solar:atmosphericPressure ?atmosphericPressure ;
solar:meanTemperature ?meanTemp .
}
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.
position
component
1 rdf:_1 "Iron Core"
2 rdf:_1 "Iron Core"
3 rdf:_2 "Silicate Mantle"
4 rdf:_2 "Silicate Mantle"

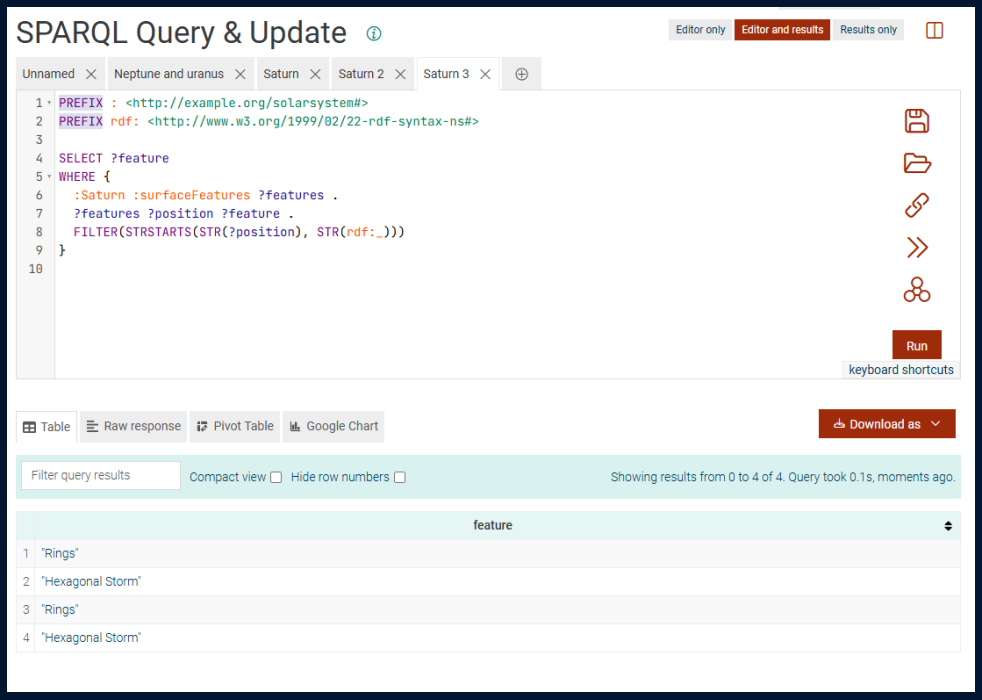

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
Neptune and uranus
PREFIX solar: <http://example.org/solarsystem#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
SELECT ?planetName ?feature
WHERE {
solar:Venus rdfs:label ?planetName ;
solar:surfaceFeatures ?features .
?features ?position ?feature .
FILTER(STRSTARTS(STR(?position), STR(rdf:_)))
}
ORDER BY ?position
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.
position
component
1 rdf:_1 "Iron Core"
2 rdf:_1 "Iron Core"
3 rdf:_2 "Silicate Mantle"
4 rdf:_2 "Silicate Mantle"

