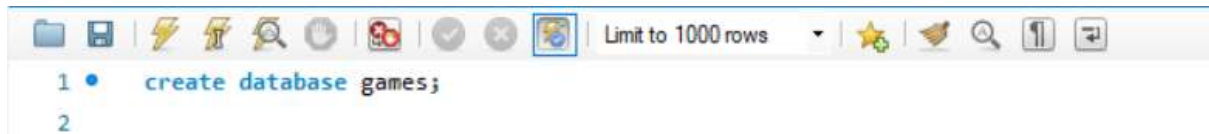


### --- Creation of database in MySQL Workbench: -

We want to create “games database” to store Olympics data as a table in games database

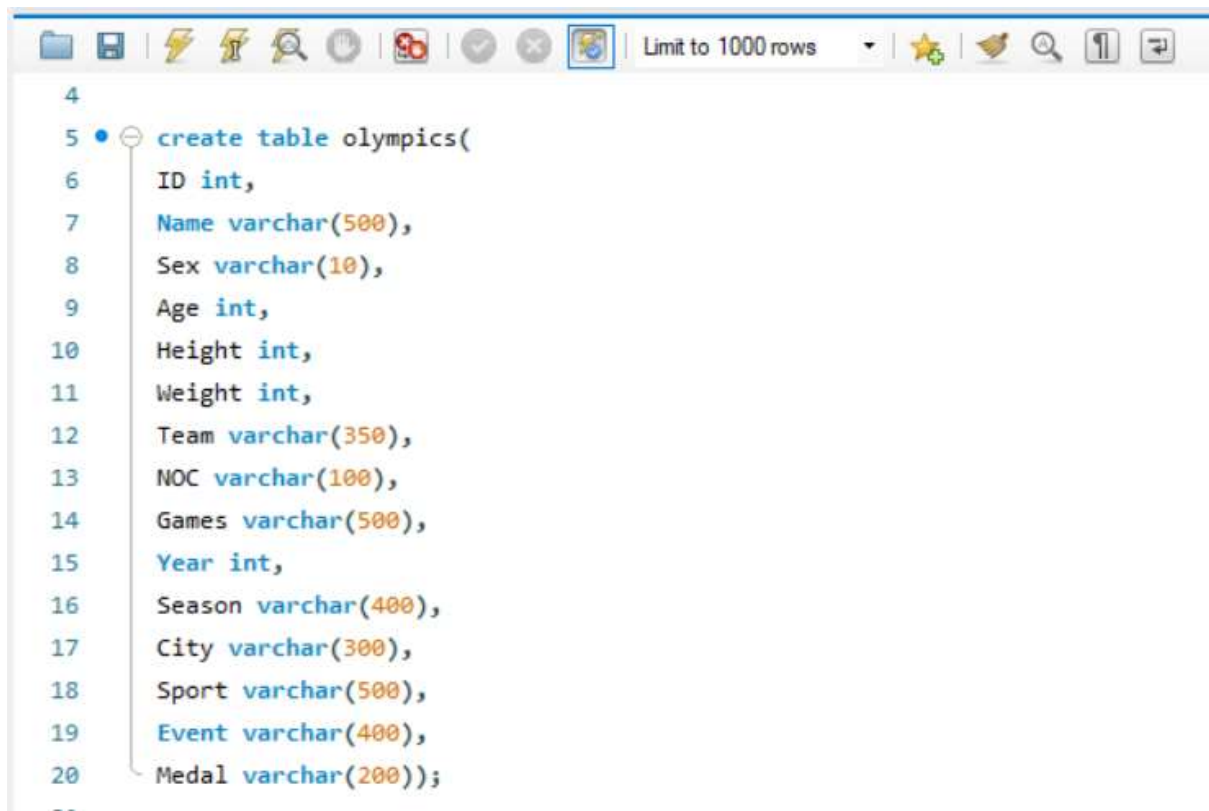


```
1 • create database games;
2
```

### --- Using the Created database: -

```
2
3 • use games;
4
```

### --- Creation of Olympics table: -



```
4
5 • create table olympics(
6     ID int,
7     Name varchar(500),
8     Sex varchar(10),
9     Age int,
10    Height int,
11    Weight int,
12    Team varchar(350),
13    NOC varchar(100),
14    Games varchar(500),
15    Year int,
16    Season varchar(400),
17    City varchar(300),
18    Sport varchar(500),
19    Event varchar(400),
20    Medal varchar(200));
21
```

