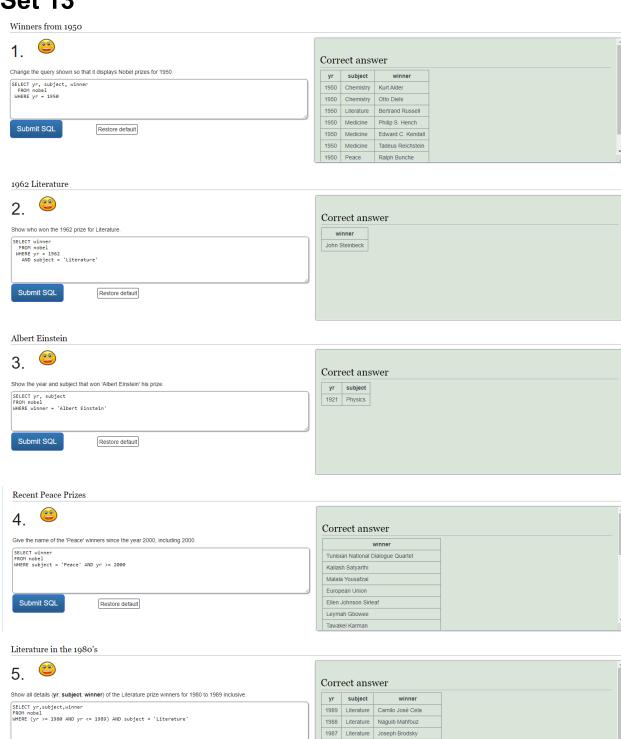
Set 13

Submit SQL

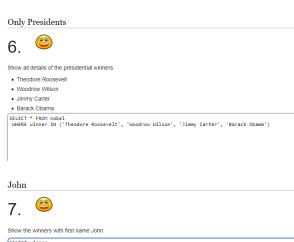
Restore default



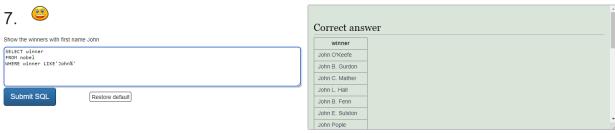
1986 Literature Wole Soyinka

1985 Literature Claude Simon

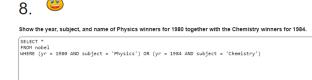
1984 Literature Jaroslav Seifert 1983 Literature William Golding







