# Exoplanet Database

## Study of Exoplanets, the stars that the planets orbit and the observatories that discovered them

## Data derived from NASA's Science Mission Directorate and various online data repositories about stars




# What are exoplanets?

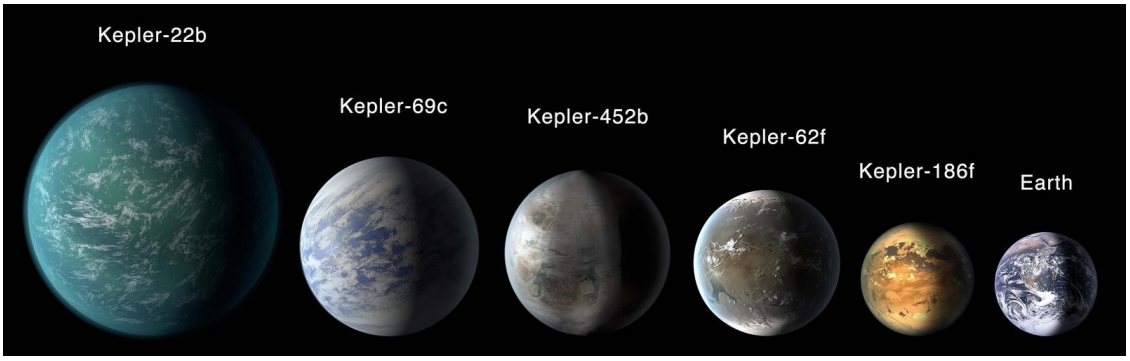
# Planets that orbit other stars in our galaxy

## How Big of a Database Is Required?

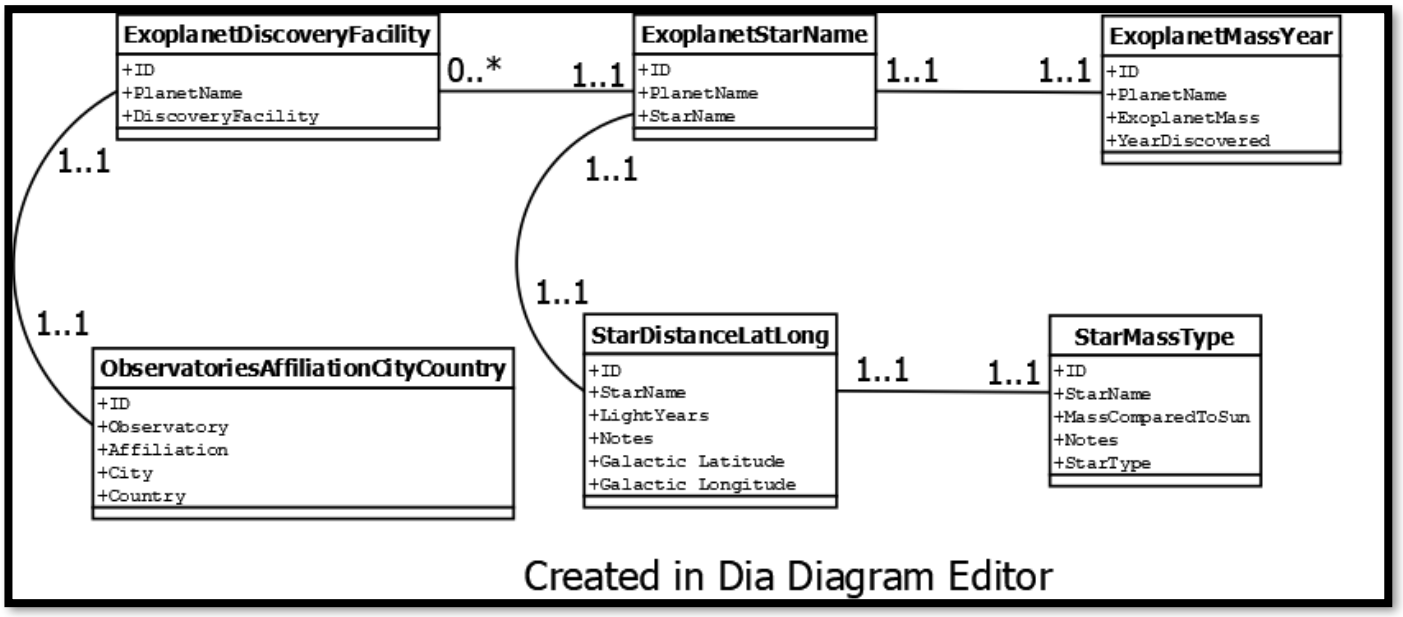
### Current confirmed exoplanets: 5,220 (as of Dec 7, 2022)

### Approximate number of stars in galaxy: 250 billion

### Approximate number of exoplanets (assuming 5 planets per star): 1.25 trillion exoplanets



# Relational Model



# Normalization

# Initial Star Table

| StarName | LightYears | Galactic Latitude | Galactic Logitude | MassComparedToSun | StarType |
|---|---|---|---|---|---|
| 11 Com | 303.325 | 78.2805316 | 264.142395019531 | 2.7 | G8III |
| 24 Sex | 235.05797 | 44.71563108 | 245.0850262 | 1.54 | K0IV |
| XO-1 | 536 | 48.02124 | 45.85302 | 1.027 | G1V |
| 2MASS J04372171+2651014 | 419.06 | -13.44593 | 172.81975 | 0.17 | MV |
| 2MASS J01225093-2439505 | 110.333 | -82.5199 | 195.45385 | 0.353185 | M3.5V |
| 2MASS J02192210-3925225 | 130.75 | -67.98402 | 252.45343 | 0.240111 | M6+L4 |
| 2MASS J04414489+2301513 | 392.77 | -15.11435 | 176.51065 | 0.201559 | M8.7 |

# Star Table 1
# Distance & Location in Galaxy

| ID | StarName | LightYears | Notes | Galactic Latitude | Galactic Logitude |
|---|---|---|---|---|---|
| stardist1 | 11 Com | 303.325 | | 78.2805316 | 264.142395019531 |
| stardist10 | 24 Sex | 235.057966 | | 44.71563108 | 245.0850262 |
| stardist100 | XO-1 | 536 | | 48.02124 | 45.85302 |
| stardist11 | 2MASS J04372171+2651014 | 419.06 | | -13.44593 | 172.81975 |
| stardist12 | 2MASS J01225093-2439505 | 110.333 | | -82.5199 | 195.45385 |
| stardist13 | 2MASS J02192210-3925225 | 130.75 | | -67.98402 | 252.45343 |
| stardist14 | 2MASS J04414489+2301513 | 392.77 | | -15.11435 | 176.51065 |

# Star Table 2
# Mass & Type

| ID | StarName | MassComparedToSun | Notes | StarType |
|---|---|---|---|---|
| starmass1 | 11 Com | 2.7 | | G8III |
| starmass10 | 24 Sex | 1.54 | | K0IV |
| starmass100 | XO-1 | 1.027 | | G1V |
| starmass11 | 2MASS J04372171+2651014 | 0.17 | | MV |
| starmass12 | 2MASS J01225093-2439505 | 0.353185 | | M3.5V |
| starmass13 | 2MASS J02192210-3925225 | 0.240111 | | M6+L4 |
| starmass14 | 2MASS J04414489+2301513 | 0.201559 | | M8.7 |

# Normalization

# Initial Exoplanet Table

| PlanetName | StarName | PlanetName | Exoplanet Mass | YearDiscovery |
|---|---|---|---|---|
| 11 Com b | 11 Com | 11 Com b | 6165 | 2007 |
| 11 UMi b | 11 Umi | 11 UMi b | 4685 | 2009 |
| 14 And b | 14 And | 14 And b | 1525 | 2008 |
| 14 Her b | 14 Her | 14 Her b | 1440 | 2002 |
| 16 Cyg B b | 16 Cyg B | 16 Cyg B b | 533 | 1996 |
| 17 Sco b | 17 Sco | 17 Sco b | 1373 | 2020 |

## Exoplanet Table 1
## Planet & Associated Star

| ID | PlanetName | StarName |
|---|---|---|
| exostar1 | 11 Com b | 11 Com |
| exostar2 | 11 UMi b | 11 Umi |
| exostar3 | 14 And b | 14 And |
| exostar4 | 14 Her b | 14 Her |
| exostar5 | 16 Cyg B b | 16 Cyg B |
| exostar6 | 17 Sco b | 17 Sco |

## Star Table 2
## Mass & Year of Discovery

| ID | PlanetName | Exoplanet Mass | YearDiscovery |
|---|---|---|---|
| exomass1 | 11 Com b | 6165 | 2007 |
| exomass2 | 11 UMi b | 4685 | 2009 |
| exomass3 | 14 And b | 1525 | 2008 |
| exomass4 | 14 Her b | 1440 | 2002 |
| exomass5 | 16 Cyg B b | 533 | 1996 |
| exomass6 | 17 Sco b | 1373 | 2020 |

# Normalization

# Initial Observatories Table

| PlanetName | DiscoveryFacility | Observatory | Affiliation | City | Country |
|---|---|---|---|---|---|
| DP Leo b | Yunnan Astronomical Observatory | Yunnan Astronomical Observatory | Chinese Academy of Sciences | Kumming | China |
| XO-1 b | XO Telescope | XO Telescope | University of Hawaii | Haleakalā | USA |
| 11 Com b | Xinglong Station | Xinglong Station | Nat Astromical Observatories of China | Cangzhou | China |
| NY Vir c | Winer Observatory | Winer Observatory | Irvin Marvin Winer Memoral Mobile Obervatory, Inc. | Sonoita | USA |
| BD+60 1417 b | Wide-field Infrared Survey Explorer (WISE) Sat | Wide-field Infrared Survey Explorer (WISE) Sat | NASA | Low Earth Orbit | Earth |
| 14 Her b | W. M. Keck Observatory | W. M. Keck Observatory | UC & CalTech | Maunakea | USA |

## Observatories Table 1
## Exoplanet and Discovery Facility

| ID | PlanetName | DiscoveryFacility |
|---|---|---|
| exodisc77 | DP Leo b | Yunnan Astronomical Observatory |
| exodisc115 | XO-1 b | XO Telescope |
| exodisc1 | 11 Com b | Xinglong Station |
| exodisc103 | NY Vir c | Winer Observatory |
| exodisc59 | BD+60 1417 b | Wide-field Infrared Survey Explorer (WISE) Sat |
| exodisc4 | 14 Her b | W. M. Keck Observatory |

# Observatories Table 2
# Observatory, Affiliation, City & Country

| ID | Observatory | Affiliation | City | Country |
|---|---|---|---|---|
| observ22 | Yunnan Astronomical Observatory | Chinese Academy of Sciences | Kumming | China |
| observ56 | XO Telescope | University of Hawaii | Haleakalā | USA |
| observ1 | Xinglong Station | Nat Astromical Observatories of China | Cangzhou | China |
| observ44 | Winer Observatory | Irvin Marvin Winer Memoral Mobile Obervatory, Inc. | Sonoita | USA |
| observ17 | Wide-field Infrared Survey Explorer (WISE) Sat | NASA | Low Earth Orbit | Earth |
| observ4 | W. M. Keck Observatory | UC & CalTech | Maunakea | USA |

# SQL to Create Tables

```
create table ObservatoriesAffiliationCityCountry (
        ID Char(25) NOT NULL,
        Observatory Char(50) NOT NULL,
        Affiliation Char(50) NOT NULL,
        City Char(50) NOT NULL,
        Country Char(50) NOT NULL,
        CONSTRAINT PK PRIMARY KEY(ID)
);
create table StarDistanceLatLong (
        ID Char(25) NOT NULL,
        StarName Char(50) NOT NULL,
        LightYears Real NOT NULL,
        GalacticLatitude Real NOT NULL,
        GalacticLongitude Real NOT NULL,
        CONSTRAINT PK PRIMARY KEY(ID)
);

create table StarMassType (
        ID Char(25) NOT NULL,
        StarName Char(50) NOT NULL,
        MassComparedToSun Real NOT NULL,
        StarType Char(10) NOT NULL,
        Notes Char(100) NOT NULL,
        CONSTRAINT PK PRIMARY KEY(ID)
);
```

# SQL to Create Tables (continued)

```
create table ExoplanetDiscoveryFacility (
        ID          Char(25) NOT NULL,
        PlanetName      Char(50) NOT
NULL,
        DiscoveryFacility  Char(50) NOT
NULL,
        CONSTRAINT PK PRIMARY KEY(ID)
);

create table ExoplanetMassYear (
        ID          Char(25) NOT NULL,
        PlanetName Char(50) NOT NULL,
        ExoplanetMass Real NOT NULL,
        YearDiscovered Real NOT NULL,
        CONSTRAINT PK PRIMARY KEY(ID)
);

create table ExoplanetStarName (
        ID Char(25) NOT NULL,
        PlanetName Char(50) NOT NULL,
        StarName Char(50) NOT NULL,
        CONSTRAINT PK PRIMARY KEY(ID)
);
```

