

1) For each country:

- a) Number of players
- b) Number of tournaments
- c) Number of games

SQL solution:

```
SELECT
    c.name country,
    COALESCE(cp.n_players, 0) n_players,
    COALESCE(ct.n_tournaments, 0) n_tournaments,
    COALESCE(cpr.n_matches, 0) n_matches
FROM country c
LEFT JOIN (
    SELECT p.country country, COUNT(p.id) n_players
    FROM player p
    GROUP BY p.country
) cp ON c.id = cp.country
LEFT JOIN (
    SELECT t.country country, COUNT(t.name) n_tournaments
    FROM tournament t
    GROUP BY t.country
) ct ON c.id = ct.country
LEFT JOIN (
    SELECT t1.country country, COUNT(t1.tournament) n_matches
    FROM (
        SELECT DISTINCT
            CASE WHEN p.name > pr.oponent_name THEN p.name ELSE
pr.oponent_name END player1,
            CASE WHEN p.name < pr.oponent_name THEN p.name ELSE
pr.oponent_name END player2,
            pr.tournament,
            pr.tournament_dates,
            pr.tournament_location,
            pr.round,
            t.country
        FROM player_records pr
        JOIN player p ON pr.player = p.id
        JOIN tournament t ON t.name = pr.tournament AND t.dates = pr.tournament_dates
        AND t.location = pr.tournament_location
        WHERE score <> ""
    ) t1
    GROUP BY t1.country
) cpr ON c.id = cpr.country
ORDER BY c.name;
```

Results:

País	Jogadores	Torneios	Jogos
Afghanistan	0	0	0
Aland Islands	0	0	0
Albania	0	0	0
Algeria	2	35	914
American Samoa	0	0	0
Andorra	0	13	349
Angola	0	0	0
Anguilla	0	0	0
Antarctica	0	0	0
Antigua and Barbuda	0	0	0
Argentina	155	435	12490
Armenia	1	7	216
Aruba	0	4	124
Australia	129	570	21762
Austria	51	357	10865
Azerbaijan	0	9	277
Bahamas	5	20	114
Bahrain	0	12	374
Bangladesh	0	2	62
Barbados	1	16	110
Belarus	16	67	1335
Belgium	34	228	6047
Belize	0	0	0
Benin	0	0	0
Bermuda	0	17	489
Bhutan	0	0	0
Bolivia, Plurinational State of	5	83	2364
Bonaire, Sint Eustatius and Saba	0	0	0
Bosnia and Herzegovina	7	117	3703
Botswana	0	0	0
Bouvet Island	0	0	0
Brazil	104	706	22713
British Indian Ocean Territory	0	0	0
Brunei Darussalam	0	0	0
Bulgaria	15	101	2698
Burkina Faso	0	0	0
Burundi	1	6	184
Cambodia	0	14	434
Cameroon	0	3	91
Canada	53	281	9945
Cape Verde	0	0	0
Cayman Islands	0	0	0
Central African Republic	0	0	0
Chad	0	0	0

País	Jogadores	Torneios	Jogos
Chile	35	277	8033
China	36	338	12448
Christmas Island	0	0	0
Cocos (Keeling) Islands	0	0	0
Colombia	28	229	7710
Comoros	0	0	0
Congo	0	0	0
Congo, the Democratic Republic of the	0	0	0
Cook Islands	0	0	0
Costa Rica	2	17	341
Côte d'Ivoire	0	0	0
Croatia	35	285	8859
Cuba	1	18	313
Curaçao	1	3	15
Cyprus	3	29	567
Czech Republic	68	304	9735
Denmark	12	80	1330
Djibouti	0	0	0
Dominica	0	0	0
Dominican Republic	1	67	1662
Ecuador	17	182	5390
Egypt	5	387	11258
El Salvador	1	19	180
Equatorial Guinea	0	0	0
Eritrea	0	0	0
Estonia	4	54	1374
Ethiopia	0	0	0
Falkland Islands (Malvinas)	0	0	0
Faroe Islands	0	0	0
Fiji	0	0	0
Finland	17	157	4452
France	175	1080	41282
French Guiana	0	0	0
French Polynesia	0	0	0
French Southern Territories	0	0	0
Gabon	0	10	306
Gambia	0	0	0
Georgia	11	49	1319
Germany	181	1079	35372
Ghana	0	11	205
Gibraltar	0	0	0
Greece	10	207	6062
Greenland	0	0	0
Grenada	0	0	0
Guadeloupe	2	11	431
Guam	0	12	337
Guatemala	2	26	502
Guernsey	0	0	0
Guinea	0	0	0
Guinea-Bissau	0	0	0
Guyana	0	0	0
Haiti	1	4	16