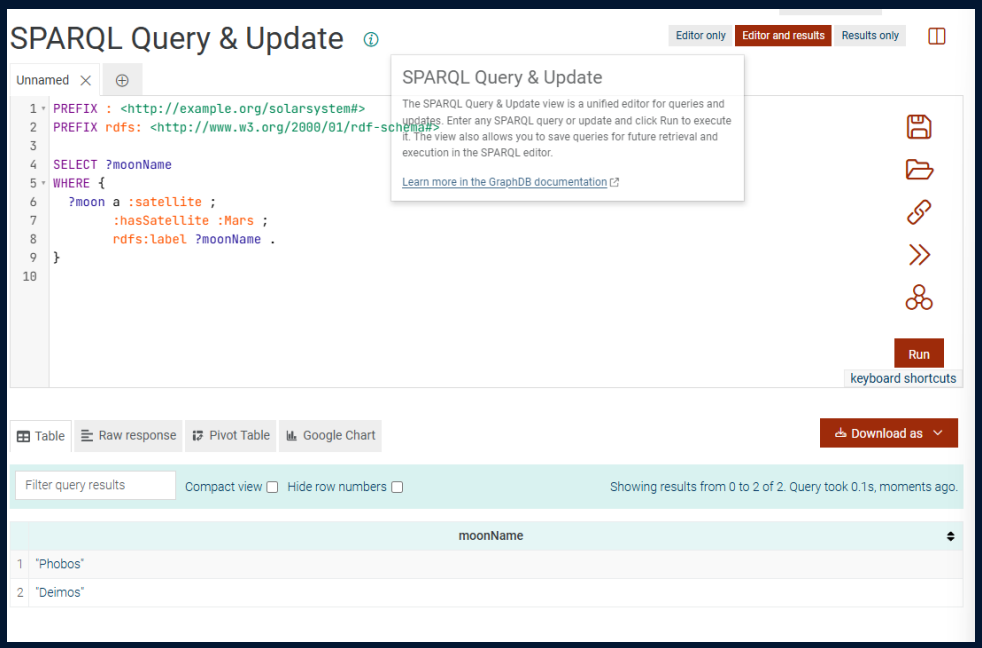

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
Neptune and uranus
PREFIX : <http://example.org/solarsystem#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
SELECT ?feature
WHERE {
:Mars :surfaceFeatures ?features .
?features ?position ?feature .
FILTER(STRSTARTS(STR(?position), STR(rdf:_)))
}
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.
position
component
1 rdf:_1 "Iron Core"
2 rdf:_1 "Iron Core"
3 rdf:_2 "Silicate Mantle"
4 rdf:_2 "Silicate Mantle"

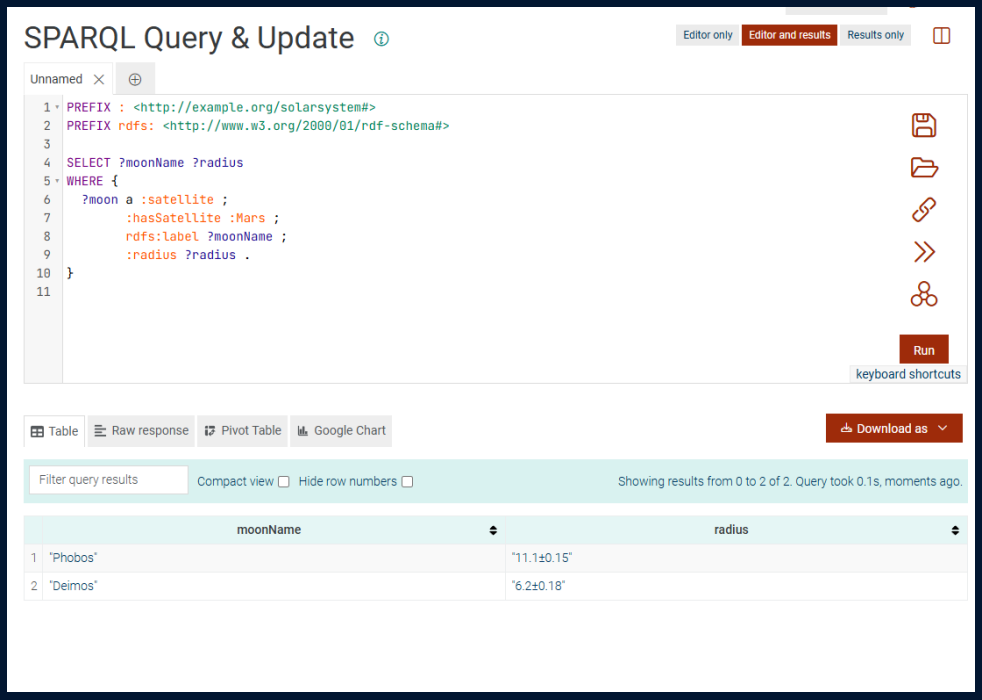

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
Neptune and uranus
PREFIX : <http://example.org/solarsystem#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
SELECT ?numberOfMoons
WHERE {
:Mars :numberOfMoons ?numberOfMoons .
}
Run
keyboard shortcuts
Table
Raw response
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.
numberOfMoons
1 "2"^^xsd:integer