### --- Displaying the created table using SELECT: -

```
21
22 • select * from olympics;
```

### --- Showing Variables: -

```
23
24 • show variables like "secure_file_priv";
25
```

**“secure\_file\_priv”:** This MySQL system variable restricts file access for certain commands like LOAD DATA INFILE, SELECT INTO OUTFILE, etc. It ensures that these commands can only be used within a specific directory.

### --- Loading the Olympics Dataset externally using “Data infile”: -

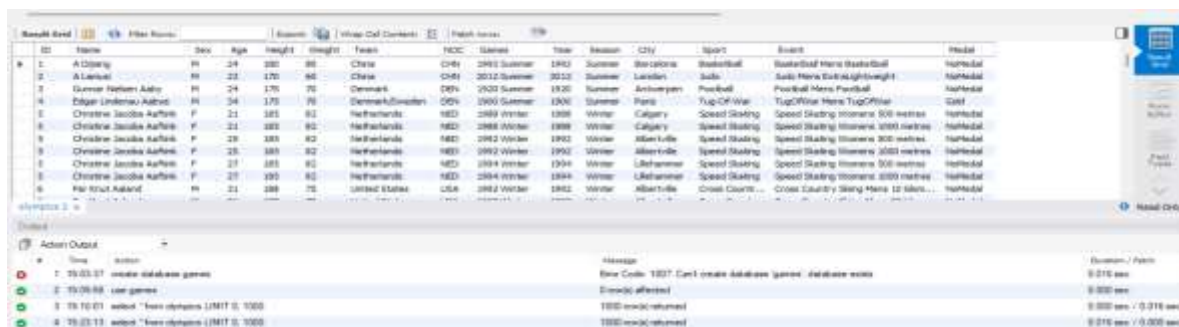
```
25
26 • load data infile "C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/Athletes_Transformed.csv"
27 into table olympics
28 fields terminated by ','
29 enclosed by '"'
30 lines terminated by '\r\n'
31 ignore 1 rows;
32
```

- **LOAD DATA INFILE:** This statement loads data from a file into a table.
- **INTO TABLE olympics:** Specifies the table into which the data will be loaded.
- **FIELDS TERMINATED BY ',':** Specifies that fields in the CSV file are separated by commas.
- **ENCLOSED BY '"':** Indicates that fields in the file are enclosed by double quotes.
- **LINES TERMINATED BY '\r\n':** Specifies that lines in the file end with \r\n (carriage return and line feed), which is typical for files created on Windows.
- **IGNORE 1 ROWS:** Skips the first row, often used to ignore the header row in a CSV file.

