Esercizi sull'SQL - Soluzioni

19 maggio 2008

1 Query di aggregazione

1. **SELECT MAX**(LifeExpectancy)
   FROM country

2. **SELECT COUNT**(∗) **AS** NumStati
   FROM country
   WHERE LifeExpectancy > 50

3. **SELECT AVG**(GNP) **AS** ProdottoInternoLordoMedio
   FROM country

4. **SELECT MAX**(GNP) **AS** ProdottoInternoLordoMassimo
   FROM country

5. **SELECT MIN**(GNP) **AS** ProdottoInternoLordoMinimo
   FROM country

6. **SELECT SUM**(GNP) **AS** ProdottoInternoLordoTotale
   FROM country

7. **SELECT SUM**(SurfaceArea) **AS** AreaTotale
   FROM country

8. **SELECT SUM**(Population) **AS** PopolazioneTotale
   FROM country

9. **SELECT MAX**(GNP/ Population)∗1000000 **AS**
        RedditoProcapiteMassimo
   FROM country

10. **SELECT** **MIN**(GNP/Population)*1000000 **AS**
    RedditoProcapiteMinimo
    FROM country
    WHERE GNP <> 0

11. **SELECT** **MAX**(Population) **AS** Massimo,
    MIN(Population) **AS** Minimo
    FROM city

12. **SELECT** **MAX**(city.Population) **AS** Massimo,
    MIN(city.Population) **AS** Minimo
    FROM city, country
    WHERE city.CountryCode = country.Code
    AND Region = "Western Europe"

13. **SELECT** **COUNT**(*) **AS** CittaAfricane
    FROM city, country
    WHERE city.CountryCode = country.Code
    AND Continent = "Africa"

14. **SELECT** **COUNT**(*) **AS** CittaItaliane
    FROM city, country
    WHERE city.CountryCode = country.Code
    AND LocalName = "Italia"

15. **SELECT** **COUNT**(*) **AS** CittaDiLinguaItaliana
    FROM city, country, countrylanguage
    WHERE city.CountryCode = country.Code
    AND country.Code = countrylanguage.CountryCode
    AND Language = "Italian"

16. **SELECT** **COUNT**(*) **AS** StatiLinguaInglese
    FROM country, countrylanguage
    WHERE country.Code = countrylanguage.CountryCode
    AND Language = "English"

17. **SELECT** **COUNT**(*) **AS** StatiLinguaUfficialeInglese
    FROM country, countrylanguage
    WHERE country.Code = countrylanguage.CountryCode
    AND Language = "English"
    AND IsOfficial = "T"

18. **SELECT AVG**(c i t y . Population) **AS**
    MediaAbitantiCittaLinguaTedesco
    FROM c i t y , country , countrylanguage
    WHERE c i t y . CountryCode = country . Code
    AND country . Code = countrylanguage . CountryCode
    AND Language = "German"

19. **SELECT AVG**(c i t y . Population) **AS**
    MediaAbitantiCittaTedesche
    FROM c i t y , country , countrylanguage
    WHERE c i t y . CountryCode = country . Code
    AND country . Code = countrylanguage . CountryCode
    AND country . Name = "Germany"

20. **SELECT AVG**(Percentage) **AS**
    MediaLinguaggiUfficialiAfrica
    FROM country , countrylanguage
    WHERE country . Code = countrylanguage . CountryCode
    AND Continent = " Africa "
    AND I s O f f i c i a l = "T"

21. **SELECT AVG**(Percentage) **AS**
    MediaLinguaggiUfficialiEuropa
    FROM country , countrylanguage
    WHERE country . Code = countrylanguage . CountryCode
    AND Continent = "Europe"
    AND I s O f f i c i a l = "T"

2 Query di raggruppamento

1. **SELECT** Continent , **COUNT**(∗) **AS** NumStati
   FROM country
   GROUP BY Continent
   ORDER BY NumStati **Desc** ;

2. **SELECT** GovernmentForm , **COUNT**(∗) **AS** NumStati
   FROM country
   GROUP BY GovernmentForm
   ORDER BY NumStati **Desc** ;

3. **SELECT** Continent , **COUNT**(∗) **AS** NumStati
   FROM country
   WHERE GNP > GNPOld
   GROUP By Continent
   ORDER BY NumStati **Desc** ;

4. **SELECT** Continent, **COUNT**(∗) **AS** NumStati
   FROM country
   GROUP BY Continent
   ORDER BY NumStati **DESC**
   LIMIT 0,1

5. **SELECT** country.Name, **COUNT**(∗) **AS** NumeroCitta
   FROM city, country
   WHERE city.CountryCode = country.Code
   GROUP BY country.Name
   ORDER BY NumeroCitta **DESC**

6. **SELECT** Continent, **SUM**(SurfaceArea) **AS**
        SuperficieTotale
   FROM country
   GROUP BY Continent
   ORDER BY SuperficieTotale **DESC**

7. **SELECT** Language, **COUNT**(∗) **AS** Stati
   FROM country, countryLanguage
   WHERE country.Code = countryLanguage.CountryCode
   AND IsOfficial = 'T'
   GROUP BY Language
   ORDER BY Stati **DESC**

8. **SELECT** Name, **COUNT**(∗) **AS** Lingue
   FROM country, countryLanguage
   WHERE country.Code = countryLanguage.CountryCode
   GROUP BY Name
   HAVING Lingue > 8
   ORDER BY Lingue **DESC**