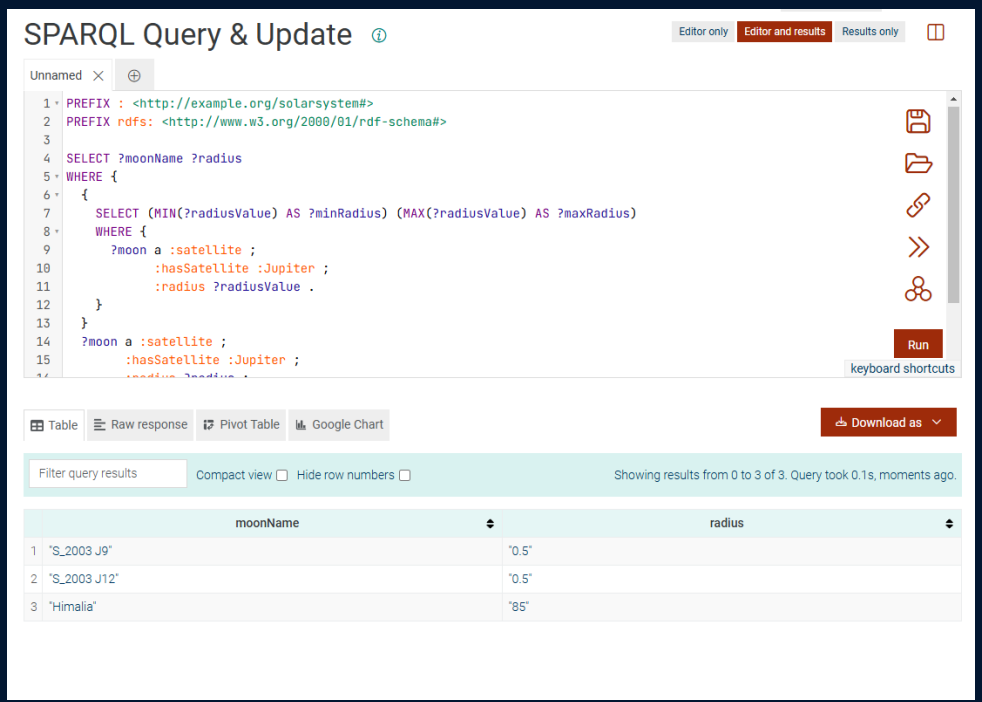

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
Neptune and uranus
PREFIX : <http://example.org/solarsystem#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
SELECT ?planetName
WHERE {
?planet :colorPlanet ?colorContainer .
?colorContainer ?position ?color .
?planet rdfs:label ?planetName .
FILTER(STRSTARTS(STR(?color), "Red"))
}
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 2 of 2. Query took 0.1s, moments ago.
planetName
1 "Mars"
2 "Mars"