### --- Showing the data inserted into olympics table created: -

```
32
33 • select * from olympics;
34
```

### OUTPUT: -



| ID | Name               | Sex | Age | Height | Weight | Team           | NOC | Games       | Year | Season | City     | Sport         | Event                             | Medal |
|----|--------------------|-----|-----|--------|--------|----------------|-----|-------------|------|--------|----------|---------------|-----------------------------------|-------|
| 1  | A. Doping          | M   | 24  | 180    | 80     | China          | CHN | 2000 Summer | 2000 | Summer | Sarajevo | Basketball    | Basketball Men's Basketball       | Gold  |
| 2  | A. Lando           | M   | 22  | 170    | 60     | China          | CHN | 2012 Summer | 2012 | Summer | London   | Sudo          | Sudo Men's Bantamweight           | Gold  |
| 3  | Gunnar Nelson      | M   | 24  | 170    | 70     | Denmark        | DEN | 2000 Summer | 2000 | Summer | Atlanta  | Football      | Football Men's Football           | Gold  |
| 4  | Edgar Linderoth    | M   | 34  | 170    | 70     | Denmark/Sweden | DEN | 1900 Summer | 1900 | Summer | Paris    | Tug-Of-War    | Tug-Of-War Men's Tug-Of-War       | Gold  |
| 5  | Christine Jacobsen | F   | 21  | 165    | 60     | Netherlands    | NED | 2000 Winter | 2000 | Winter | Calgary  | Speed Skating | Speed Skating Women's 500 metres  | Gold  |
| 6  | Christine Jacobsen | F   | 21  | 165    | 60     | Netherlands    | NED | 2000 Winter | 2000 | Winter | Calgary  | Speed Skating | Speed Skating Women's 1000 metres | Gold  |
| 7  | Christine Jacobsen | F   | 21  | 165    | 60     | Netherlands    | NED | 2000 Winter | 2000 | Winter | Calgary  | Speed Skating | Speed Skating Women's 1500 metres | Gold  |
| 8  | Christine Jacobsen | F   | 21  | 165    | 60     | Netherlands    | NED | 2000 Winter | 2000 | Winter | Calgary  | Speed Skating | Speed Skating Women's 500 metres  | Gold  |
| 9  | Christine Jacobsen | F   | 21  | 165    | 60     | Netherlands    | NED | 2000 Winter | 2000 | Winter | Calgary  | Speed Skating | Speed Skating Women's 1000 metres | Gold  |
| 10 | Christine Jacobsen | F   | 21  | 165    | 60     | Netherlands    | NED | 2000 Winter | 2000 | Winter | Calgary  | Speed Skating | Speed Skating Women's 1500 metres | Gold  |

## -- SQL PROJECT

-- 1. Show how many medal counts present for entire data: -

```
SELECT medal,count(Medal) as Medalcounts FROM olympics
WHERE medal != 'Nomedal'
GROUP BY medal;
```

OUTPUT: -

| Result Grid | Filter Rows: | Export:     | Wrap Cell Content: |
|-------------|--------------|-------------|--------------------|
|             |              |             |                    |
|             | medal        | Medalcounts |                    |
| ▶           | Gold         | 26744       |                    |
|             | Bronze       | 26590       |                    |
|             | Silver       | 26232       |                    |

-- 2. Show count of unique sports present in Olympics: -

```
43 • SELECT COUNT(DISTINCT(SPORT)) AS UniqueSport
44 FROM olympics;
45
```

OUTPUT: -

| Result Grid | Filter Rows: | Export: | Wrap Cell Content: |
|-------------|--------------|---------|--------------------|
|             |              |         |                    |
|             | UniqueSport  |         |                    |
| ▶           | 66           |         |                    |

-- 3. Show how many different medals won by team India: -

```
47 • SELECT TEAM,MEDAL, COUNT(MEDAL) AS Medalcnt
48 FROM olympics
49 WHERE team = 'India' and medal != 'Nomedal'
50 GROUP BY TEAM,MEDAL;
```

OUTPUT: -

| Result Grid | Filter Rows: | Export: | Wrap Cell Content: |
|-------------|--------------|---------|--------------------|
|             |              |         |                    |
|             | TEAM         | MEDAL   | Medalcnt           |
| ▶           | India        | Gold    | 276                |
|             | India        | Silver  | 38                 |
|             | India        | Bronze  | 80                 |

-- 4. Show event wise medals won by India show from highest to lowest medals won in order: -

```
54 • SELECT EVENT,COUNT(*) AS Eventcnt FROM olympics
55 WHERE team = 'India' and medal != 'Nomedal'
56 GROUP BY EVENT
57 ORDER BY Eventcnt DESC;
```

OUTPUT: -

| Result Grid                              |          |                    |
|--|----------|--------------------|
| Filter Rows:                             | Export:  | Wrap Cell Content: |
| EVENT                                    | Eventcnt |                    |
| Hockey Mens Hockey                       | 346      |                    |
| Alpinism Mixed Alpinism                  | 14       |                    |
| Shooting Mens Air Rifle 10 metres        | 4        |                    |
| Wrestling Mens Welterweight Freestyle    | 4        |                    |
| Badminton Womens Singles                 | 4        |                    |
| Wrestling Mens Lightweight Freestyle     | 2        |                    |
| Wrestling Mens Bantamweight Freestyle    | 2        |                    |
| Boxing Womens Flyweight                  | 2        |                    |
| Shooting Mens RapidFire Pistol 25 metres | 2        |                    |
| Wrestling Womens Lightweight Freestyle   | 2        |                    |
| Weightlifting Womens LightHeavyweight    | 2        |                    |