# SQL to Insert Data

ExoplanetDiscoveryFacility Table:

```
INSERT INTO ExoplanetDiscoveryFacility VALUES ('exodisc77', 'DP Leo b',
'Yunnan Astronomical Observatory');
INSERT INTO ExoplanetDiscoveryFacility VALUES ('exodisc115', 'XO-1 b', 'XO
Telescope');
INSERT INTO ExoplanetDiscoveryFacility VALUES ('exodisc1', '11 Com b',
'Xinglong Station');
INSERT INTO ExoplanetDiscoveryFacility VALUES ('exodisc103', 'NY Vir c',
'Winer Observatory');
INSERT INTO ExoplanetDiscoveryFacility VALUES ('exodisc59',        'BD+60
1417 b',      'Wide-field Infrared Survey Explorer (WISE) Sat');
INSERT INTO ExoplanetDiscoveryFacility VALUES ('exodisc4', '14 Her b', 'W.
M. Keck Observat
```

ExoplanetMassYear Table:

```
INSERT INTO ExoplanetMassYear VALUES ('exomass1', '11 Com b', '6165',
'2007');
INSERT INTO ExoplanetMassYear VALUES ('exomass2', '11 UMi b', '4685',
'2009');
INSERT INTO ExoplanetMassYear VALUES ('exomass3', '14 And b', '1525',
'2008');
INSERT INTO ExoplanetMassYear VALUES ('exomass4', '14 Her b', '1440',
'2002');
INSERT INTO ExoplanetMassYear VALUES ('exomass5', '16 Cyg B b', '533',
'1996');
INSERT INTO ExoplanetMassYear VALUES ('exomass6', '17 Sco b', '1373',
'2020');
```

# SQL to Insert Data

ExoplanetStarName Table:

```
INSERT INTO ExoplanetStarName VALUES ('exostar1', '11 Com b', '11 Com');
INSERT INTO ExoplanetStarName VALUES ('exostar2', '11 UMi b', '11 Umi');
INSERT INTO ExoplanetStarName VALUES ('exostar3', '14 And b', '14 And');
INSERT INTO ExoplanetStarName VALUES ('exostar4', '14 Her b', '14 Her');
INSERT INTO ExoplanetStarName VALUES ('exostar5', '16 Cyg B b', '16 Cyg
B');
INSERT INTO ExoplanetStarName VALUES ('exostar6', '17 Sco b', '17 Sco');
```

ObservatoriesAffiliationCityCountry Table:

```
INSERT INTO ObservatoriesAffiliationCityCountry VALUES ('observ22', 'Yunnan
Astronomical Observatory', 'Chinese Academy of Sciences', 'Kumming', 'China');
INSERT INTO ObservatoriesAffiliationCityCountry VALUES ('observ56',
        'XO Telescope', 'University of Hawaii', 'Haleakalā', 'USA');
INSERT INTO ObservatoriesAffiliationCityCountry VALUES ('observ1', 'Xinglong
Station', 'Nat Astromical Observatories of China', 'Cangzhou',      'China');
INSERT INTO ObservatoriesAffiliationCityCountry VALUES ('observ44',
        'Winer Observatory', 'Irvin Marvin Winer Memoral Mobile Obervatory
Inc.', 'Sonoita', 'USA');
INSERT INTO ObservatoriesAffiliationCityCountry VALUES ('observ17',
        'Wide-field Infrared Survey Explorer (WISE) Sat', 'NASA', 'Low Earth
Orbit', 'Earth');
INSERT INTO ObservatoriesAffiliationCityCountry VALUES ('observ4', 'W. M.
Keck Observatory', 'UC & CalTech', 'Maunakea', 'USA');
```

# SQL to Insert Data

StarDistanceLatLong table:

```
INSERT INTO StarDistanceLatLong VALUES ('stardist1', '11 Com', '303.325', '', '78.2805316', '264.142395019531');
INSERT INTO StarDistanceLatLong VALUES ('stardist10', '24 Sex', '235.057966', '', '44.71563108', '245.0850262');
INSERT INTO StarDistanceLatLong VALUES ('stardist100', 'XO-1', '536', '', '48.02124', '45.85302');
INSERT INTO StarDistanceLatLong VALUES ('stardist11', '2MASS J04372171+2651014', '419.06', '', '-13.44593', '172.81975');
INSERT INTO StarDistanceLatLong VALUES ('stardist12', '2MASS J01225093-2439505', '110.333', '', '-82.5199', '195.45385');
INSERT INTO StarDistanceLatLong VALUES ('stardist13', '2MASS J02192210-3925225', '130.75', '-67.98402', '252.45343');
```

StarMassType table:

```
INSERT INTO StarMassType VALUES ('starmass1', '11 Com', '2.7', '', 'G8III');
INSERT INTO StarMassType VALUES ('starmass10', '24 Sex', '1.54', '', 'K0IV');
INSERT INTO StarMassType VALUES ('starmass100', 'XO-1', '1.027', '', 'G1V');
INSERT INTO StarMassType VALUES ('starmass11', '2MASS J04372171+2651014', '0.17', '', 'MV');
INSERT INTO StarMassType VALUES ('starmass12', '2MASS J01225093-2439505', '0.353185', '', 'M3.5V');
INSERT INTO StarMassType VALUES ('starmass13', '2MASS J02192210-3925225', '0.240111', '', 'M6+L4');
```

# SQL for Inner Joins

6 tables:

```
SELECT StarDistanceLatLong.StarName, StarDistanceLatLong.LightYears,
ExoplanetStarName.PlanetName, ExoplanetDiscoveryFacility.DiscoveryFacility,
ObservatoriesAffiliationCityCountry.Country, ExoplanetMassYear.YearDiscovery,
StarMassType.StarType
FROM (((((StarDistanceLatLong
INNER JOIN ExoplanetStarName
ON StarDistanceLatLong.StarName = ExoplanetStarName.StarName)
INNER JOIN ExoplanetDiscoveryFacility
ON ExoplanetDiscoveryFacility.PlanetName = ExoplanetStarName.PlanetName)
INNER JOIN ObservatoriesAffiliationCityCountry
ON ExoplanetDiscoveryFacility.DiscoveryFacility =
ObservatoriesAffiliationCityCountry.Observatory)
INNER JOIN ExoplanetMassYear
ON ExoplanetStarName.PlanetName = ExoplanetMassYear.PlanetName)
INNER JOIN StarMassType
ON ExoplanetStarName.StarName = StarMassType.StarName)
;
```

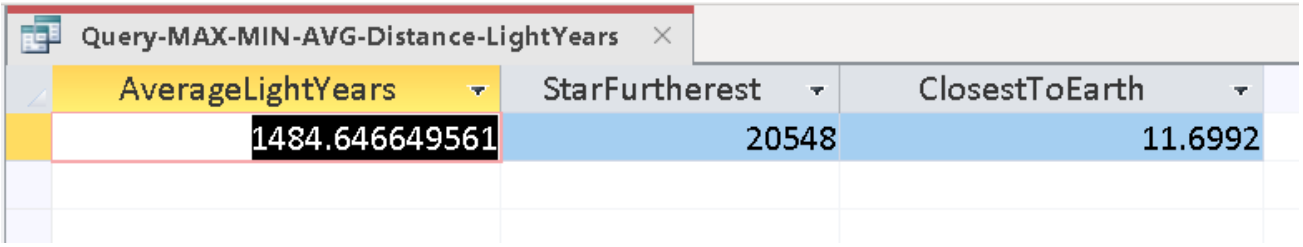
Query-Inner-Join-6-tables

| StarName | LightYears | PlanetName | DiscoveryFacility | Country | YearDiscover | StarType |
|---|---|---|---|---|---|---|
| 11 Com | 303.325 | 11 Com b | Xinglong Station | China | 2007 | G8III |
| 2MASS J19383260+4603591 | 1293 | 2MASS J19383260+46035 | Kepler Space Telescope | Earth-trailing | 2015 | sdBV |
| BD+63 1405 | 124.09 | BD+63 1405 b | Haute-Provence Observatory | France | 2021 | K0D |
| BD-00 4475 | 139.23 | BD-00 4475 b | Haute-Provence Observatory | France | 2021 | G0 |
| BD+55 362 | 171.7211 | BD+55 362 b | Haute-Provence Observatory | France | 2021 | K3 |
| BD+45 564 | 175.14 | BD+45 564 b | Haute-Provence Observatory | France | 2021 | K1 |
| 51 Peg | 50.1 | 51 Peg b | Haute-Provence Observatory | France | 1995 | G45 |
| 55 Cnc | 40 | 55 Cnc c | McDonald Observatory | USA | 2004 | G8V |
| BD+14 4559 | 161.2 | BD+14 4559 b | McDonald Observatory | USA | 2009 | K2V |
| BD+15 2940 | 1538.4717 | BD+15 2940 b | McDonald Observatory | USA | 2013 | K0 |
| BD+20 2457 | 5400 | BD+20 2457 b | McDonald Observatory | USA | 2009 | K2II |
| BD+20 274 | 3545.1739 | BD+20 274 b | McDonald Observatory | USA | 2012 | K5 |
| 55 Cnc | 40 | 55 Cnc e | McDonald Observatory | USA | 2004 | G8V |
| BD+48 738 | 2657.7246 | BD+48 738 b | McDonald Observatory | USA | 2011 | K0III |
| BD+49 828 | 1331.249 | BD+49 828 b | McDonald Observatory | USA | 2015 | KO |
| 7 Cma | 64.4195 | 7 CMa b | Anglo-Australian Telescope | Australia | 2011 | K1III |

# SQL Query Min/Max/Avg

Min/Max/Avg:

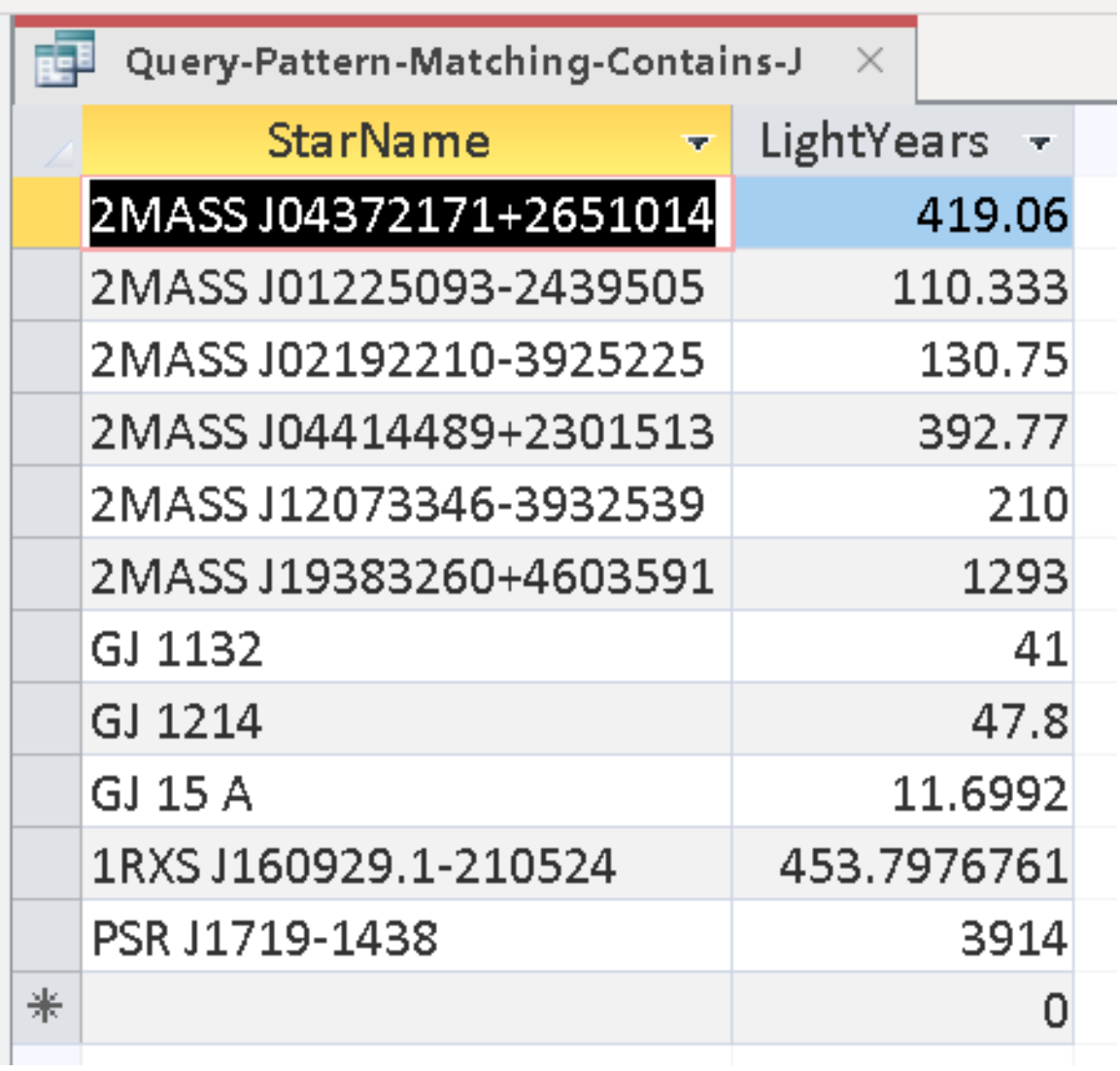
```
SELECT AVG(LightYears) AS AverageLightYears,
MAX(LightYears) AS StarFurtherest, MIN(LightYears)
AS ClosestToEarth
FROM StarDistanceLatLong;
```



# SQL Query Pattern Matching

Pattern Matching:

```
SELECT StarName, LightYears
FROM StarDistanceLatLong
WHERE StarName LIKE '*J*';
```