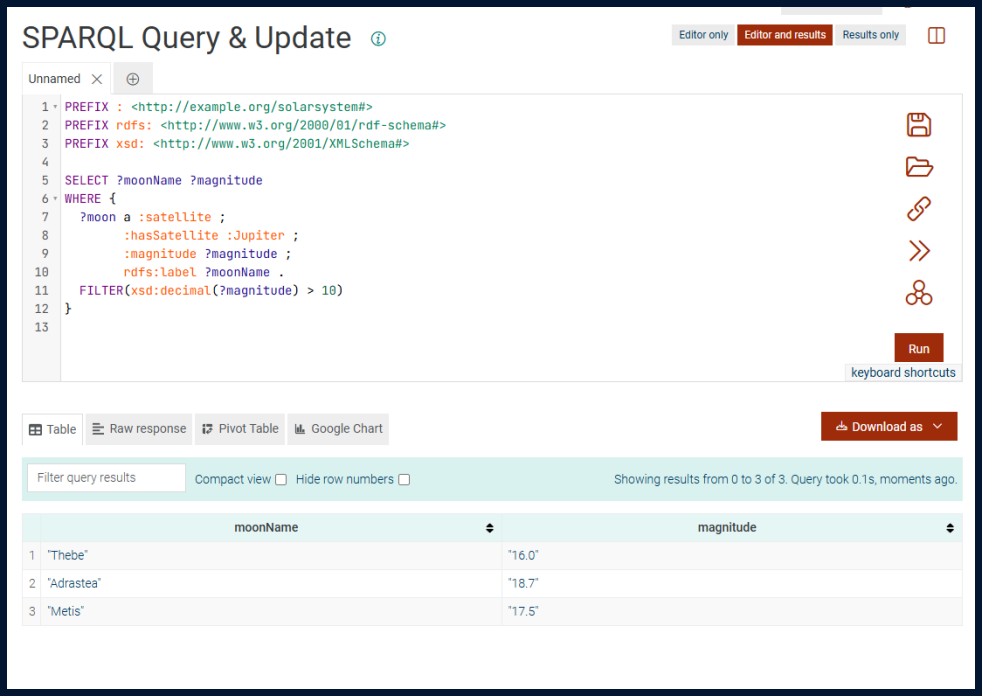

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
Neptune and uranus
PREFIX : <http://example.org/solarsystem#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
SELECT ?planetName ?orbitalPeriod
WHERE {
VALUES ?planet { :Saturn :Earth }
?planet rdfs:label ?planetName ;
:orbitalPeriod ?orbitalPeriod .
}
ORDER BY ?planetName
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 2 of 2. Query took 0.1s, moments ago.
planetName
1 "Mars"
2 "Mars"