Chemistry and Physics from different years

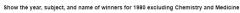




Exclude Chemists and Medics



Submit SQL



Restore default



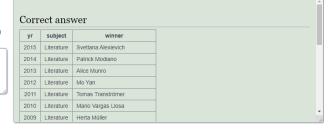


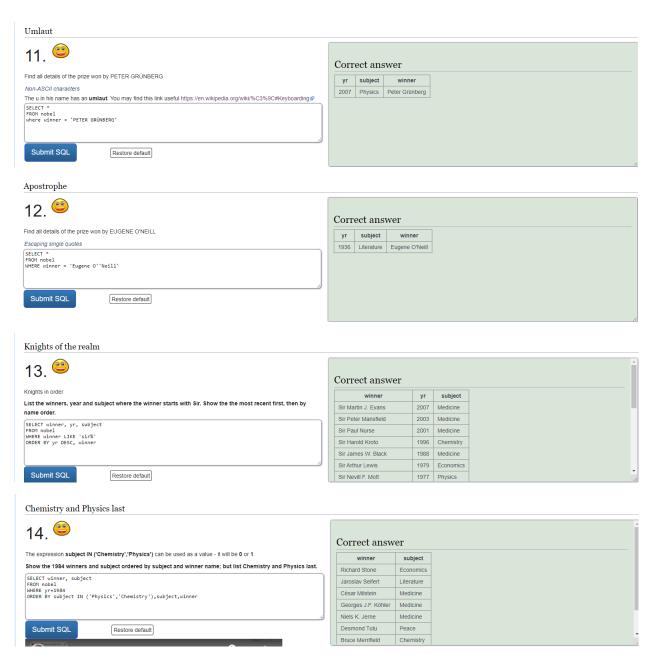
Early Medicine, Late Literature



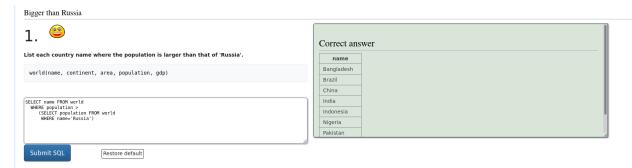
Show year, subject, and name of people who won a 'Medicine' prize in an early year (before 1910, not including 1910) together with winners of a 'Literature' prize in a later year (after 2004, including 2004)

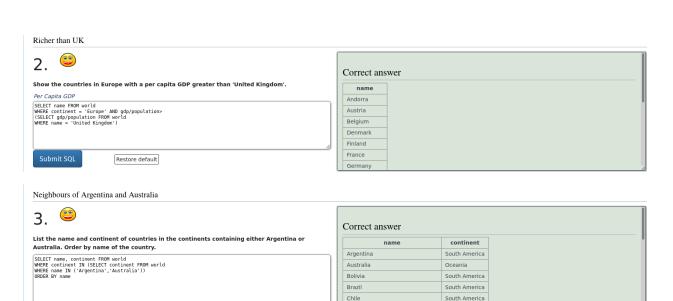






Set 14





Between Canada and Poland





Which country has a population that is more than Canada but less than Poland? Show the name and the population.

SELECT name,population FROM world
WHERE population > (SELECT population FROM world WHERE name = 'Canada')
AND
population < (SELECT population FROM world WHERE name = 'Poland')

Restore default

Submit SQL

Restore default

Correct answer

Colombia

name	population
Iraq	36004552
Sudan	37289406

Percentages of Germany





Germany (population 80 million) has the largest population of the countries in Europe. Austria (population 8.5 million) has 11% of the population of Germany.

Show the name and the population of each country in Europe. Show the population as a percentage of the population of Germany.

The format should be Name, Percentage for example:

name	percentage
Albania	3%
Andorra	0%
Austria	11%

Decimal places

Percent symbol %

SELECT name, CONCAT(ROUND(population/(SELECT population FROM world WHERE name = 'Germany')*100,0), '%')
FROM world WHERE continent = 'Europe'

Submit SQ

Restore default

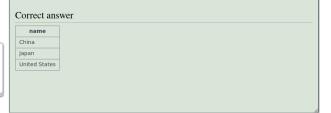
Correct answer	
name	CONCAT(ROUND(
Albania	3%
Andorra	0%
Austria	11%
Belarus	12%
Belgium	14%
Bosnia and Herzegovina	5%
Bulgaria	9%

South America



Which countries have a GDP greater than every country in Europe? [Give the name only.] (Some countries may have NULL gdp values)

SELECT name FROM world WHERE gdp > ALL(SELECT gdp FROM world WHERE gdp > 0 AND continent = 'Europe')



Largest in each continent



Find the largest country (by area) in each continent, show the continent, the name and the area:

SELECT continent, name, area FROM world x WHERE area >= ALL (SELECT area FROM world y WHERE y.continent=x.continent AND area>0)



Restore default

Restore default

The above example is known as a correlated or synchronized sub-query.

Using correlated subqueries

A correlated subquery works like a nested loop: the subquery only has access to rows related to a single

First country of each continent (alphabetically)

8.



List each continent and the name of the country that comes first alphabetically.

SELECT continent, name FROM world x WHERE name <= ALL (SELECT name FROM world y WHERE y.continent=x.continent)

Restore default

Correct answ	er
continent	

Correct answer

name

Algeria

Australia

China

Kazakhstan 2724900

Cuba

area

2381741

7692024

8515767

9596961

109884

continent

South America

North America Canada

Africa

Asia

Caribbean

Europe

Oceania

continent	name
Africa	Algeria
Asia	Afghanistan
Caribbean	Antigua and Barbuda
Eurasia	Armenia
Europe	Albania
North America	Belize
Oceania	Australia

Difficult Questions That Utilize Techniques Not Covered In Prior Sections





Find the continents where all countries have a population <= 25000000. Then find the names of the countries associated with these continents. Show name, continent and population.