Query-Pattern-Matching-Contains-J

| StarName | LightYears |
|---|---|
| 2MASS J04372171+2651014 | 419.06 |
| 2MASS J01225093-2439505 | 110.333 |
| 2MASS J02192210-3925225 | 130.75 |
| 2MASS J04414489+2301513 | 392.77 |
| 2MASS J12073346-3932539 | 210 |
| 2MASS J19383260+4603591 | 1293 |
| GJ 1132 | 41 |
| GJ 1214 | 47.8 |
| GJ 15 A | 11.6992 |
| 1RXS J160929.1-210524 | 453.7976761 |
| PSR J1719-1438 | 3914 |
| | 0 |

# SQL Query AND Statement

AND statement:

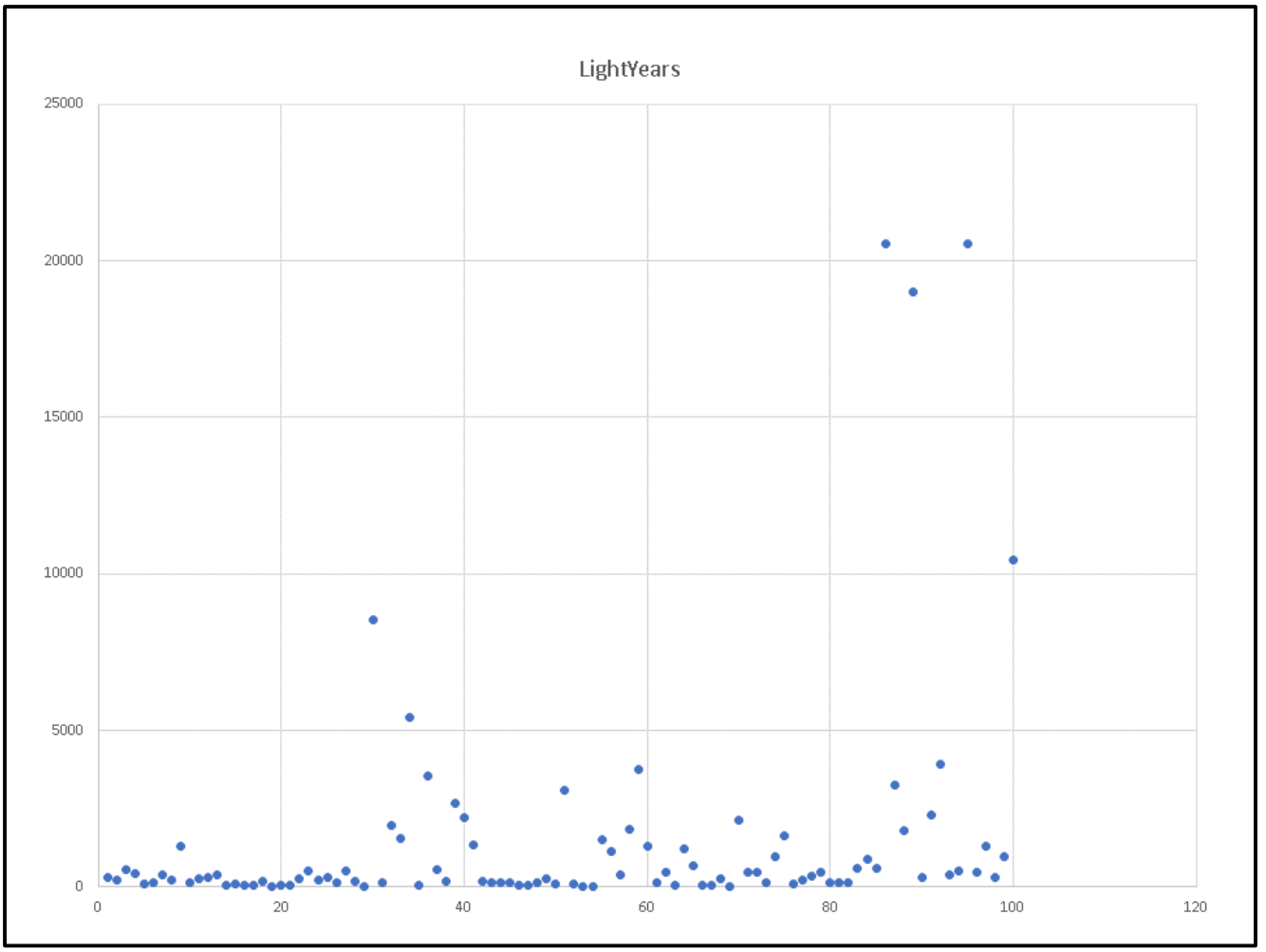
```
SELECT StarName, LightYears
FROM StarDistanceLatLong
WHERE LightYears>=1000 AND LightYears <= 2000
ORDER BY LightYears;
```

Query-Distance-Greater-1000-AND-Less-2000-OrderBy-LightYears

| StarName | LightYears |
|---|---|
| CoRoT-10 | 1125.2382 |
| Gaia-1 | 1201.2 |
| 2MASS J19383260+4603591 | 1293 |
| WASP-1 | 1300 |
| DP Leo | 1304.624 |
| BD+49 828 | 1331.249 |
| CoRoT-1 | 1500.3176 |
| BD+15 2940 | 1538.4717 |
| HATS-10 | 1617.7338 |
| NY Vir | 1800 |
| CoRoT-11 | 1826.4736 |
| BD+15 2375 | 1988.7561 |
| | 0 |

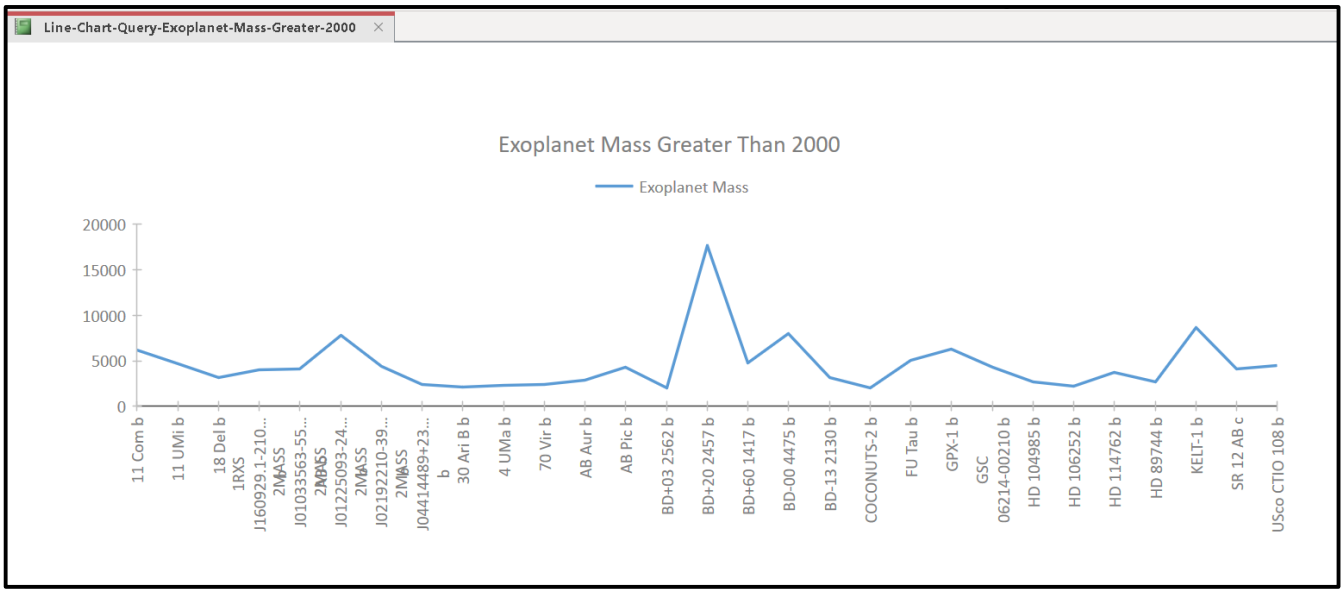
# Distance From Earth in Light Years

# Scatter Graph from Excel



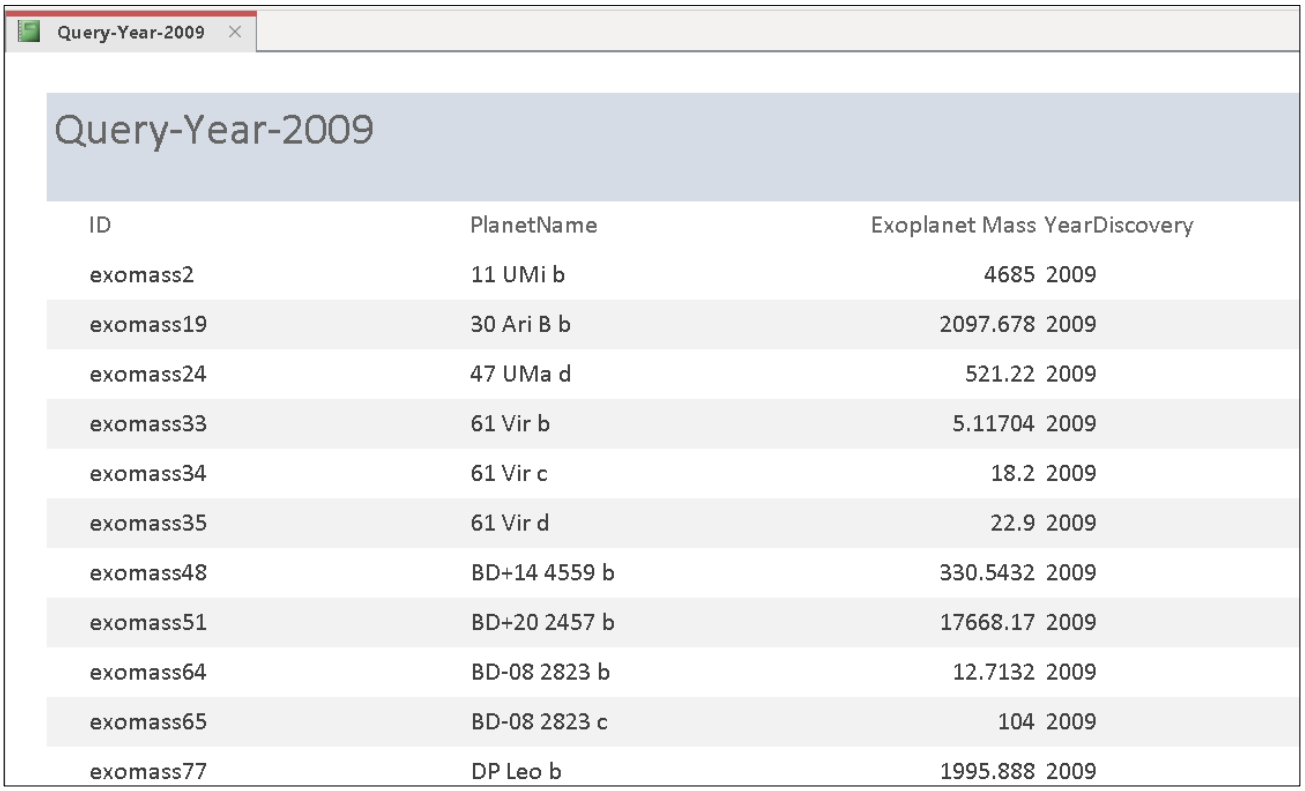
# Report in Access

# Line Chart



# Report in Access

# Query for Planets Discovered in 2009


Query-Year-2009

Query-Year-2009

| ID | PlanetName | Exoplanet Mass | YearDiscovery |
|---|---|---|---|
| exomass2 | 11 UMi b | 4685 | 2009 |
| exomass19 | 30 Ari B b | 2097.678 | 2009 |
| exomass24 | 47 UMa d | 521.22 | 2009 |
| exomass33 | 61 Vir b | 5.11704 | 2009 |
| exomass34 | 61 Vir c | 18.2 | 2009 |
| exomass35 | 61 Vir d | 22.9 | 2009 |
| exomass48 | BD+14 4559 b | 330.5432 | 2009 |
| exomass51 | BD+20 2457 b | 17668.17 | 2009 |
| exomass64 | BD-08 2823 b | 12.7132 | 2009 |
| exomass65 | BD-08 2823 c | 104 | 2009 |
| exomass77 | DP Leo b | 1995.888 | 2009 |

