SQL CHALLENGE (9/24/14)

Who has played the most matches total in all of US Open, AUST Open, French Open? Answer this both for men and women.

MEN: Rafael Nadal with 21 matches

select player, sum(count) as number_of_matches from (select player1 as player, count(*) as count from
aus_men_2013 group by player1
UNION ALL select player2 as player, count(*) as count from aus_men_2013 group by player2
UNION ALL select player1 as player, count(*) as count from french_men_2013 group by player1
UNION ALL select player2 as player, count(*) as count from french_men_2013 group by player2
UNION ALL select player1 as player, count(*) as count from us_men_2013 group by player1
UNION ALL select player2 as player, count(*) as count from us_men_2013 group by player2) AS temporary_table group by player
order by number_of_matches desc LIMIT 5;

WOMEN: Serena Williams, Maria Sharapova, Agnieszka Radwanska, & Victoria Azarenka with 11 matches

select player, sum(count) as number_of_matches from
(select player1 as player, count(*) as count from aus_women_2013 group by player1
UNION ALL select player2 as player, count(*) as count from aus_women_2013 group by player2
UNION ALL select player1 as player, count(*) as count from french_women_2013 group by player1
UNION ALL select player2 as player, count(*) as count from french_women_2013 group by player2
UNION ALL select player1 as player, count(*) as count from us_women_2013 group by player1
UNION ALL select player2 as player, count(*) as count from us_women_2013 group by player2) AS
temporary_table group by player order by number_of_matches desc LIMIT 5;

Who has the highest first serve percentage? (Just the maximum value in a single match)

MEN: Nadal, Monfils, and Berlocq with 84%

select player, max(max_serve_p) as maxfsp from (select player1 as player,
max(FSP_1) as max_serve_p from aus_men_2013 group by player1
UNION ALL select player2 as player, max(FSP_2) as max_serve_p from aus_men_2013
group by player2
UNION ALL select player1 as player , max(FSP_1) as max_serve_p
from french_men_2013 group by player1
UNION ALL select player2 as player, max(FSP_2) as max_serve_p from
french_men_2013 group by player2
UNION ALL select player1 as player , max(FSP_1) as max_serve_p from us_men_2013
group by player1
UNION ALL select player2 as player, max(FSP_2) as max_serve_p from us_men_2013
group by player2) AS temporary_table group by player order by maxfsp desc LIMIT 5;

WOMEN: S. Errani with 93%

select player, max(max_serve_p) as maxfsp from (select player1 as player,
max(FSP_1) as max_serve_p from aus_women_2013 group by player1
UNION ALL select player2 as player, max(FSP_2) as max_serve_p from
aus_women_2013 group by player2
UNION ALL select player1 as player , max(FSP_1) as max_serve_p
from french_women_2013 group by player1
UNION ALL select player2 as player, max(FSP_2) as max_serve_p from
french_women_2013 group by player2
UNION ALL select player1 as player , max(FSP_1) as max_serve_p from
us_women_2013 group by player1
UNION ALL select player2 as player, max(FSP_2) as max_serve_p from
us_women_2013 group by player2) AS temporary_table group by player order by maxfsp
desc LIMIT 5;

What are the unforced error percentages of the top three players with the most wins? (unforced error percentage is % of points lost due to unforced errors. In a match, you have fields for number of points won by each player, and number of unforced errors for each field).

TOP 3 MEN WITH MOST WINS: Rafael Nadal (21.2%), Stanislas Wawrinka (23.8%), David Ferrer (21.6%), Novak Djokovic (23.5%)

```
select player, sum(wins) as Total_Wins from (select player1 as player, count(*) as wins
        from aus_men_2013 where result=1 group by player1
        UNION ALL select player2 as player, count(*) as wins from aus_men_2013 where result=0 group by
        player2
        UNION ALL select player1 as player, count(*) as wins from french_men_2013 where result=1 group by
        player1
        UNION ALL select player2 as player, count(*) as wins from french_men_2013 where result=0 group by
        player2
        UNION ALL select player1 as player , count(*) as wins from us_men_2013 where result=1 group by    player1
        UNION ALL select player2 as player, count(*) as wins from us_men_2013  where result=0
        group by player2) AS table_temp group by player order by Total_Wins desc LIMIT 4;

select player, sum(UFE) as SUM_UNFORCED_ERRORS, sum(total_points) as SUM_TOTAL_POINTS_LOST,
        (100*(sum(UFE)/sum(total_points))) as percent_unforced_error from
        (
        select player1 as player, UFE_1 as UFE, (TPW_2) as total_points from aus_men_2013
        UNION ALL select player2 as player, UFE_2 as UFE, (TPW_1) as total_points from aus_men_2013
        UNION ALL select player1 as player, UFE_1 as UFE, (TPW_2) as total_points from french_men_2013
        UNION ALL select player2 as player, UFE_2 as UFE, (TPW_1) as total_points from french_men_2013
        UNION ALL select player1 as player, UFE_1 as UFE, (TPW_2) as total_points from us_men_2013
        UNION ALL select player2 as player, UFE_2 as UFE, (TPW_1) as total_points from us_men_2013
        ) AS table_temp
        where player in ('Rafael Nadal', 'Stanislas Wawrinka','David Ferrer','Novak Djokovic') group by player;
```

TOP 3 WOMEN WITH MOST WINS: Serena Williams (43.2%), Victoria Azarenka (38.9%), Agnieszka Radwanska (27.5%)

```
select player, sum(wins) as Total_Wins from (select player1 as player, count(*) as wins
        from aus_women_2013 where result=1 group by player1
        UNION ALL select player2 as player, count(*) as wins from aus_women_2013 where result=0 group by
        player2
        UNION ALL select player1 as player, count(*) as wins from french_women_2013 where result=1 group by
        player1
        UNION ALL select player2 as player, count(*) as wins from french_women_2013 where result=0 group by
        player2
        UNION ALL select player1 as player, count(*) as wins from us_women_2013 where result=1 group by player1
        UNION ALL select player2 as player, count(*) as wins from us_women_2013  where result=0
        group by player2) AS table_temp group by player order by Total_Wins desc LIMIT 3;

select player, sum(UFE) as SUM_UNFORCED_ERRORS, sum(total_points) as SUM_TOTAL_POINTS_LOST,
        (100*(sum(UFE)/sum(total_points))) as percent_unforced_error from (
        select player1 as player, UFE_1 as UFE, (TPW_2) as total_points from aus_women_2013
        UNION ALL select player2 as player, UFE_2 as UFE, (TPW_1) as total_points from aus_women_2013
        UNION ALL select player1 as player, UFE_1 as UFE, (TPW_2) as total_points from french_women_2013
        UNION ALL select player2 as player, UFE_2 as UFE, (TPW_1) as total_points from french_women_2013
        UNION ALL select player1 as player, UFE_1 as UFE, (TPW_2) as total_points from us_women_2013
        UNION ALL select player2 as player, UFE_2 as UFE, (TPW_1) as total_points from us_women_2013
        ) AS table_temp where player in ('Serena Williams', 'Victoria Azarenka', 'Agnieszka Radwanska') group by player;
```

A note: SUM(double_faults) function sums the contents of an entire column. if, for each row, you want to add the field values from two columns, you can just do SELECT name, double_faults + unforced_errors