País	Jogadores	Torneios	Jogos
Heard Island and McDonald Islands	0	0	0
Holy See (Vatican City State)	0	0	0
Honduras	0	1	32
Hong Kong	3	75	1648
Hungary	14	145	3718
Iceland	0	0	0
India	54	320	9410
Indonesia	8	111	2605
Iran, Islamic Republic of	1	80	2185
Iraq	0	0	0
Ireland	10	53	1112
Isle of Man	0	0	0
Israel	24	228	6239
Italy	142	1350	47907
Jamaica	0	54	1318
Japan	57	378	11720
Jersey	0	0	0
Jordan	0	2	62
Kazakhstan	7	163	5264
Kenya	2	15	362
Kiribati	0	0	0
Korea, Democratic People's Republic of	0	0	0
Korea, Republic of	22	198	6151
Kuwait	0	64	1628
Kyrgyzstan	1	0	0
Lao People's Democratic Republic	0	0	0
Latvia	7	41	727
Lebanon	1	26	369
Lesotho	0	0	0
Liberia	0	0	0
Libya	0	0	0
Liechtenstein	0	0	0
Lithuania	4	41	945
Luxembourg	1	26	375
Macao	0	0	0
Macedonia, the Former Yugoslav Republic of	3	28	731
Madagascar	1	1	4
Malawi	0	0	0
Malaysia	2	40	1297
Maldives	0	0	0
Mali	1	0	0
Malta	0	3	93
Marshall Islands	0	0	0
Martinique	0	0	0
Mauritania	0	0	0
Mauritius	1	1	31
Mayotte	0	0	0
Mexico	42	538	16707
Micronesia, Federated States of	0	0	0
Moldova, Republic of	6	4	15
Monaco	4	62	2785
Mongolia	0	0	0

País	Jogadores	Torneios	Jogos
Montenegro	5	5	155
Montserrat	0	0	0
Morocco	15	229	7426
Mozambique	0	8	242
Myanmar	0	1	2
Namibia	0	4	124
Nauru	0	0	0
Nepal	0	0	0
Netherlands	61	305	9062
New Caledonia	0	17	745
New Zealand	14	116	2817
Nicaragua	0	3	93
Niger	0	0	0
Nigeria	8	108	2757
Niue	0	0	0
Norfolk Island	0	0	0
Northern Mariana Islands	0	0	0
Norway	9	61	1110
Oman	0	3	11
Pakistan	2	26	442
Palau	0	0	0
Palestine, State of	0	0	0
Panama	0	15	617
Papua New Guinea	0	0	0
Paraguay	3	63	997
Peru	12	122	2964
Philippines	3	48	657
Pitcairn	0	0	0
Poland	30	261	8187
Portugal	18	323	9482
Puerto Rico	3	21	182
Qatar	0	94	3256
Réunion	0	11	360
Romania	41	358	10900
Russian Federation	99	281	8688
Rwanda	0	16	489
Saint Barthélemy	0	0	0
Saint Helena, Ascension and Tristan da Cunha	0	0	0
Saint Kitts and Nevis	0	0	0
Saint Lucia	0	0	0
Saint Martin (French part)	0	0	0
Saint Pierre and Miquelon	0	0	0
Saint Vincent and the Grenadines	0	0	0
Samoa	0	1	4
San Marino	0	28	1069
Sao Tome and Principe	0	0	0
Saudi Arabia	2	3	95
Senegal	0	15	405
Serbia	32	158	4586
Seychelles	0	0	0
Sierra Leone	0	0	0