# Research

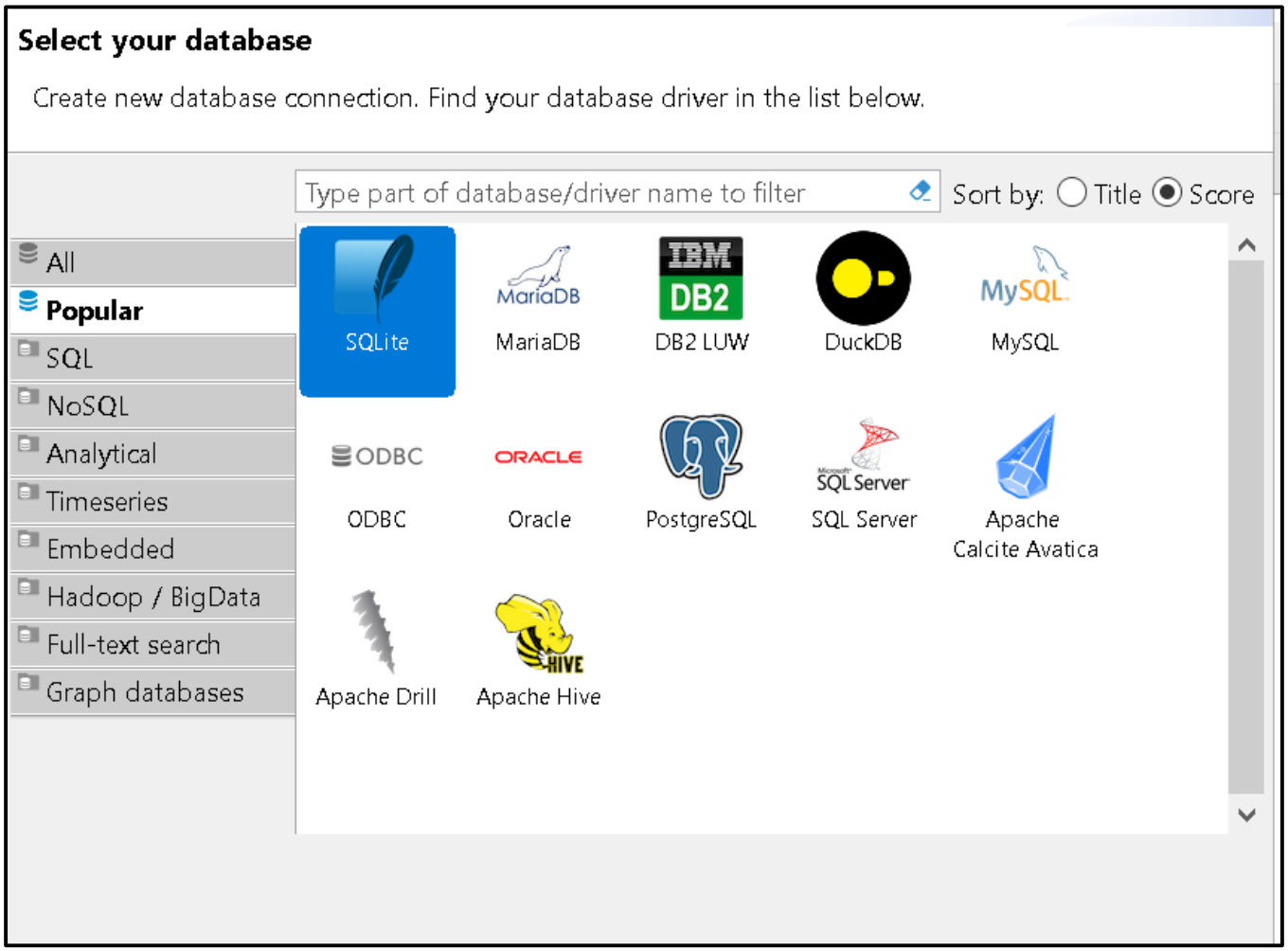
# Additional Relational Database Systems

# Dbeaver with SQLite

# phpMyAdmin with MariaDB

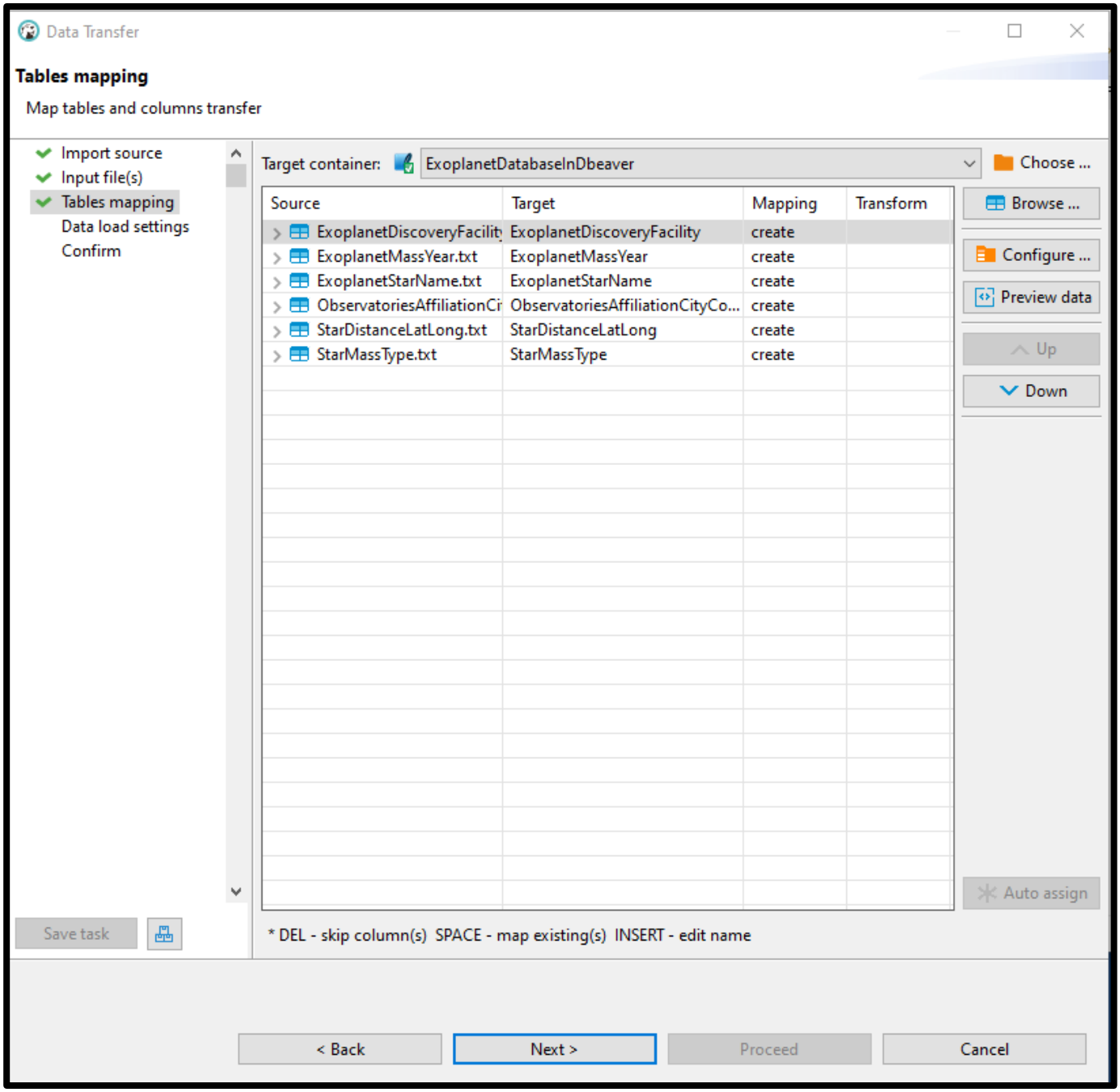
# Dbeaver front end with SQLite database back end