9. **SELECT** Continent, **AVG**(LifeExpectancy) **AS**
        AspettativaMedia
   FROM country
   GROUP BY Continent
   ORDER BY AspettativaMedia **DESC**

10. **SELECT** country.Name, **COUNT**(∗) **AS** NumeroCitta,
    AVG(city.Population) **AS** MediaAbitanti
    FROM country, city
    WHERE country.Code = city.CountryCode
    GROUP BY country.Name

11. **SELECT** country.Name
    FROM country
    WHERE country.Population <
     (**SELECT MAX**(city.Population) **FROM** city)

12. **SELECT** GovernmentForm, **COUNT**(∗) **AS** NumStati,
    AVG (GNP/Population) **AS** ProdottoMedio
    FROM country
    GROUP BY GovernmentForm
    ORDER BY ProdottoMedio **Desc**;

13. **SELECT** Continent, **Count**(∗) **AS** NumeroCitta
    FROM country, city
    WHERE country.Code = city.CountryCode
    GROUP BY Continent

14. **SELECT** country.Name,
    SUM(city.Population)/country.Population **AS**
         PopolazioneCittadina
    FROM country, city
    WHERE country.Code = city.CountryCode
    GROUP BY country.Name
    ORDER BY PopolazioneCittadina **DESC**

3 Sottoquery

1. **SELECT** Name, GNP
   FROM country
   WHERE GNP =
    (**SELECT MAX**(GNP) **FROM** country)

2. **SELECT** Name, Population
   FROM country
   WHERE Population =
    (**SELECT MAX**(Population) **FROM** country)

3. **SELECT** Name, GNP/Population∗1000000 **AS** ProCapite
   FROM country
   WHERE GNP/Population =
    (**SELECT MAX**(GNP/Population) **FROM** country)

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4. SELECT Name, GNP/Population*1000000 AS ProCapite
   FROM country WHERE GNP <> 0
   AND GNP/Population =
    (SELECT MIN(GNP/Population)
   FROM country WHERE GNP<>0)


5. SELECT Name, IndepYear
   FROM country WHERE IndepYear =
    (SELECT MIN(IndepYear) FROM country)


6. SELECT Name, IndepYear
   FROM country WHERE IndepYear =
    (SELECT MAX(IndepYear) FROM country)


7. SELECT COUNT(*)/
    (SELECT COUNT(*) FROM country)*100 AS Percentuale
   FROM country
   WHERE LifeExpectancy > 50


8. SELECT Name, GNP/Population*1000000 AS ProCapite
   FROM country
   WHERE Continent = "Asia"
   AND GNP/Population =
    (SELECT MAX(GNP/Population)
   FROM country WHERE Continent = "Asia")


9. SELECT city.Name, city.Population
   FROM country, city
   WHERE country.Code = city.CountryCode
   AND Continent = "Africa"
   AND city.Population =
    (SELECT MAX(city.Population)
   FROM country,city
   WHERE country.Code = city.CountryCode
   AND Continent = "Africa")


10. SELECT MAX(Persone)
    FROM ( SELECT Language, SUM(Population * Percentage /
         100) AS Persone
    FROM country, countrylanguage
    WHERE country.Code = countrylanguage.CountryCode
    GROUP BY Language ) AS A
```

11. **SELECT** Language , **SUM**(Population ∗ Percentage / 100)
      AS Persone
    FROM country , countrylanguage
    WHERE country.Code = countrylanguage.CountryCode
    GROUP BY Language
    HAVING Persone =
     (**SELECT MAX**(Persone)
    FROM (**SELECT** Language , **SUM**(Population ∗ Percentage /
        100) **AS** Persone
    FROM country , countrylanguage
    WHERE country.Code = countrylanguage.CountryCode
    GROUP BY Language) **AS** A)

12. **SELECT** Language , **SUM**(Population ∗ Percentage / 100)
      AS Persone
    FROM country , countrylanguage
    WHERE country.Code = countrylanguage.CountryCode
    GROUP BY Language
    ORDER BY Persone **DESC**
    LIMIT 0,1

13. **SELECT** city.Name, city.Population
    FROM country , city
    WHERE country.Code = city.CountryCode
    AND Region = "Middle East"
    AND city.Population <
     (**SELECT AVG**(city.Population)
    FROM country , city
    WHERE country.Code = city.CountryCode
    AND Region = "Middle East")
    ORDER BY city.Population **DESC**
    LIMIT 0,1

14. **SELECT SUM**(NumeroCitta)
    FROM
     (**SELECT** country.Name, **Count**(∗) **AS** NumeroCitta
    FROM country , city
    WHERE country.Code = city.CountryCode
    GROUP BY country.Name
    HAVING NumeroCitta > 100) **AS** A

15. **SELECT SUM**(Quanti)
    FROM
     (**SELECT** language ,**SUM**(country.Population∗
        countrylanguage.Percentage/100)

   AS Quanti
   FROM country , countrylanguage
   WHERE country . Code = countrylanguage . CountryCode
   GROUP BY language
   HAVING language = "Spanish" **OR** language="Chinese" **OR**
     language **LIKE** "Telugu") **AS** A

16. **SELECT** language ,**SUM**(city . Population) **AS** Quanti
   FROM country , countrylanguage , city
   WHERE country . Code = countrylanguage . CountryCode
   AND country . Code = city . CountryCode
   AND IsOfficial = 1
   GROUP BY language
   ORDER By Quanti **DESC**