

```
--create database university_ranking
```

```
USE university_ranking
```

```
DROP TABLE IF EXISTS
```

```
university_ranking_year,  
ranking_criteria,  
university_year,  
university,  
country,  
ranking_system;
```

```
CREATE TABLE country(  
    id INT IDENTITY(1,1) NOT NULL,  
    country_name VARCHAR(50) NOT NULL,  
    PRIMARY KEY (id)  
);
```

```
CREATE TABLE university(  
    id INT IDENTITY(1,1) NOT NULL,  
    country_id INT NOT NULL,  
    university_name VARCHAR(50) NOT NULL,  
    FOREIGN KEY (country_id) REFERENCES country (id),  
    PRIMARY KEY (id)  
);
```

```
CREATE TABLE ranking_system(  
    id INT IDENTITY(1,1) NOT NULL,  
    system_name VARCHAR(50) NOT NULL,  
    PRIMARY KEY (id)  
);
```

```
CREATE TABLE ranking_criteria(  
    id INT IDENTITY(1,1) NOT NULL,  
    ranking_system_id INT NOT NULL,  
    criteria_name VARCHAR(50) NOT NULL,  
    FOREIGN KEY (ranking_system_id) REFERENCES ranking_system (id),  
    PRIMARY KEY (id)  
);
```

```
CREATE TABLE university_year(  
    university_year_id INT IDENTITY(1,1) NOT NULL,  
    university_id INT NOT NULL,  
    year INT CHECK  
(year>1700),  
    num_students INT CHECK  
(num_students>=0),  
    student_staff_ratio FLOAT NOT NULL,  
    FOREIGN KEY (university_id) REFERENCES university (id),  
    PRIMARY KEY (university_year_id)  
);
```

```
CREATE TABLE university_ranking_year(  
    university_id INT NOT NULL,  
    ranking_criteria_id INT NOT NULL,  
    year INT NOT NULL,  
    score INT ,  
    FOREIGN KEY (university_id) REFERENCES university (id),  
    FOREIGN KEY (ranking_criteria_id) REFERENCES ranking_criteria (id),  
    PRIMARY KEY (university_id, ranking_criteria_id, year)  
);
```

```
USE university_ranking;
```

```
INSERT INTO country (country_name, country_continent)
VALUES ('Poland', 'Europe'),
      ('Germany', 'Europe'),
      ('France', 'Europe'),
      ('Scotland', 'Europe'),
      ('Belgium', 'Europe'),
      ('Spain', 'Europe'),
      ('USA', 'North America');
```

```
INSERT INTO university (university_name, country_id)
SELECT 'Pwr', id FROM country WHERE country_name = 'Poland'
UNION ALL
SELECT 'University of Freiburg', id FROM country WHERE country_name = 'Germany'
UNION ALL
SELECT 'UWr', id FROM country WHERE country_name = 'Poland'
UNION ALL
SELECT 'Heidelberg University', id FROM country WHERE country_name = 'Germany'
UNION ALL
SELECT 'Harvard University', id FROM country WHERE country_name = 'USA'
UNION ALL
SELECT 'Stanford University', id FROM country WHERE country_name = 'USA';
```

```
--DELETE FROM university;
--DBCC CHECKIDENT('university', RESEED, 0);
```

```
INSERT INTO ranking_system (system_name)
VALUES ('World University Rankings'),
      ('Country University Rankings'),
      ('Subject-Specific Rankings');
```

```
INSERT INTO ranking_criteria (criteria_name, ranking_system_id)
VALUES ('Academic Reputation', 1),
      ('Employer Reputation', 1),
      ('Citations per Faculty', 1),
      ('International Faculty Ratio', 1),
      ('International Student Ratio', 1),
      ('Research', 2),
      ('Teaching', 2),
      ('Research Income', 2),
      ('Subject Ranking', 3),
      ('Publication Citation', 3);
```

```
INSERT INTO university_year(university_id,year, num_students,student_staff_ratio)
VALUES
-- (1, 11000, -10, 0),
  (1, 2009, 4567, 3.2),
  (2, 2004, 3674, 4.5),
  (3, 2017, 2789, 6.1),
  (4, 2015, 3987, 2.8),
  (5, 2002, 5892, 8.3),
  (6, 2006, 4234, 5.7),
  (1, 2001, 3121, 4.9),
  (2, 2003, 4568, 7.2),
```