# Dbeaver allows admin to select database engine



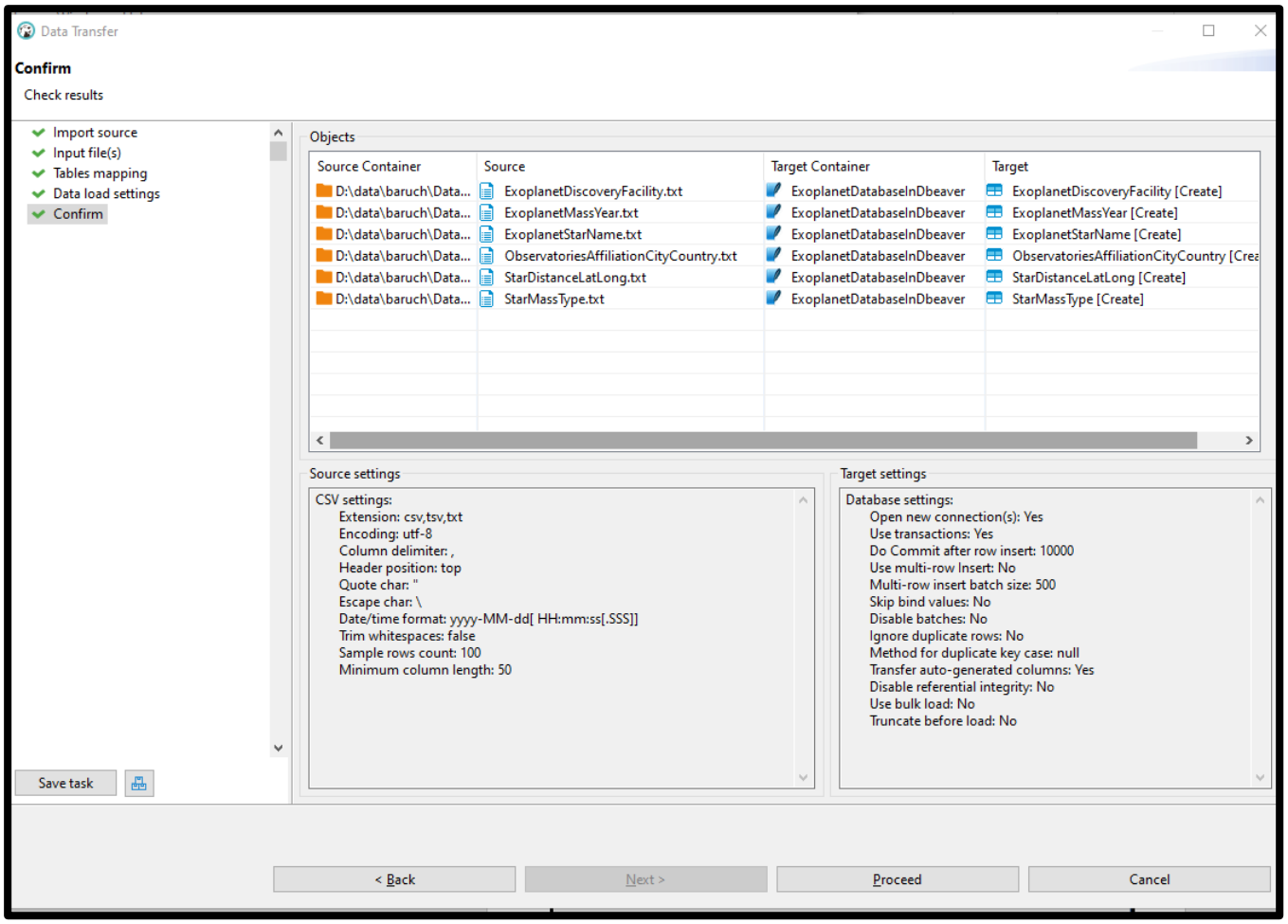

**Examples are: SQLite, MariaDB, DB2, DuckDB, MySQL, ODBC, Orable, PosgreSQL, SQL Server, Apache Calcite/Drill/Hive**

# Importing Text Files into Tables

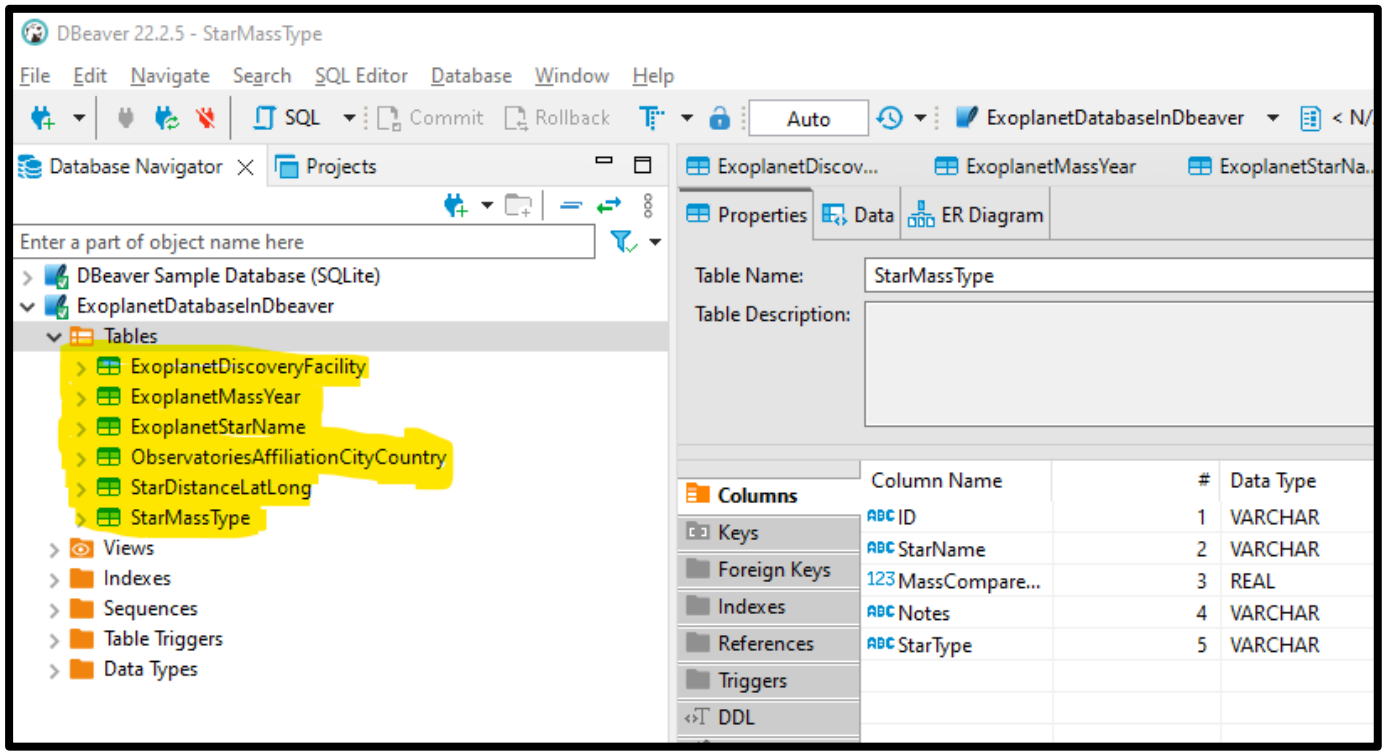



# Table Mapping

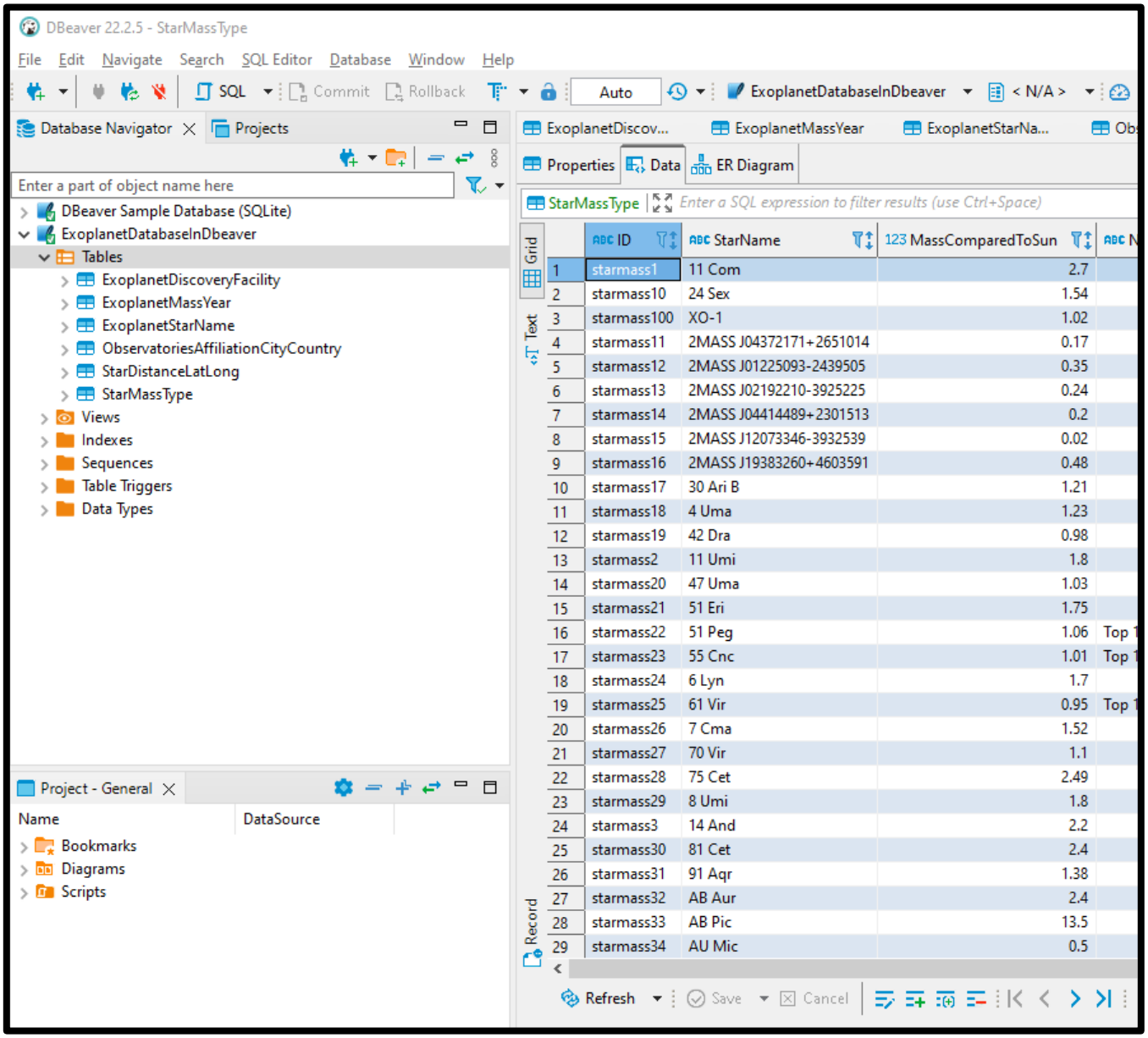
# Confirming Import



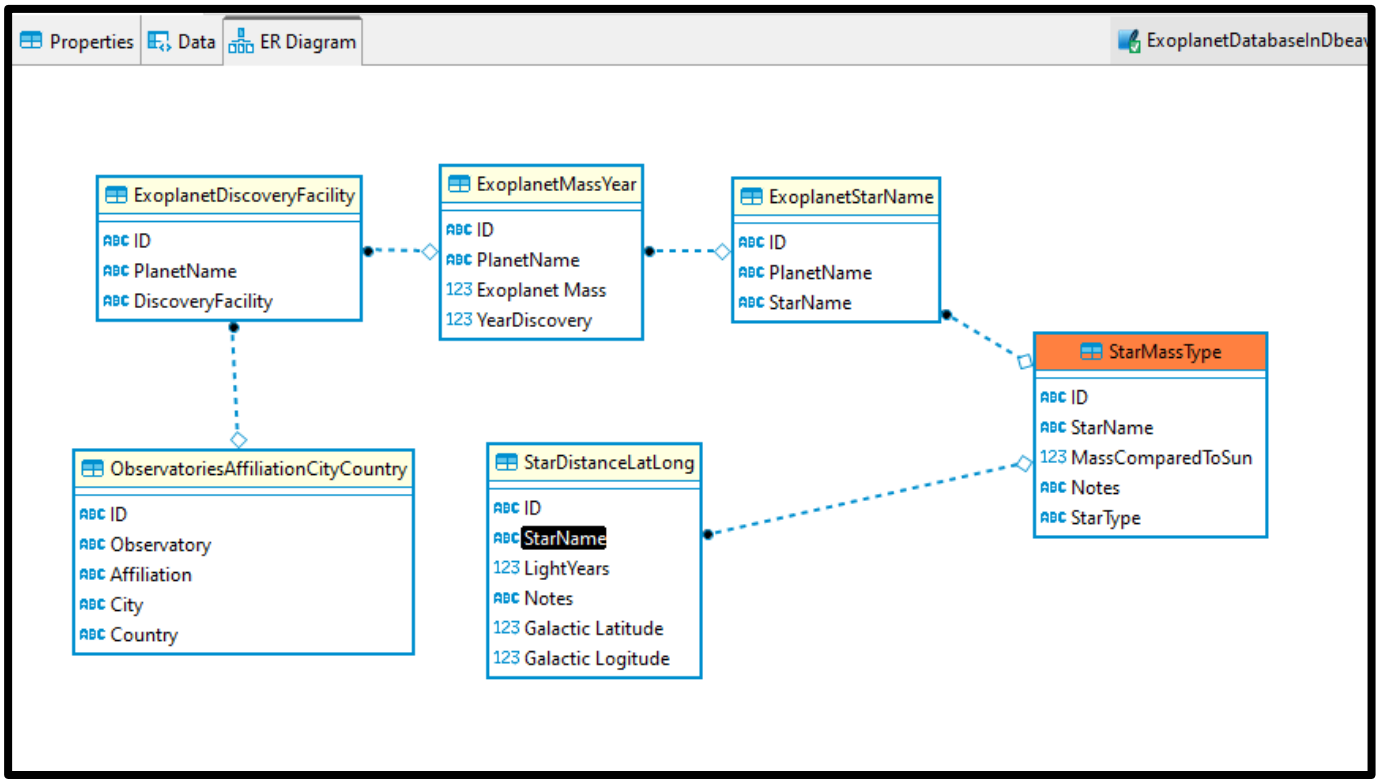
# All Tables Imported



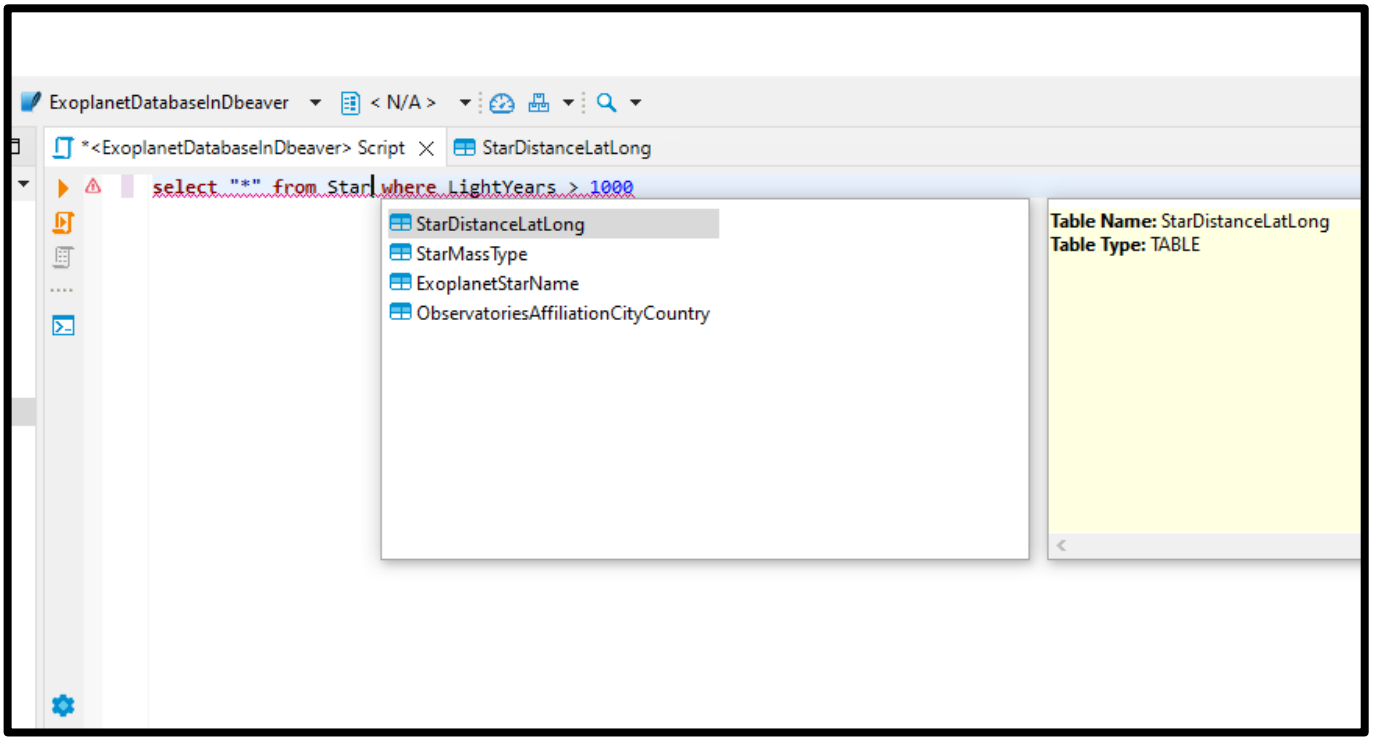
# Table Data Imported



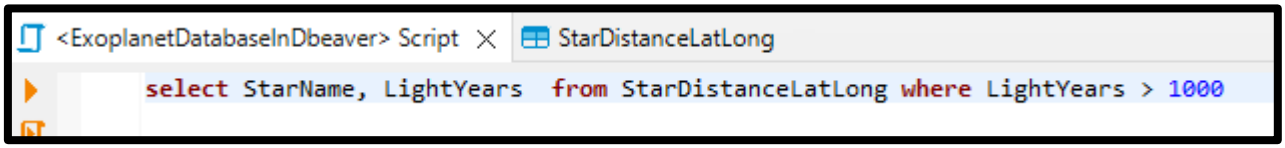
# ER Diagram Tool

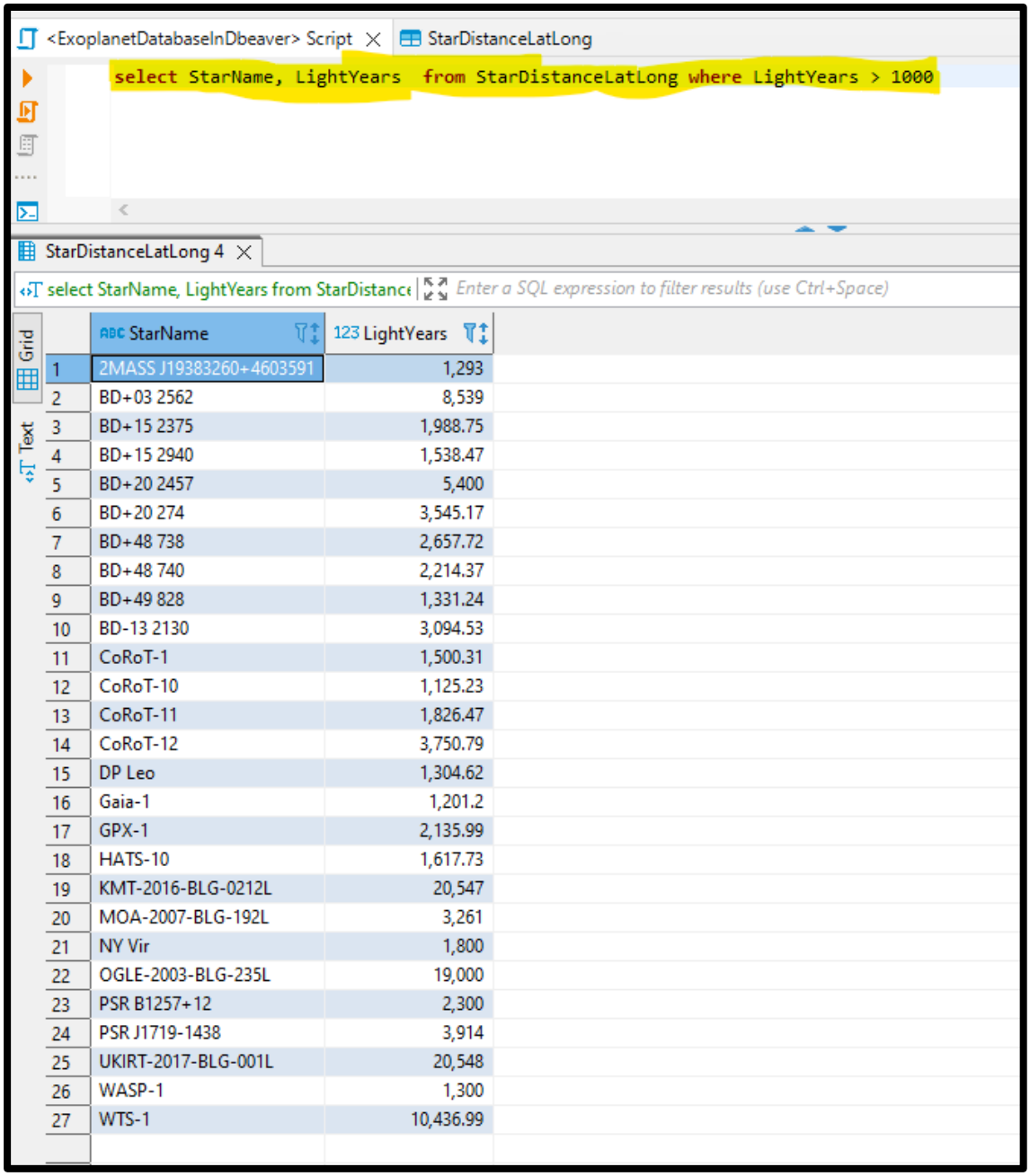


# SQL Editor Built In with Code Completion



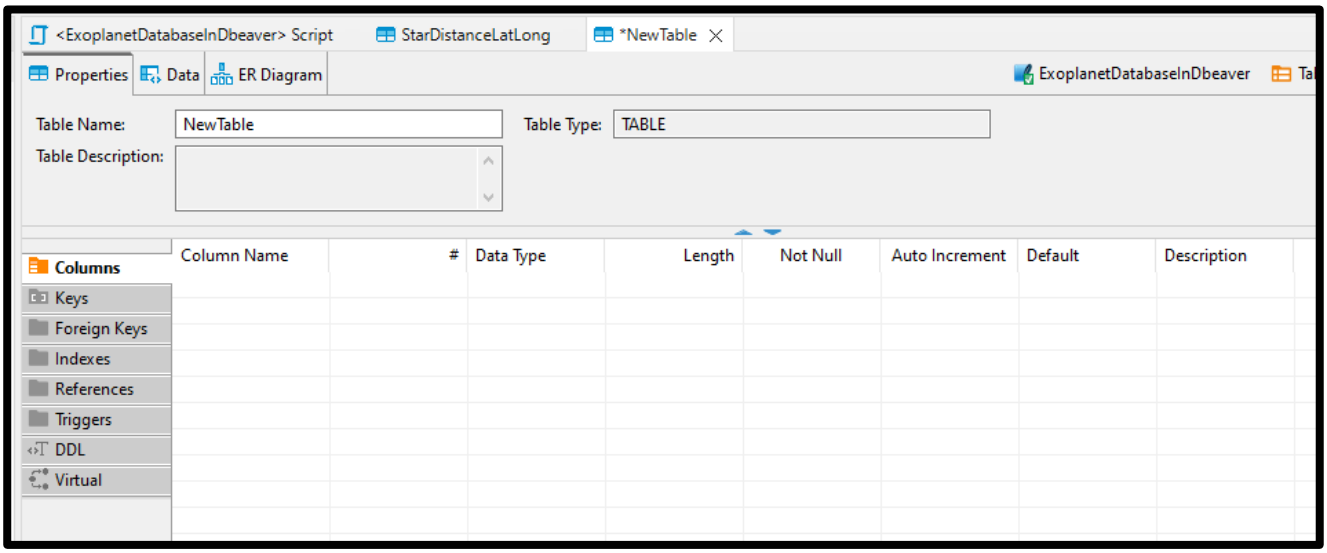
# Select Query for LightYears > 1000



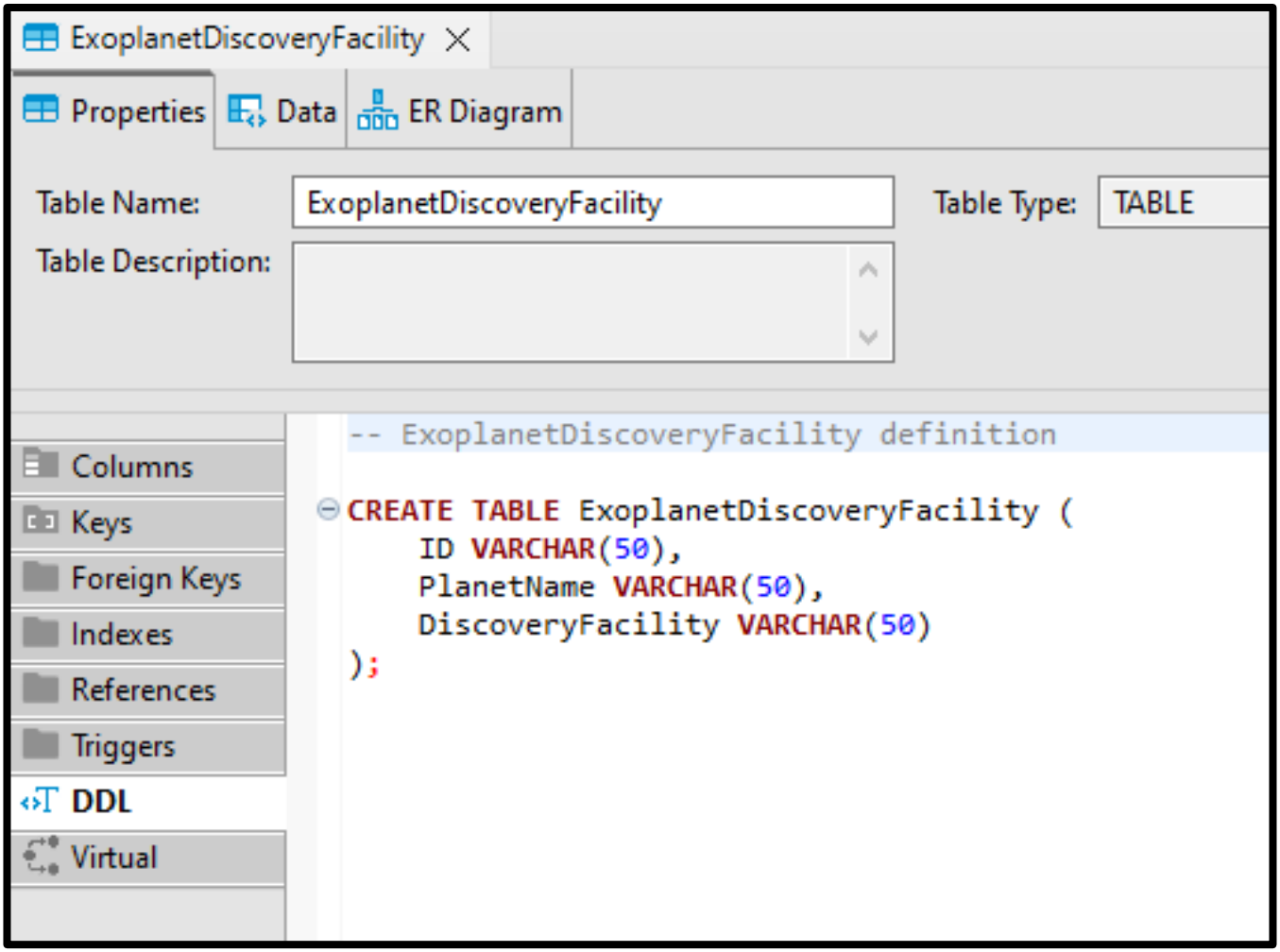




| | StarName | LightYears |