SELECT name, continent, population FROM world x WHERE 25000000 >= ALL(SELECT population FROM world y WHERE x.continent = y.continent AND y.population>0);

Submit SQL

Restore default

Correct answer

name	continent	population
Antigua and Barbuda	Caribbean	86295
Australia	Oceania	23545500
Bahamas	Caribbean	351461
Barbados	Caribbean	285000
Cuba	Caribbean	11167325
Dominica	Caribbean	71293
Dominican Republic	Caribbean	9445281

10.



SELECT name, continent FROM world x WHERE population >= ALL(SELECT population*3 FROM world y WHERE x.continent = y.continent and y.name != x.name)

Submit SQL

Restore default

name	continent
Australia	Oceania
Brazil	South America
Russia	Eurasia

Restore default

Total world population Correct answer Show the total $\boldsymbol{population}$ of the world. SUM(populatio.. 7118632738 world(name, continent, area, population, gdp) SELECT SUM(population) FROM world Restore default List of continents 2. 🥯 Correct answer List all the continents - just once each. continent SELECT DISTINCT continent FROM world Africa Asia Caribbean Eurasia Restore default Europe North America Oceania GDP of Africa 3. 🥯 Correct answer Give the total GDP of Africa SUM(gdp) SELECT SUM(gdp) FROM world WHERE continent = 'Africa' 1811788000000 Restore default Count the big countries 4. 🕯 Correct answer How many countries have an **area** of at least 1000000 COUNT(name) SELECT COUNT(name) FROM world WHERE area >= 1000000 29 Restore default Baltic states population 5. 🔓 Correct answer What is the total **population** of ('Estonia', 'Latvia', 'Lithuania') SUM(populatio.. SELECT SUM(population) FROM world WHERE name IN ('Estonia','Latvia','Lithuania') 6251750

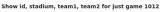




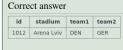


From the previous query you can see that Lars Bender's scored a goal in game 1012. Now we want to know what teams were playing in that match.

Notice in the that the column matchid in the goal table corresponds to the id column in the game table We can look up information about game 1012 by finding that row in the game table











You can combine the two steps into a single query with a 301N

SELECT *
FROM game JOIN goal ON (id=matchid)

The **FROM** clause says to merge data from the goal table with that from the game table. The **ON** says how to figure out which rows in **game** go with which rows in **goal** - the **matchid** from **goal** must match **id** from **goal**. (If we wanted to be more clear/specific we could say **ON** (game.id=goal.matchid)

The code below shows the player (from the goal) and stadium name (from the game table) for every goal

Modify it to show the player, teamid, stadium and mdate for every German goal.

```
SELECT player, teamid, stadium, mdate
FROM game JOIN goal ON (id=matchid)
WHERE teamid = 'GER'
                                                        Restore default
```





Use the same JOIN as in the previous question.

Show the team1, team2 and player for every goal scored by a player called Mario player LIKE 'Mario%'

SELECT team1,team2,player FROM game JOIN goal ON (id=matchid) WHERE player LIKE 'Mario%'



Restore default



The table eteam gives details of every national team including the coach. You can $\,$ JOIN $\,$ goal to $\,$ eteam using the phrase $\,$ goal JOIN eteam on teamid=id

Show player, teamid, coach, gtime for all goals scored in the first 10 minutes gtime<=10

SELECT player, teamid, coach,gtime FROM goal JOIN eteam ON (teamid=id) WHERE gtime<=10

Restore default





To JOIN game with eteam you could use either

game JOIN eteam ON (team1=eteam.id) or game JOIN eteam ON (team2=eteam.id)

Notice that because id is a column name in both game and eteam you must specify eteam.id instead of just id



Restore default

List the dates of the matches and the name of the team in which 'Fernando Santos' was the team1 coach.