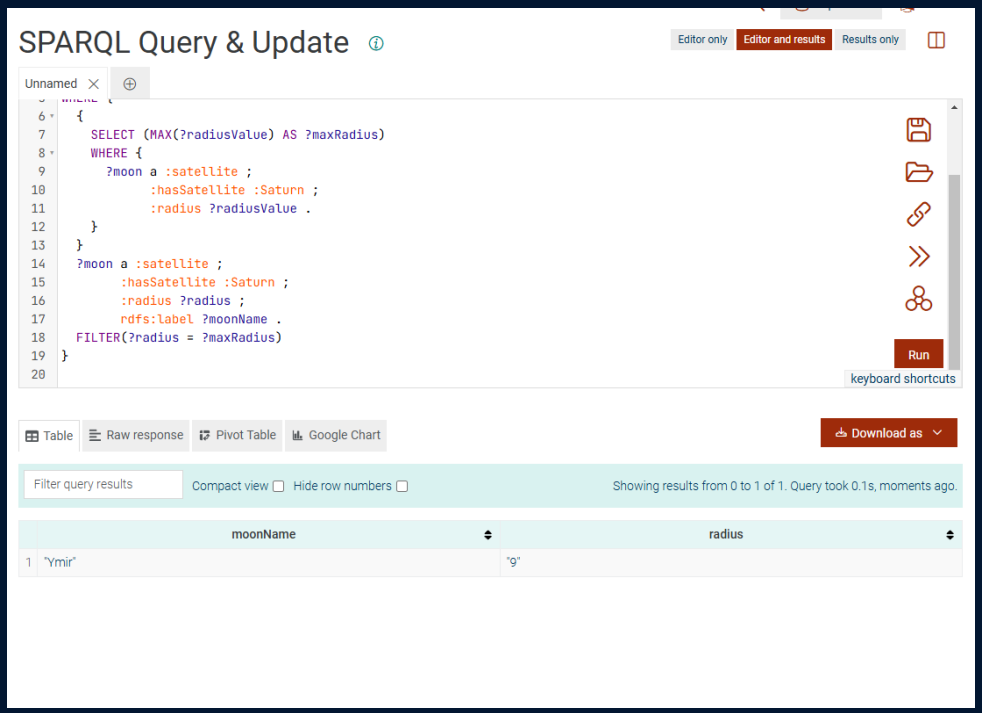

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
Neptune and uranus
Saturn
Saturn 2
Saturn 3
PREFIX : <http://example.org/solarsystem#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
SELECT ?feature
WHERE {
:Saturn :surfaceFeatures ?features .
?features ?position ?feature .
FILTER(STRSTARTS(STR(?position), STR(rdf:_)))
}
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.
feature
1 "Rings"
2 "Hexagonal Storm"
3 "Rings"
4 "Hexagonal Storm"

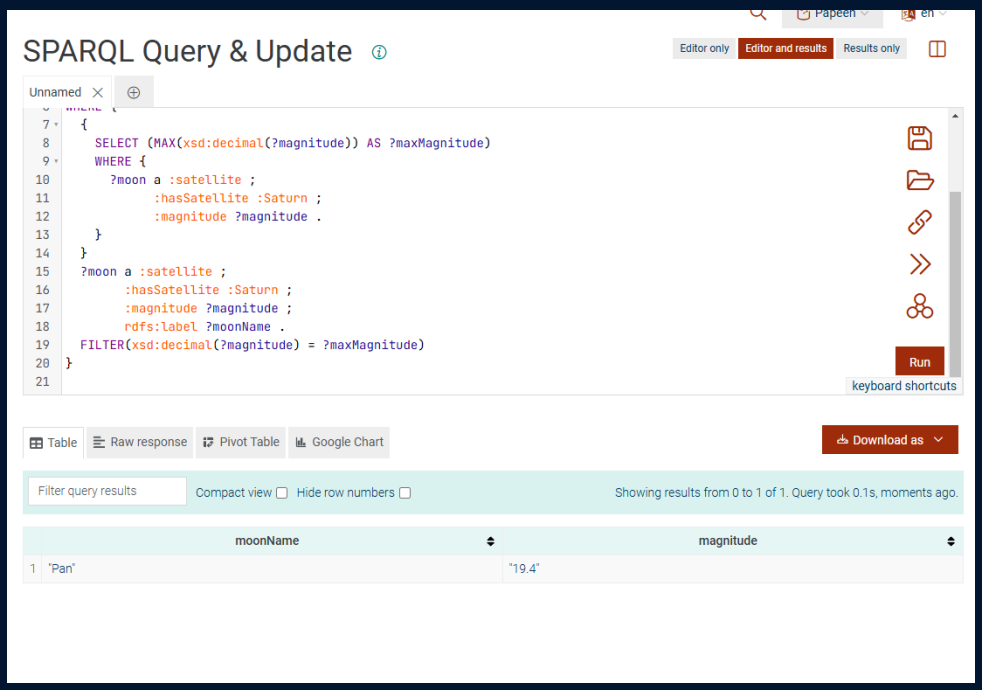

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
PREFIX : <http://example.org/solarsystem#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
SELECT ?moonName
WHERE {
?moon a :satellite ;
:hasSatellite :Mars ;
rdfs:label ?moonName .
}
SPARQL Query & Update
The SPARQL Query & 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
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 2 of 2. Query took 0.1s, moments ago.
moonName
1 "Phobos"
2 "Deimos"