|---|---|---|
| 1 | 2MASS J19383260+4603591 | 1,293 |
| 2 | BD+03 2562 | 8,539 |
| 3 | BD+15 2375 | 1,988.75 |
| 4 | BD+15 2940 | 1,538.47 |
| 5 | BD+20 2457 | 5,400 |
| 6 | BD+20 274 | 3,545.17 |
| 7 | BD+48 738 | 2,657.72 |
| 8 | BD+48 740 | 2,214.37 |
| 9 | BD+49 828 | 1,331.24 |
| 10 | BD-13 2130 | 3,094.53 |
| 11 | CoRoT-1 | 1,500.31 |
| 12 | CoRoT-10 | 1,125.23 |
| 13 | CoRoT-11 | 1,826.47 |
| 14 | CoRoT-12 | 3,750.79 |
| 15 | DP Leo | 1,304.62 |
| 16 | Gaia-1 | 1,201.2 |
| 17 | GPX-1 | 2,135.99 |
| 18 | HATS-10 | 1,617.73 |
| 19 | KMT-2016-BLG-0212L | 20,547 |
| 20 | MOA-2007-BLG-192L | 3,261 |
| 21 | NY Vir | 1,800 |
| 22 | OGLE-2003-BLG-235L | 19,000 |
| 23 | PSR B1257+12 | 2,300 |
| 24 | PSR J1719-1438 | 3,914 |
| 25 | UKIRT-2017-BLG-001L | 20,548 |
| 26 | WASP-1 | 1,300 |
| 27 | WTS-1 | 10,436.99 |