-- 5. Show event wise medals won by India in order of year: -

```
61 • SELECT YEAR,EVENT,COUNT(MEDAL) AS medalcnt FROM olympics
62 WHERE team = 'India' and medal != 'Nomedal'
63 GROUP BY YEAR,EVENT
64 ORDER BY YEAR;
```

OUTPUT: -

| Result Grid  |                                       |                    |
|--------------|---------------------------------------|--------------------|
| Filter Rows: | Export:                               | Wrap Cell Content: |
| YEAR         | EVENT                                 | medalcnt           |
| 1900         | Athletics Mens 200 metres             | 2                  |
| 1900         | Athletics Mens 200 metres Hurdles     | 2                  |
| 1924         | Alpinism Mixed Alpinism               | 14                 |
| 1928         | Hockey Mens Hockey                    | 28                 |
| 1932         | Hockey Mens Hockey                    | 30                 |
| 1936         | Hockey Mens Hockey                    | 38                 |
| 1948         | Hockey Mens Hockey                    | 40                 |
| 1952         | Hockey Mens Hockey                    | 28                 |
| 1952         | Wrestling Mens Bantamweight Freestyle | 2                  |
| 1956         | Hockey Mens Hockey                    | 34                 |
| 1960         | Hockey Mens Hockey                    | 26                 |

-- 6. Show country who won maximum medals: -

```
68 • SELECT TEAM,COUNT(MEDAL) AS medalcnt FROM olympics
69     GROUP BY TEAM
70     ORDER BY medalcnt DESC
71     LIMIT 1;
```

OUTPUT: -

| Result Grid   | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows: |
|---------------|--------------|---------|--------------------|-------------|
| TEAM          | medalcnt     |         |                    |             |
| United States | 35694        |         |                    |             |

-- 7. Show top 10 countries who won gold: -

```
74 • SELECT TEAM,COUNT(MEDAL) AS medalcnt FROM olympics
75     WHERE medal = 'gold'
76     GROUP BY TEAM
77     ORDER BY medalcnt DESC
78     LIMIT 10;
```

OUTPUT: -

| Result Grid   | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows: |
|---------------|--------------|---------|--------------------|-------------|
| TEAM          | medalcnt     |         |                    |             |
| United States | 4948         |         |                    |             |
| Soviet Union  | 2116         |         |                    |             |
| Germany       | 1358         |         |                    |             |
| Italy         | 1070         |         |                    |             |
| Great Britain | 1038         |         |                    |             |
| France        | 910          |         |                    |             |
| Sweden        | 902          |         |                    |             |
| Hungary       | 864          |         |                    |             |
| Canada        | 844          |         |                    |             |
| East Germany  | 738          |         |                    |             |

-- 8. Show in which year did United states won most gold medal: -

```
83 • SELECT TEAM,YEAR,COUNT(MEDAL) AS Goldmedals FROM olympics
84     WHERE team = 'United States' and medal = 'Gold'
85     GROUP BY TEAM,YEAR
86     ORDER BY Goldmedals DESC
87     LIMIT 1;
```



OUTPUT: -

| Result Grid   | Filter Rows: | Export:    | Wrap Cell Content: | Fetch rows: |
|---------------|--------------|------------|--------------------|-------------|
| TEAM          | YEAR         | Goldmedals |                    |             |
| United States | 1984         | 380        |                    |             |

-- 9. In which sports United States has most medals: -

```
91 • SELECT TEAM,SPORT,COUNT(MEDAL) AS Medalcnt FROM olympics
92 WHERE team = 'United States'
93 GROUP BY TEAM, SPORT
94 ORDER BY Medalcnt DESC
95 LIMIT 1;
```

OUTPUT: -

| Result Grid   | Filter Rows: | Export:  | Wrap Cell Content: | Fetch rows: |
|---------------|--------------|----------|--------------------|-------------|
| TEAM          | SPORT        | Medalcnt |                    |             |
| United States | Athletics    | 6404     |                    |             |