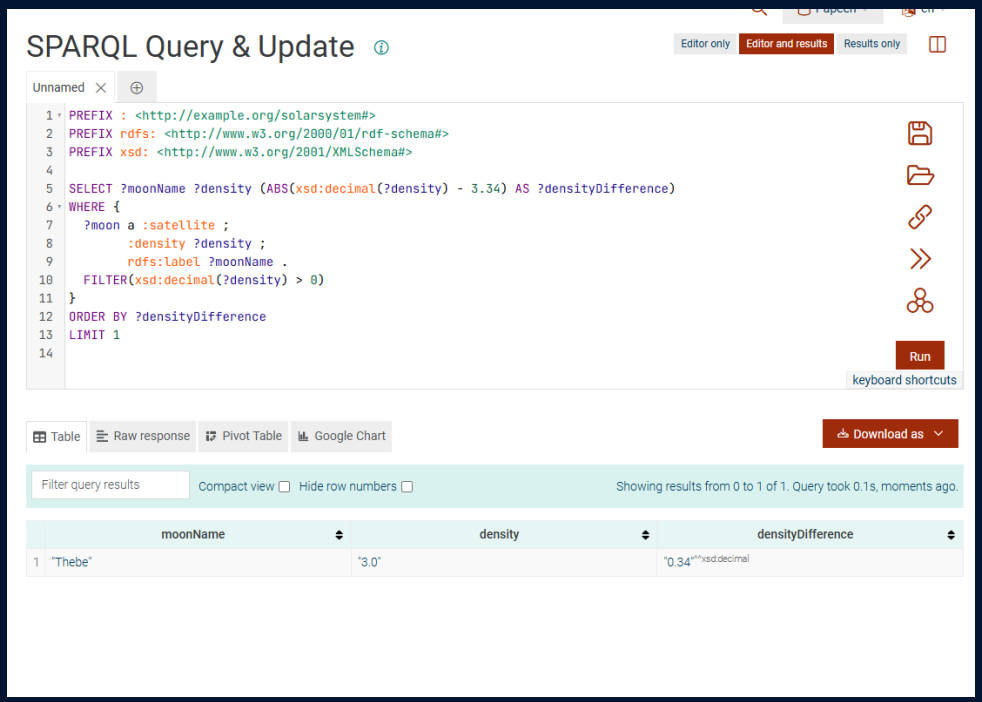

SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
PREFIX : <http://example.org/solarsystem#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
SELECT ?moonName ?radius
WHERE {
?moon a :satellite ;
:hasSatellite :Mars ;
rdfs:label ?moonName ;
:radius ?radius .
}
Run
keyboard shortcuts
Table
Raw response
Pivot Table
Google Chart
Download as
Filter query results
Compact view
Hide row numbers
Showing results from 0 to 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 only
Editor and results
Results only
Unnamed
PREFIX : <http://example.org/solarsystem#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
SELECT ?moonName ?radius
WHERE {
{
SELECT (MIN(?radiusValue) AS ?minRadius) (MAX(?radiusValue) AS ?maxRadius)
WHERE {
?moon a :satellite ;
:hasSatellite :Jupiter ;
:radius ?radiusValue .
}
}
?moon a :satellite ;
:hasSatellite :Jupiter ;
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 3 of 3. Query took 0.1s, moments ago.
moonName
radius
1 "S_2003 J9" "0.5"
2 "S_2003 J12" "0.5"
3 "Himalia" "85"


SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
PREFIX : <http://example.org/solarsystem#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
SELECT ?moonName ?magnitude
WHERE {
?moon a :satellite ;
:hasSatellite :Jupiter ;
:magnitude ?magnitude ;
rdfs:label ?moonName .
FILTER(xsd:decimal(?magnitude) > 10)
}
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 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
Editor only
Editor and results
Results only
Unnamed
{
SELECT (MAX(?radiusValue) AS ?maxRadius)
WHERE {
?moon a :satellite ;
:hasSatellite :Saturn ;
:radius ?radiusValue .
}
}
?moon a :satellite ;
:hasSatellite :Saturn ;
:radius ?radius ;
rdfs:label ?moonName .
FILTER(?radius = ?maxRadius)
}
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.
moonName
radius
1 "Ymir" "9"


SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
{
SELECT (MAX(xsd:decimal(?magnitude)) AS ?maxMagnitude)
WHERE {
?moon a :satellite ;
:hasSatellite :Saturn ;
:magnitude ?magnitude .
}
}
?moon a :satellite ;
:hasSatellite :Saturn ;
:magnitude ?magnitude ;
rdfs:label ?moonName .
FILTER(xsd:decimal(?magnitude) = ?maxMagnitude)
}
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.
moonName
magnitude
1
"Pan"
"19.4"


SPARQL Query & Update
Editor only
Editor and results
Results only
Unnamed
PREFIX : <http://example.org/solarsystem#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
SELECT ?moonName ?density (ABS(xsd:decimal(?density) - 3.34) AS ?densityDifference)
WHERE {
?moon a :satellite ;
:density ?density ;
rdfs:label ?moonName .
FILTER(xsd:decimal(?density) > 0)
}
ORDER BY ?densityDifference
LIMIT 1
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.
moonName
density
densityDifference
1
"Thebe"
"3.0"
"0.34"^^xsd:decimal

SPARQL Query & Update

Editor only | Editor and results | Results only

Unnamed

```
PREFIX : <http://example.org/solarsystem#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>

SELECT ?moonName ?albedo
WHERE {
  ?moon a :satellite ;
        :hasSatellite :Neptune ;
        :albedo ?albedo ;
        rdfs:label ?moonName .
  FILTER(xsd:decimal(?albedo) > 0.5)
}
```

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.

	moonName	albedo
1	"Triton"	"0.719"

SPARQL Query & Update

Editor only | Editor and results | Results only

Unnamed

```
  {
    SELECT (MIN(xsd:decimal(?albedo)) AS ?minAlbedo)
    WHERE {
      ?moon a :satellite ;
            :hasSatellite :Neptune ;
            :albedo ?albedo .
    }
  }
  ?moon a :satellite ;
        :hasSatellite :Neptune ;
        :albedo ?albedo ;
        rdfs:label ?moonName .
  FILTER(xsd:decimal(?albedo) = ?minAlbedo)
}
```

Run

keyboard shortcuts

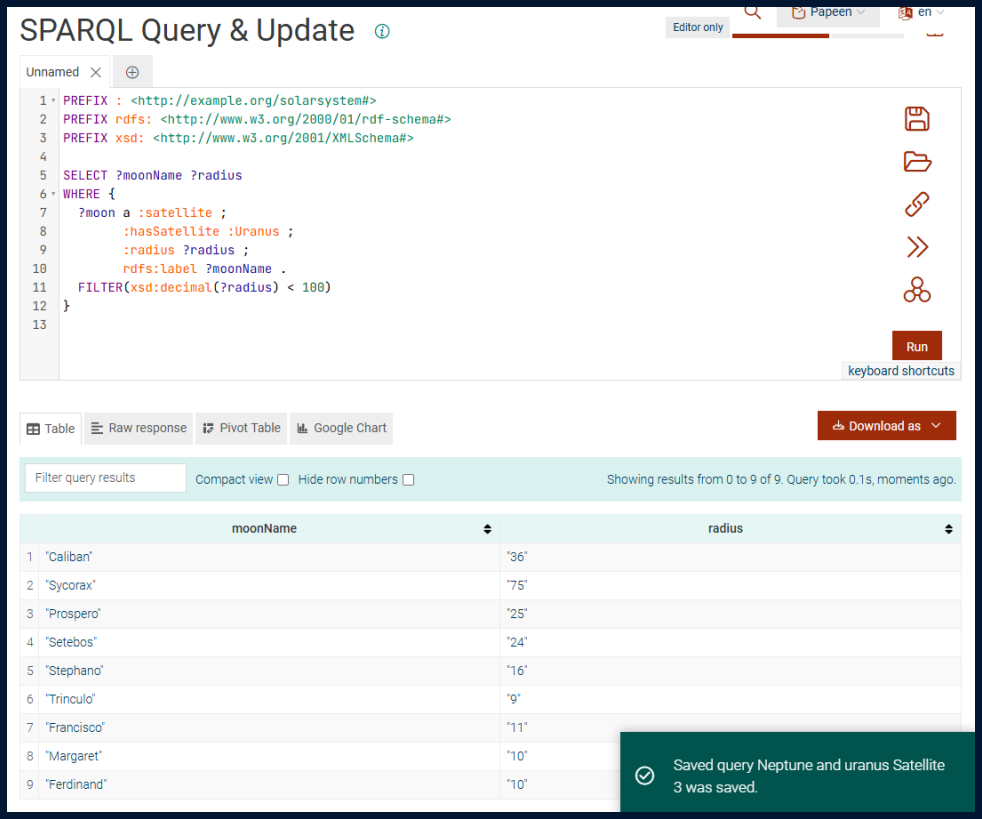
Table | Raw response | Pivot Table | Google Chart