SELECT mdate, teamname FROM game JOIN eteam ON (team1 = eteam.id) WHERE coach = 'Fernando Santos'

Correct answer

player	teamid	stadium	mdate
Mario Gómez	GER	Arena Lviv	9 June 2012
Mario Gómez	GER	Metalist Stadium	13 June 2012
Mario Gómez	GER	Metalist Stadium	13 June 2012
Lukas Podolski	GER	Arena Lviv	17 June 2012
Lars Bender	GER	Arena Lviv	17 June 2012
Philipp Lahm	GER	PGE Arena Gdansk	22 June 2012
Sami Khedira	GER	PGE Arena Gdansk	22 June 2012

Correct answer

team1	team2	player
GER	POR	Mario Gómez
NED	GER	Mario Gómez
NED	GER	Mario Gómez
IRL	CRO	Mario Mandžukic
IRL	CRO	Mario Mandžukic
ITA	CRO	Mario Mandžukic
ITA	IRL	Mario Balotelli

Correct answer

player	teamid	coach	gtime
Petr Jirácek	CZE	Michal Bílek	3
Václav Pilar	CZE	Michal Bílek	6
Mario Mandžukic	CRO	Slaven Bilic	3
Fernando Torres	ESP	Vicente del Bosque	4

mdate	teamname
12 June 2012	Greece
16 June 2012	Greece





列出場館 'National Stadium, Warsaw'的入球球員。

SELECT player FROM goal JOIN game ON (matchid = id) MHERE stadium = 'National Stadium, Warsaw' #I for some reason decided to do it in chinese

Restore default

Correct answer

player
Robert Lewandowski
Dimitris Salpingidis
Alan Dzagoev
Jakub Blaszczykowski
Giorgos Karagounis
Cristiano Ronaldo

Mario Balotelli

8.



The example query shows all goals scored in the Germany-Greece quarterfinal.

Instead show the name of all players who scored a goal against Germany.

Select goals scored only by non-German players in matches where GER was the id of either **team1** or team2.

You can use $\mbox{\tt teamid!='GER'}$ to prevent listing German players.

You can use DISTINCT to stop players being listed twice.

SELECT DISTINCT player
FROM game JOIN goal ON matchid = id
WHERE (teaml='GER' OR team2='GER')
AND teamid != 'GER'

Submit SQL

Restore default

Correct answer





Show teamname and the total number of goals scored.

COUNT and GROUP BY

You should COUNT(*) in the SELECT line and GROUP BY teamname

SELECT teamname, COUNT(*)
FROM eteam JOIN goal ON id=teamid
GROUP BY teamname

Restore default

Correct answer

teamname	COUNT(*)
Croatia	4
Czech Republic	4
Denmark	4
England	5
France	3
Germany	10
Greece	5



Show the stadium and the number of goals scored in each stadium.

SELECT stadium, COUNT(*) FROM goal JOIN game ON (matchid = id) GROUP BY stadium

Submit SQL

Restore default

Correct answer

stadium	COUNT(*)
Arena Lviv	9
Donbass Arena	7
Metalist Stadium	7
National Stadium, Warsaw	9
Olimpiyskiy National Sports Complex	14
PGE Arena Gdansk	13
Stadion Miejski (Poznan)	8
Stadion Miejski (Wrocław)	9

11. 🥯



For every match involving 'POL', show the matchid, date and the number of goals scored.