# Create New Table Wizard



# Generates DDL Code

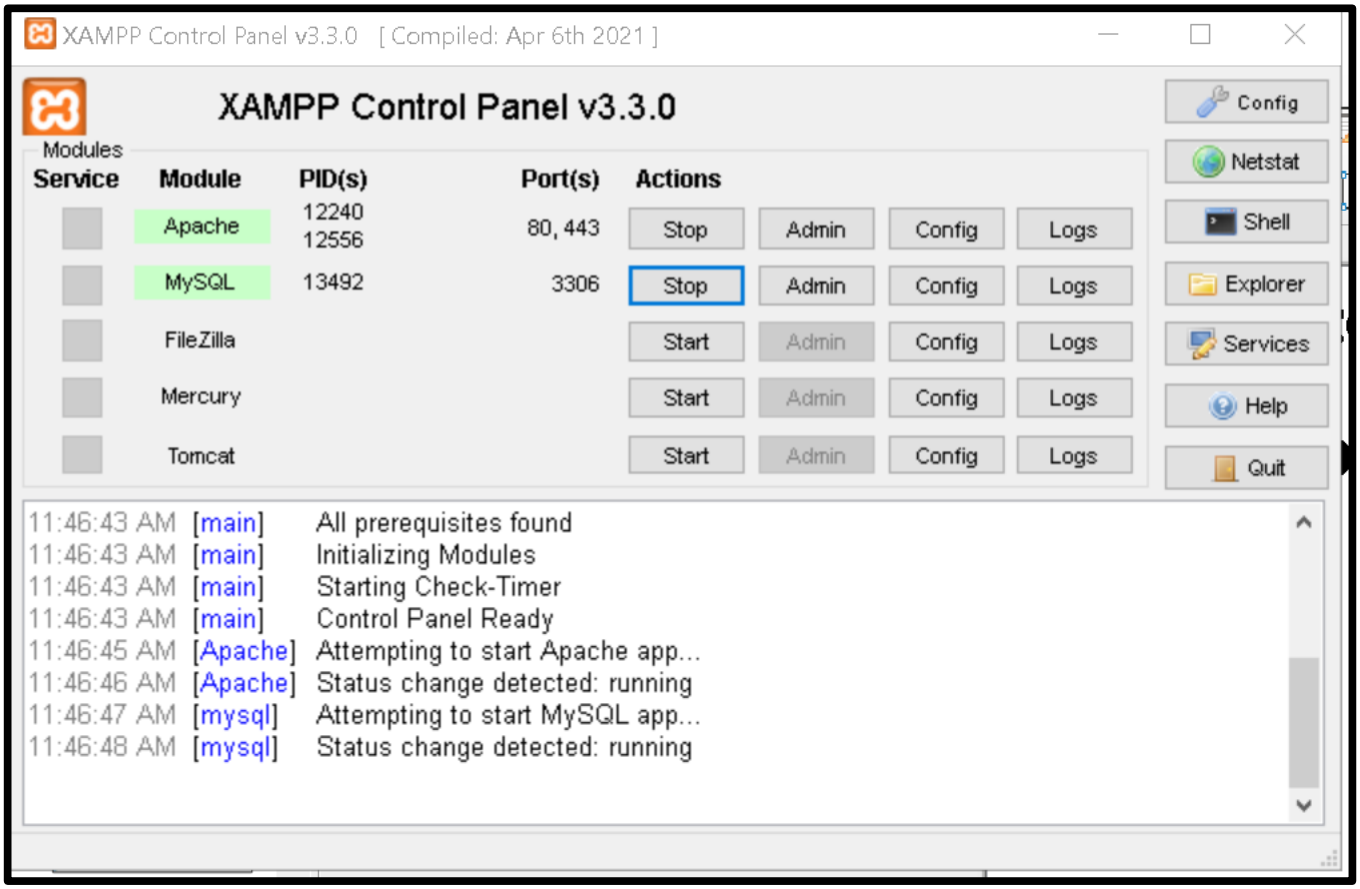


# phpMyAdmin front end with MariaDB database back end


# Sitting on Apache Web Server

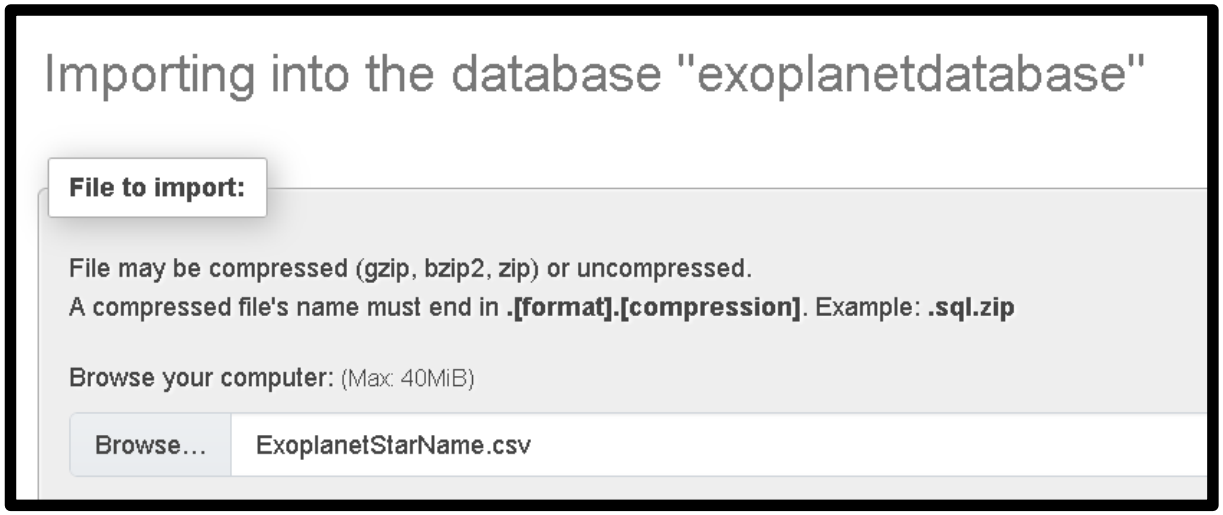

# Installed with XAMPP package on Windows

# XAMPP Control Panel

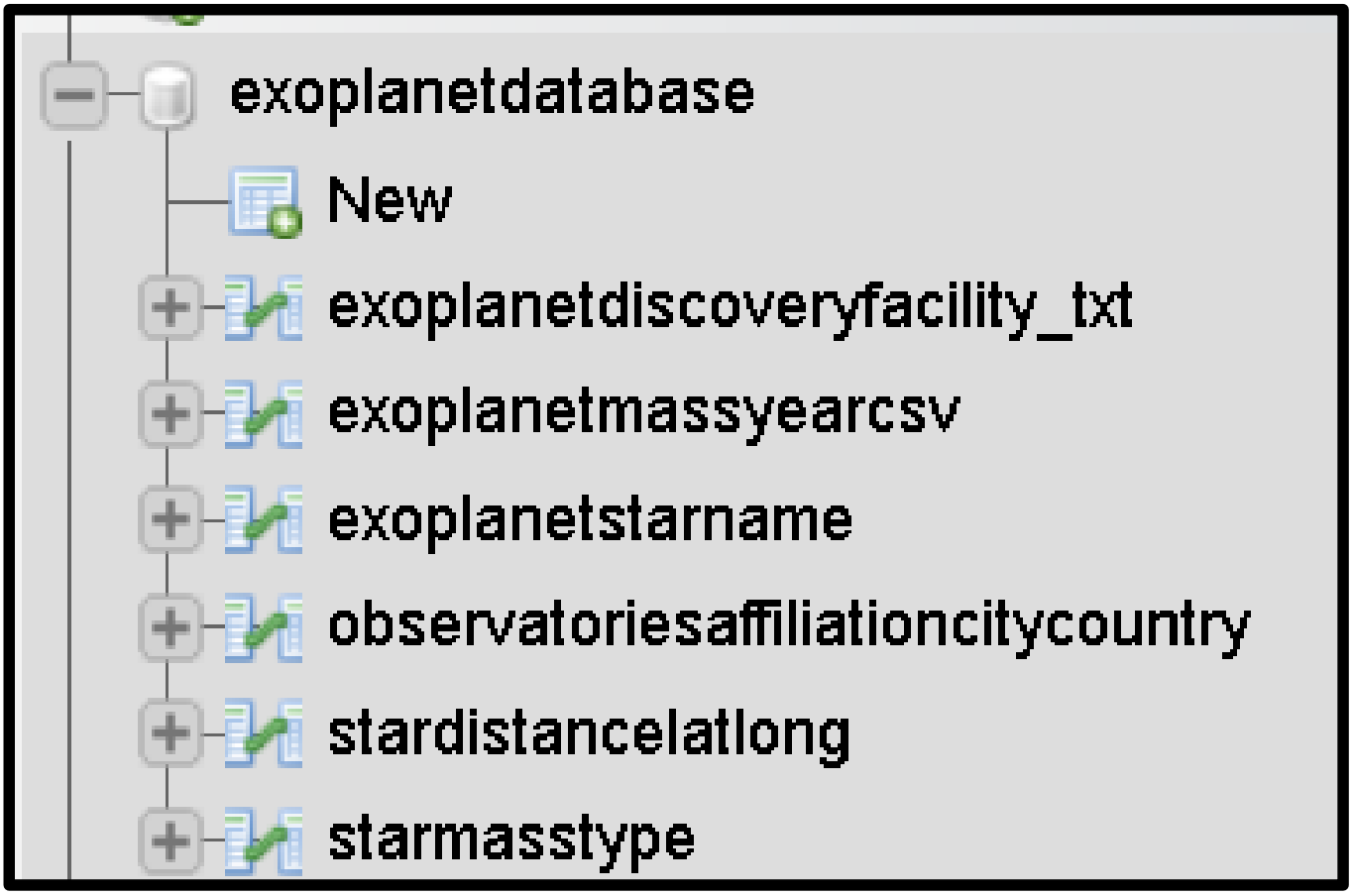



# Used to start/stop Apache web server and MariaDB

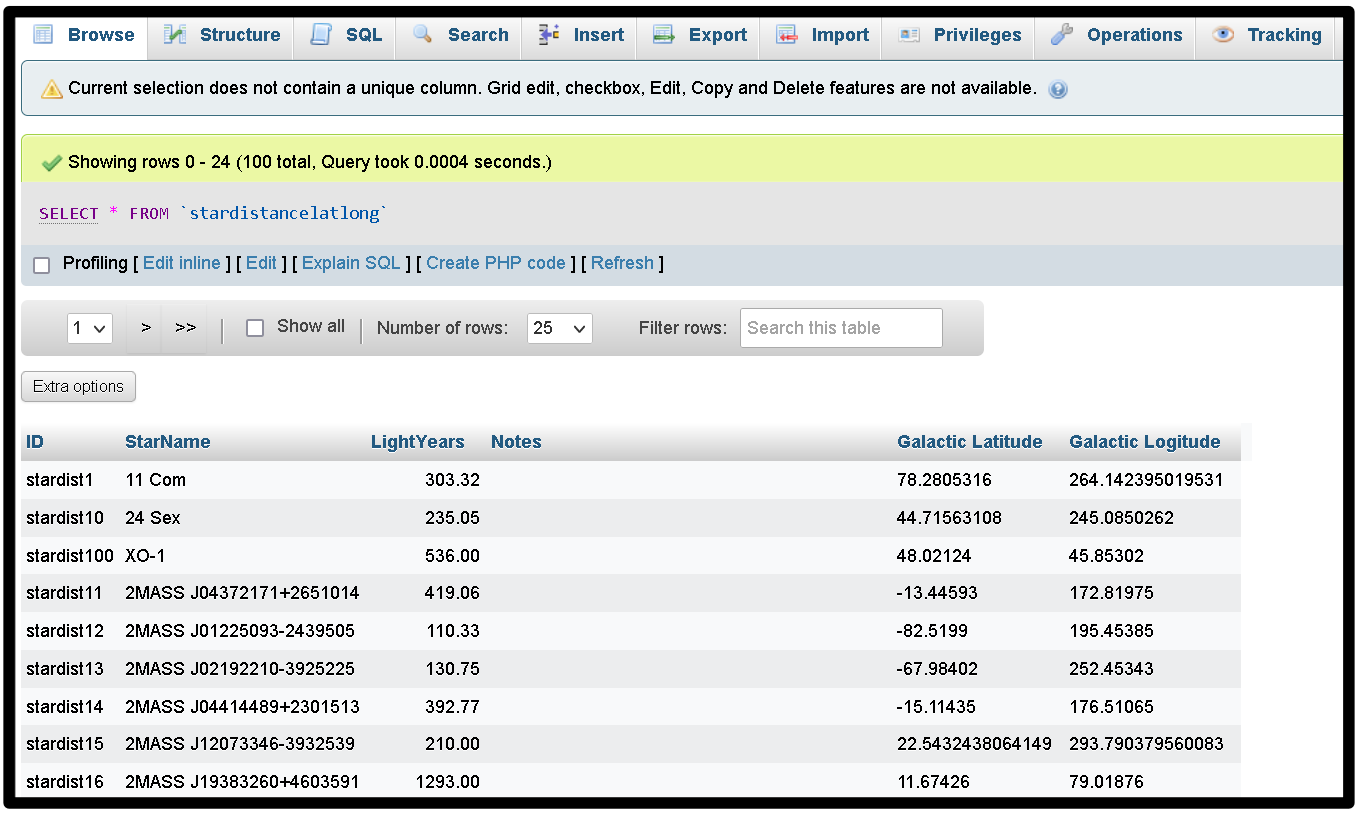
# Confirming Import of Text File



# All Tables Imported



# Table Data Imported Using Browse Function



Browse | Structure | SQL | Search | Insert | Export | Import | Privileges | Operations | Tracking

Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Showing rows 0 - 24 (100 total, Query took 0.0004 seconds.)

```
SELECT * FROM `stardistancelatlong`
```

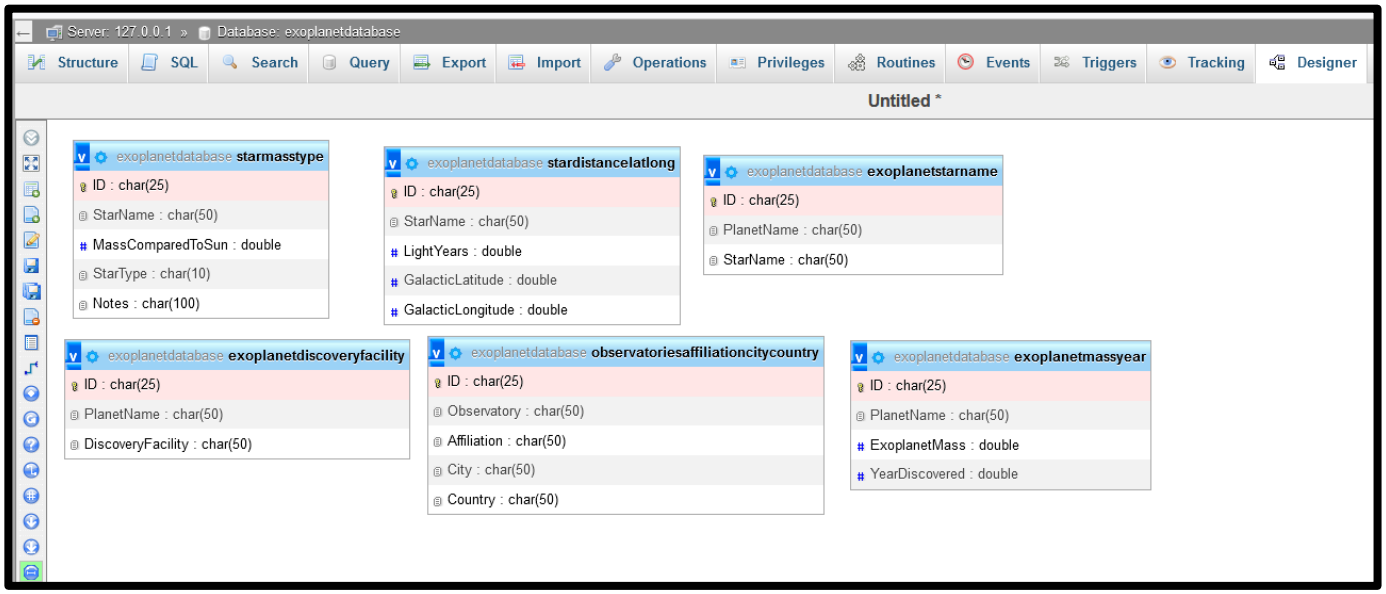
Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