País	Jogadores	Torneios	Jogos
Singapore	3	33	1082
Sint Maarten (Dutch part)	0	0	0
Slovakia	28	153	4906
Slovenia	14	103	3011
Solomon Islands	0	0	0
Somalia	0	0	0
South Africa	60	126	2964
South Georgia and the South Sandwich Islands	0	0	0
South Sudan	0	0	0
Spain	130	1076	34800
Sri Lanka	1	25	500
Sudan	0	7	184
Suriname	1	0	0
Svalbard and Jan Mayen	0	0	0
Swaziland	0	0	0
Sweden	86	267	6731
Switzerland	37	279	7887
Syrian Arab Republic	0	0	0
Taiwan, Province of China	15	70	1860
Tajikistan	0	1	4
Tanzania, United Republic of	0	0	0
Thailand	9	179	5681
Timor-Leste	0	0	0
Togo	1	4	122
Tokelau	0	0	0
Tonga	0	0	0
Trinidad and Tobago	0	0	0
Tunisia	6	374	11400
Turkey	7	587	18575
Turkmenistan	0	0	0
Turks and Caicos Islands	0	0	0
Tuvalu	0	0	0
Uganda	0	12	370
Ukraine	34	122	3170
United Arab Emirates	1	41	1522
United Kingdom	112	698	26086
United States	327	2434	89869
United States Minor Outlying Islands	0	0	0
Uruguay	9	88	2240
Uzbekistan	14	182	6204
Vanuatu	0	0	0
Venezuela, Bolivarian Republic of	9	127	2932
Viet Nam	2	52	1652
Virgin Islands, British	0	0	0
Virgin Islands, U.S.	0	0	0
Wallis and Futuna	0	0	0
Western Sahara	0	0	0
Yemen	0	0	0
Zambia	1	0	0
Zimbabwe	9	40	637

2) List of the top 10 player names with their percentage of games won, sorted by percentage.

SQL solution:

```
SELECT
    p.name player,
    SUM(CASE WHEN pr.win_lose = 'W' THEN 1 ELSE 0 END) / SUM(CASE WHEN
pr.win_lose IN ('W', 'L') THEN 1 ELSE 0 END) win_rate
FROM player_records pr, player p
WHERE p.id = pr.player
GROUP BY p.name
HAVING COUNT(pr.oponent_name) >= 100
UNION
SELECT
    pr.oponent_name player,
    SUM(CASE WHEN pr.win_lose = 'L' THEN 1 ELSE 0 END) / SUM(CASE WHEN
pr.win_lose IN ('W', 'L') THEN 1 ELSE 0 END) win_rate
FROM player_records pr
WHERE pr.oponent_name NOT IN (SELECT name FROM player)
GROUP BY pr.oponent_name
HAVING COUNT(pr.player) >= 100
ORDER BY 2 DESC
LIMIT 10;
```

Results:

Jogador	% Vitórias
Rafael Nadal	0.8309
Novak Djokovic	0.8293
Bjorn Borg	0.8186
Roger Federer	0.8170
Ivan Lendl	0.8160
John McEnroe	0.8156
Jimmy Connors	0.8087
Pete Sampras	0.7670
Andre Agassi	0.7607
Boris Becker	0.7601

3) List of the top 10 left-handed players with their percentage of games won in Grand Slam matches.

SQL solution:

```
SELECT
    p.name player,
    SUM(CASE WHEN pr.win_lose = 'W' THEN 1 ELSE 0 END) / SUM(CASE
    WHEN pr.win_lose IN ('W', 'L') THEN 1 ELSE 0 END) win_rate
FROM player_records pr, player p
WHERE p.id = pr.player
AND p.forehand = 'LEFT-HANDED'
AND UPPER(pr.tournament) IN ('US OPEN', 'AUSTRALIAN OPEN', 'WIMBLEDON',
'ROLAND GARROS')
GROUP BY p.name
HAVING COUNT(pr.oponent_name) >= 100
ORDER BY 2 DESC
LIMIT 10;
```

Results:

Jogador	% Vitórias
Rafael Nadal	0.8768
Jimmy Connors	0.8233
John McEnroe	0.8155
Guillermo Vilas	0.7528
Goran Ivanisevic	0.6875
Thomas Muster	0.6724
Henri Leconte	0.6393
Fernando Verdasco	0.6196
Guy Forget	0.5789
Ruben Bemelmans	0.5603

5) List of the top 5 player names with their games won on hard court surface.

SQL solution:

```
SELECT
    p.name player,
    SUM(CASE WHEN pr.win_lose = 'W' THEN 1 ELSE 0 END) wins
FROM player_records pr, player p
WHERE p.id = pr.player
AND UPPER(pr.ground) = 'HARD'
GROUP BY p.name
UNION
SELECT
    pr.oponent_name player,
    SUM(CASE WHEN pr.win_lose = 'L' THEN 1 ELSE 0 END) wins
FROM player_records pr
WHERE pr.oponent_name NOT IN (SELECT name FROM player)
AND UPPER(pr.ground) = 'HARD'
GROUP BY pr.oponent_name
ORDER BY 2 DESC
LIMIT 5;
```

Results:

Jogador	Vitórias
Roger Federer	801
Novak Djokovic	658
Ti Chen	609
Andre Agassi	608
Yen-Hsun Lu	562