(3, 2005, 3456, 5.5),  
(4, 2011, 5678, 6.8),  
(5, 2020, 4890, 3.1),  
(6, 2014, 4321, 2.5),  
(1, 2018, 3456, 4.7),  
(2, 2023, 4567, 3.9),  
(3, 2008, 2890, 7.1),  
(4, 2016, 3789, 5.6),  
(5, 2000, 4678, 6.4),  
(6, 2019, 5234, 4.2),  
(1, 2006, 4567, 8.1),  
(2, 2007, 5345, 5.2),  
(3, 2013, 4567, 6.5),  
(4, 2019, 5678, 4.8),  
(5, 2003, 4234, 2.9),  
(6, 2011, 3567, 3.8),  
(1, 2010, 4231, 6.9),  
(2, 2014, 4567, 2.6),  
(3, 2021, 3456, 5.7),  
(4, 2002, 5678, 7.3),  
(5, 2016, 4890, 3.5),  
(6, 2012, 4321, 5.1),  
(1, 2005, 3456, 3.9),  
(2, 2018, 4567, 6.2),  
(3, 2001, 2890, 4.5),  
(4, 2008, 3789, 5.7),  
(5, 2022, 4678, 4.1),  
(6, 2007, 5234, 2.3),  
(1, 2015, 4567, 7.9),  
(2, 2000, 5345, 4.2),  
(3, 2009, 4567, 6.4),  
(4, 2013, 5678, 3.8),  
(5, 2011, 4234, 5.6),  
(6, 2020, 3567, 4.3),  
(1, 2012, 4231, 3.1),  
(2, 2006, 4567, 6.5),  
(3, 2014, 3456, 4.9),  
(4, 2004, 5678, 5.2),  
(5, 2023, 4890, 3.7),  
(6, 2001, 4321, 5.3),  
(1, 2003, 3456, 7.2),  
(2, 2019, 4567, 5.8),  
(3, 2016, 2890, 4.1),  
(4, 2012, 3789, 6.2),  
(5, 2009, 4678, 5.5),  
(6, 2005, 5234, 3.6),  
(1, 2017, 4567, 2.7),  
(2, 2011, 5345, 4.8),  
(3, 2000, 4567, 6.3),  
(4, 2020, 5678, 4.4),  
(5, 2008, 4234, 5.1),  
(6, 2018, 3567, 6.7),  
(1, 2013, 4231, 3.3),  
(2, 2002, 4567, 5.6),  
(3, 2010, 3456, 7.4),  
(4, 2017, 5678, 4.9),  
(5, 2001, 4890, 6.1),  
(6, 2009, 4321, 4.7),  
(1, 2007, 3456, 5.2),  
(2, 2015, 4567, 3.6),  
(3, 2022, 2890, 5.5),  
(4, 2005, 3789, 6.3),

```

(5, 2012, 4678, 4.2),
(6, 2016, 5234, 7.1),
(1, 2021, 4567, 4.9),
(2, 2010, 5345, 6.8),
(3, 2003, 4567, 5.1),
(4, 2009, 5678, 3.5),
(5, 2018, 4234, 4.3),
(6, 2004, 3567, 6.4);

```

```

INSERT INTO university_ranking_year (university_id, ranking_criteria_id, year, score)
VALUES

```

```

(1, 1, 2021, 9),
(1, 2, 2020, 8),
(1, 3, 2022, 7),
(1, 4, 2023, 8),
(1, 5, 2021, 8),
(1, 6, 2021, 7),
(1, 7, 2021, 8),
(1, 8, 2021, 7),
(1, 9, 2021, 8),
(1, 10, 2021, 8),
(2, 1, 2021, 9),
(2, 2, 2020, 8),
(2, 3, 2021, 7),
(2, 4, 2022, 8),
(2, 5, 2021, 8),
(2, 6, 2023, 7),
(2, 7, 2021, 8),
(2, 8, 2021, 7),
(2, 9, 2021, 8),
(2, 10, 2021, 7),
(3, 1, 2021, 9),
(3, 2, 2023, 8),
(3, 3, 2022, 7),
(3, 4, 2020, 7),
(3, 5, 2021, 8),
(3, 6, 2021, 7),
(3, 7, 2022, 8),
(3, 8, 2023, 7),
(3, 9, 2020, 8),
(3, 10, 2021, 6),
(4, 1, 2021, 8),
(4, 2, 2022, 8),
(4, 3, 2023, 7),
(4, 4, 2020, 7),
(4, 5, 2021, 8),
(4, 6, 2021, 7),
(4, 7, 2021, 8),
(4, 8, 2021, 7),
(4, 9, 2021, 7),
(4, 10, 2021, 5),
(5, 1, 2021, 8),
(5, 2, 2022, 8),
(5, 3, 2020, 7),
(5, 4, 2021, 7),
(5, 5, 2021, 8),
(5, 6, 2023, 7),
(5, 7, 2021, 8),
(5, 8, 2021, 7),
(5, 9, 2021, 7),
(5, 10, 2021, 4),

```

```
(6, 1, 2021, 9),
(6, 2, 2021, 8),
(6, 3, 2023, 7),
(6, 4, 2021, 7),
(6, 5, 2022, 9),
(6, 6, 2021, 8),
(6, 7, 2020, 8),
(6, 8, 2021, 8),
(6, 9, 2021, 8),
(6, 10, 2021, 1);
```

```
USE university_ranking;
```

```
--SELECT * FROM university;
```

```
--SELECT * FROM ranking_system;
```

```
--SELECT * FROM ranking_criteria;
```

```
SELECT * FROM university_ranking_year;
```

```
SELECT * FROM university_year;
```

```
-- TASK 2
```

```
SELECT id as 'University ID', university_name as 'University Name'
FROM university;
```

```
-- TASK 3
```

```
ALTER TABLE country
ADD country_continent VARCHAR(100) NOT NULL
```

```
ALTER TABLE country
ALTER COLUMN country_name VARCHAR(100) NOT NULL
```

```
-- TASK 4
```

```
ALTER TABLE university_ranking_year
ADD CONSTRAINT check_year CHECK (year>1800)
```

```
ALTER TABLE university_ranking_year
ADD CONSTRAINT check_score CHECK (score BETWEEN 0 AND 10)
```

```
-- TASK 5
```

```
DELETE FROM university_year
WHERE university_year_id = 1;
```

```
-- TASK 6
```

```
UPDATE university
SET university_name = 'Wrocław University of Science and Technology'
WHERE id = 1
```

```
SELECT * FROM university;
```