

Course: Database management
Unit: Intermediate SQL 2
Material: Index importance

Load the TENNIS.sql and TENNIS_NOPK_NOFK.sql . They are the same database but the second one has no primary keys and no foreign keys. As a consequence, the second has no indexes. Run the query you will find below in both databases and note how long it takes to produce a result.

```
SELECT CONCAT_WS(' ', P1.p_name, P1.p_surname) AS Player1,  
CONCAT_WS(' ', P2.p_name, P2.p_surname) AS Player2, t_name AS Tournament, t_end_date  
AS `End date`, IF (mr_winner = R1.r_num, CONCAT_WS(' ', 'Winner:', P1.p_name,  
P1.p_surname), CONCAT_WS(' ', 'Winner:', P2.p_name, P2.p_surname)) AS Winner  
FROM REGISTRATIONS R1, REGISTRATIONS R2, MATCHES, MATCH_RESULTS,  
TOURNAMENTS, PLAYERS P1, PLAYERS P2  
WHERE  
m_id = mr_m_id AND  
((R1.r_num = m_r_num1 AND R2.r_num = m_r_num2) OR  
(R1.r_num = m_r_num2 AND R2.r_num = m_r_num1) ) AND  
t_id = m_t_id AND  
t_num_rounds = m_round AND  
t_type = 'Singles' AND  
R2.r_p_id = P2.p_id AND  
R1.r_p_id = P1.p_id AND  
P1.p_id < P2.p_id;
```