1 > >> | Show all | Number of rows: 25 Filter rows: Search this table

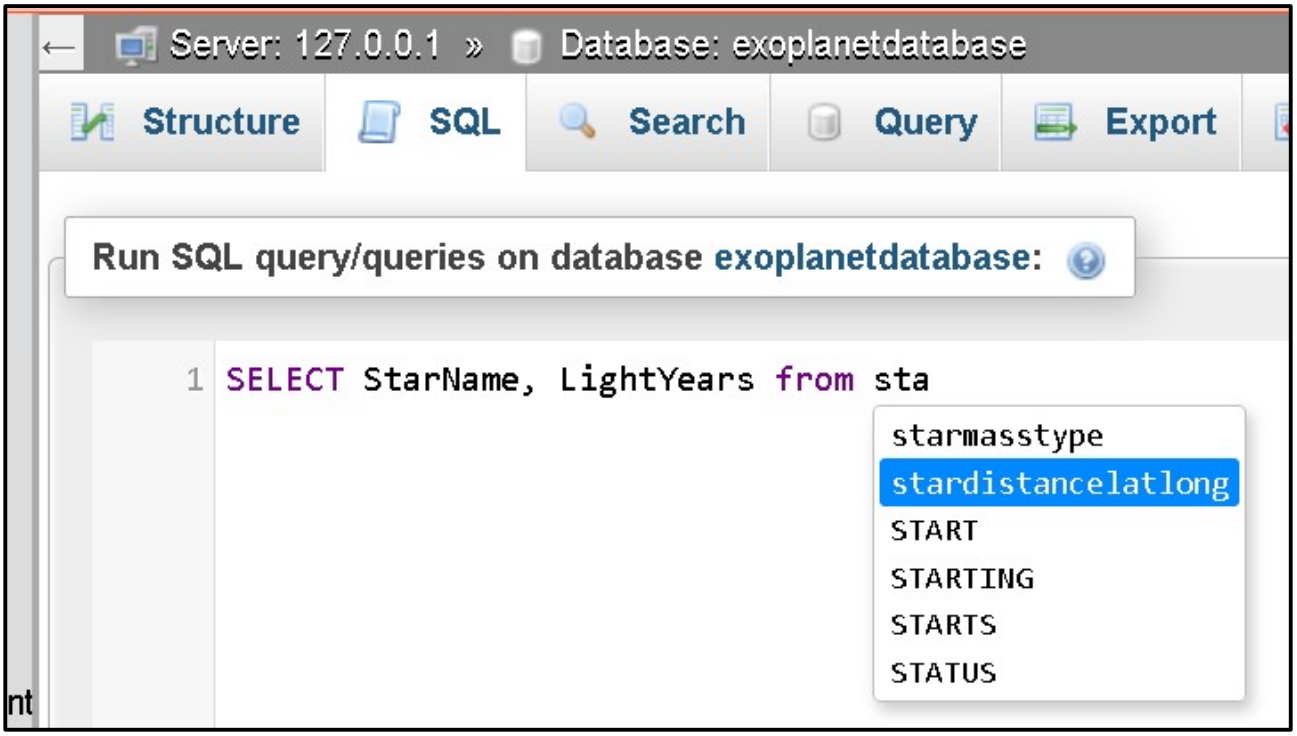
Extra options

| ID | StarName | LightYears | Notes | Galactic Latitude | Galactic Logitude |
|---|---|---|---|---|---|
| stardist1 | 11 Com | 303.32 | | 78.2805316 | 264.142395019531 |
| stardist10 | 24 Sex | 235.05 | | 44.71563108 | 245.0850262 |
| stardist100 | XO-1 | 536.00 | | 48.02124 | 45.85302 |
| stardist11 | 2MASS J04372171+2651014 | 419.06 | | -13.44593 | 172.81975 |
| stardist12 | 2MASS J01225093-2439505 | 110.33 | | -82.5199 | 195.45385 |
| stardist13 | 2MASS J02192210-3925225 | 130.75 | | -67.98402 | 252.45343 |
| stardist14 | 2MASS J04414489+2301513 | 392.77 | | -15.11435 | 176.51065 |
| stardist15 | 2MASS J12073346-3932539 | 210.00 | | 22.5432438064149 | 293.790379560083 |
| stardist16 | 2MASS J19383260+4603591 | 1293.00 | | 11.67426 | 79.01876 |

# Database Designer Tool



# SQL Editor Built In with Code Completion



# Select Query for LightYears > 1000

```
SELECT StarName, LightYears from stardistancelatlong WHERE LightYears > 2000;
```

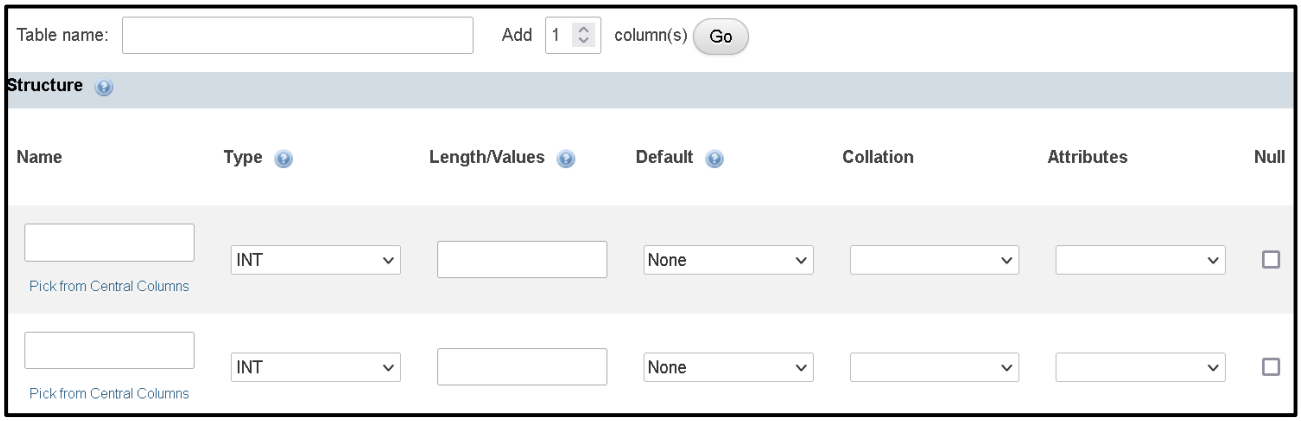
Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

Show all | Number of rows: 25 Filter rows: Search this table

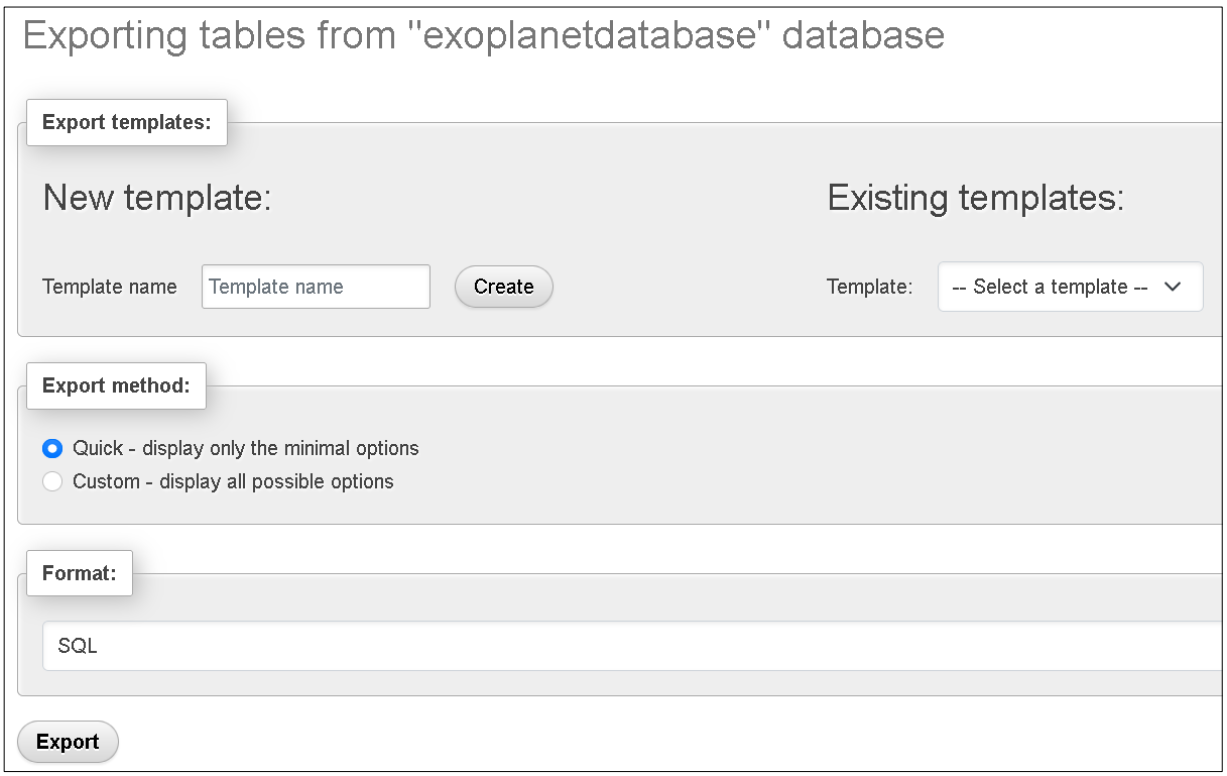
Extra options

| StarName | LightYears |
|---|---|
| BD+03 2562 | 8539.00 |
| BD+20 2457 | 5400.00 |
| BD+20 274 | 3545.17 |
| BD+48 738 | 2657.72 |
| BD+48 740 | 2214.37 |
| BD-13 2130 | 3094.53 |
| CoRoT-12 | 3750.79 |
| GPX-1 | 2135.99 |

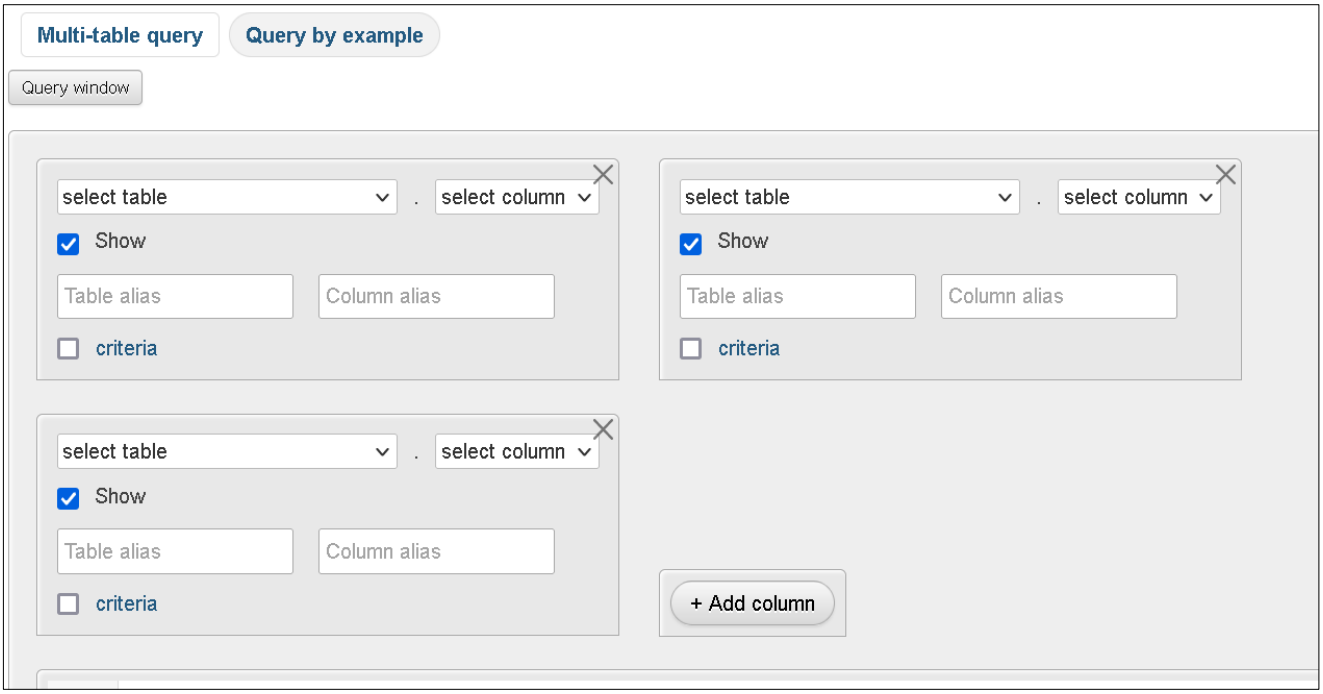
# Create New Table Wizard



# Export Full Database into SQL File



# Query Builder



# When are we leaving?