-- 10. Find top three players who won most medals along with their sports and country:

-

```
99 • SELECT NAME, COUNT(MEDAL) AS MostMedals, SPORT, TEAM FROM olympics
100 GROUP BY NAME,SPORT,TEAM
101 ORDER BY MostMedals DESC
102 LIMIT 3;
```

OUTPUT: -

| Result Grid              | Filter Rows: | Export:          | Wrap Cell Content: | Fetch rows: |
|--------------------------|--------------|------------------|--------------------|-------------|
| NAME                     | MostMedals   | SPORT            | TEAM               |             |
| Robert Tait McKenzie     | 116          | Art Competitions | Canada             |             |
| Heikki Ilmari Savolainen | 78           | Gymnastics       | Finland            |             |
| Joseph Josy Stoffel      | 76           | Gymnastics       | Luxembourg         |             |

-- 11. Find player with most gold medals in cycling along with his country: -

```
106 • SELECT NAME, COUNT(MEDAL) AS medalcnt, SPORT, TEAM FROM olympics
107 WHERE sport = 'cycling'
108 GROUP BY NAME,SPORT,TEAM
109 ORDER BY medalcnt DESC
110 LIMIT 1;
```

OUTPUT: -

| Result Grid  | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows: |
|--------------|--------------|---------|--------------------|-------------|
| NAME         | medalcnt     | SPORT   | TEAM               |             |
| Judith Arndt | 24           | Cycling | Germany            |             |

-- 12. Find player with most medals (Gold+Silver+Bronze) in Basketball also show his country:

```
114 • SELECT NAME, COUNT(MEDAL) AS medalcnt, SPORT, TEAM FROM olympics
115 WHERE sport = 'Basketball'
116 GROUP BY NAME, SPORT, TEAM
117 ORDER BY medalcnt DESC
118 LIMIT 1;
```

OUTPUT: -

| Result Grid                    | Filter Rows: | Export:    | Wrap Cell Content: | Fetch rows: |
|--------------------------------|--------------|------------|--------------------|-------------|
| NAME                           | medalcnt     | SPORT      | TEAM               |             |
| Adriana Adrianinha Moiss Pinto | 10           | Basketball | Brazil             |             |

-- 13. Find out the count of different medals of the top basketball player Teresa Edwards: -

```
122 • SELECT NAME, MEDAL, COUNT(MEDAL) AS medalcount FROM olympics
123 WHERE NAME = 'Teresa Edwards' and sport = 'Basketball'
124 GROUP BY NAME, MEDAL;
```

OUTPUT: -

| Result Grid    | Filter Rows: | Export:    | Wrap Cell Content: |
|----------------|--------------|------------|--------------------|
| NAME           | MEDAL        | medalcount |                    |
| Teresa Edwards | Gold         | 8          |                    |
| Teresa Edwards | Bronze       | 2          |                    |

-- 14. Find out medals won by male, female each year. Export this data and plot graph in excel: -

```
128 • SELECT SEX, YEAR, COUNT(MEDAL) AS MedalCounts FROM olympics
129     GROUP BY SEX, YEAR
130     ORDER BY YEAR ASC, SEX ASC;
```

OUTPUT: -

| Result Grid |     |      |             | Filter Rows: | Export: | Wrap Cell Content: |
|-------------|-----|------|-------------|--------------|---------|--------------------|
|             | SEX | YEAR | MedalCounts |              |         |                    |
| ▶           | M   | 1896 | 760         |              |         |                    |
|             | F   | 1900 | 66          |              |         |                    |
|             | M   | 1900 | 3806        |              |         |                    |
|             | F   | 1904 | 32          |              |         |                    |
|             | M   | 1904 | 2570        |              |         |                    |
|             | F   | 1906 | 22          |              |         |                    |
|             | M   | 1906 | 3444        |              |         |                    |
|             | F   | 1908 | 94          |              |         |                    |
|             | M   | 1908 | 6108        |              |         |                    |
|             | F   | 1912 | 174         |              |         |                    |
|             | M   | 1912 | 7906        |              |         |                    |