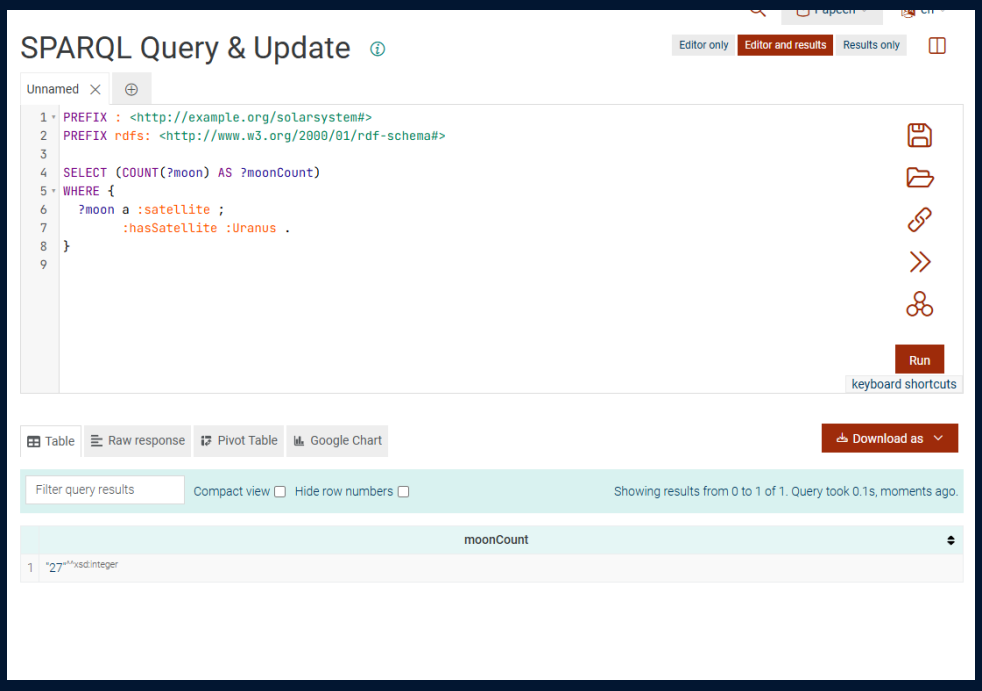
Download as

Filter query results | Compact view | Hide row numbers

Showing results from 0 to 5 of 5. Query took 0.1s, moments ago.

	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
PREFIX : <http://example.org/solarsystem#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
SELECT ?moonName ?radius
WHERE {
?moon a :satellite ;
:hasSatellite :Uranus ;
:radius ?radius ;
rdfs:label ?moonName .
FILTER(xsd:decimal(?radius) < 100)
}
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 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
PREFIX : <http://example.org/solarsystem#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
SELECT (COUNT(?moon) AS ?moonCount)
WHERE {
?moon a :satellite ;
:hasSatellite :Uranus .
}
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