SELECT matchid, mdate, COUNT(*)
FROM game JOIN goal ON matchid = id
WHERE (team1 = 'POL' OR team2 = 'POL')
GROUP BY matchid, mdate

Submit SQL

Restore default

matchid	mdate	COUNT(*)
1001	8 June 2012	2
1004	12 June 2012	2
1005	16 June 2012	1



For every match where 'GER' scored, show matchid, match date and the number of goals scored by 'GER'

SELECT matchid, mdate, COUNT(*) FROM goal JOIN game ON (matchid=id) WHERE teamid = 'GER' GROUP BY matchid, mdate

Submit SQL

Restore default

Correct answer

matchid	mdate	COUNT(*)
1008	9 June 2012	1
1010	13 June 2012	2
1012	17 June 2012	2
1026	22 June 2012	4
1030	28 June 2012	1

13. 🥯

List every match with the goals scored by each team as shown. This will use "CASE WHEN" which has not been explained in any previous exercises.

mdate	team1	score1	team2	score2
1 July 2012	ESP	4	ITA	0
10 June 2012	ESP	1	ITA	1
10 June 2012	IRL	1	CRO	3

Notice in the query given every goal is listed. If it was a team1 goal then a 1 appears in score1, otherwise there is a 0. You could SUM this column to get a count of the goals scored by team1. Sort your result by mdate, matchid, team1 and team2.

SELECT DISTINCT mdate, team1, | SUM(CASE WHEN teamid=team1 THEN 1 ELSE 0 END) score1,team2, SUM(CASE WHEN teamid=team2 THEN 1 ELSE 0 END) score2 FROM game LEFT JOIN goal ON game.id = goal.matchid GROUP BY id, mdate, team1, team2 ORDER BY mdate, matchid, team1, team2

Submit SQL

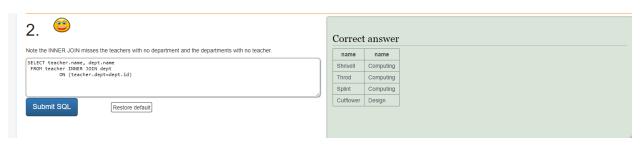
Restore default

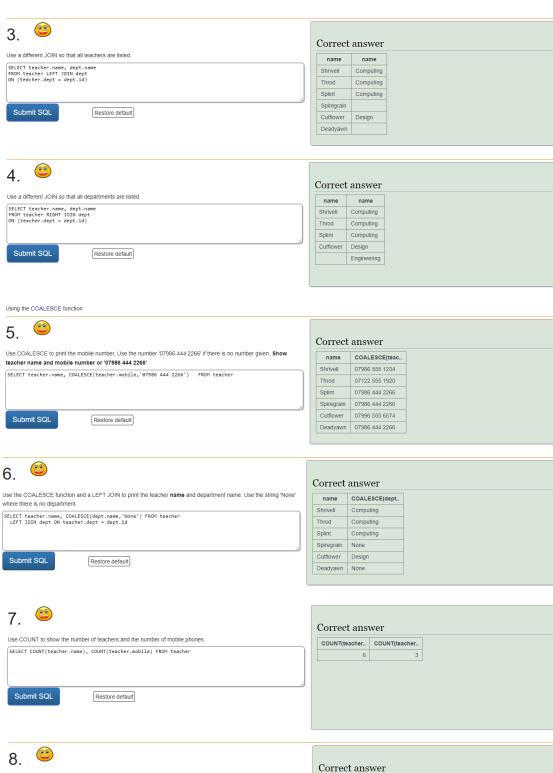


NULL

NULL, INNER JOIN, LEFT JOIN, RIGHT JOIN















Use CASE to show the **name** of each teacher followed by 'Sci' if the teacher is in **dept** 1 or 2 and 'Art' otherwise.

Submit SQL

Restore default

Correct answer

name	CASE WHEN dep
Shrivell	Sci
Throd	Sci
Splint	Sci
Spiregrain	Art
Cutflower	Sci
Deadyawn	Art

10.

Use CASE to show the name of each teacher followed by 'Sci' if the teacher is in dept 1 or 2, show 'Art' if the teacher's dept is 3 and 'None' otherwise.

SELECT name, CASE WHEN dept IN (1,2) THEN 'Sci' WHEN dept = 3 THEN 'Art' ELSE 'None' END FROM Teacher

Submit SQL

Restore default

name	CASE WHEN dep
Shrivell	Sci
Throd	Sci
Splint	Sci
Spiregrain	None
Cutflower	Sci
Deadyawn	None