

PostgreSQL
the world's most advanced open source database

HELP ME! (*en_EN*)¹⁾

AIUTATEMI! (*it_IT*)²⁾

IUTÈME! (*vec_IT*)³⁾

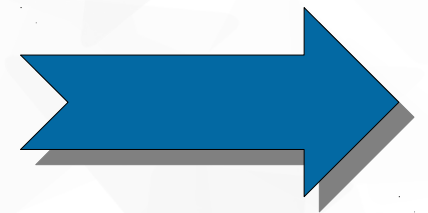
1) https://en.wikipedia.org/wiki/Main_Page - 2) https://it.wikipedia.org/wiki/Pagina_principale

3) https://vec.wikipedia.org/wiki/Pajina_prinsipale



The Problem/II Problema/El Problema

Session ID	TimeStamp	Message	User ID
S_000_001	19:03:45	Login Page	
S_000_001	19:03:53	Login Request	user_892722
S_000_001	19:05:23	Invalid Password	
S_000_001	19:05:26	Invalid Password	
S_000_001	19:10:47	Logged In	user_892722
S_000_001	19:11:13	Send Message	
S_000_001	19:15:16	Logout	user_892722
S_000_001	20:11:23	Login Page	
S_000_001	20:11:25	Login Request	user_999888
S_000_001	20:11:34	Invalid Password	
S_000_001	20:12:34	View Messages	





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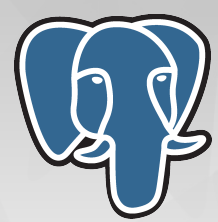


Please/Per Favore/Par Piasèr

HELP ME!

AIUTATEMI!

IUTÈME!



Sample Data/Dati d'esempio/Dati par esempio

```
CREATE TABLE logs (  
    session_id TEXT NOT NULL,  
    timestamp TIME WITHOUT TIME ZONE NOT NULL,  
    message TEXT NOT NULL,  
    user_id TEXT  
);  
  
INSERT INTO logs VALUES  
( 'S_000_001', '19:03:45', 'Login Page', null),  
( 'S_000_001', '19:03:53', 'Login Request', 'user_892722' ),  
( 'S_000_001', '19:05:23', 'Invalid Password', null),  
( 'S_000_001', '19:05:26', 'Invalid Password', null),  
( 'S_000_001', '19:10:47', 'Logged In', 'user_892722' ),  
( 'S_000_001', '19:11:13', 'Send Message', null),  
( 'S_000_001', '19:15:16', 'Logout', 'user_892722' ),  
( 'S_000_001', '20:11:23', 'Login Page', null),  
( 'S_000_001', '20:11:25', 'Login Request', 'user_999888' ),  
( 'S_000_001', '20:11:34', 'Invalid Password', null),  
( 'S_000_001', '20:12:34', 'View Messages', null),  
( 'S_000_002', '19:05:43', 'Login Page', null),  
( 'S_000_002', '19:07:23', 'Login Request', 'user_777777' ),  
( 'S_000_002', '19:08:25', 'Logged In', 'user_777777' ),  
( 'S_000_002', '19:14:10', 'Logout', 'user_777777' );
```



We could use a.../Potremmo usare.../Podarissimo usàr...

CTE: common table expression

EdTC: espressione di tabella comune

EdTC: espresión de tabéa comun



Or a.../0 una.../0 na...

Window Function
Funzione Finestra
Funsiòn Finèstra



Or a.../0 una.../0 na...

Subquery
Sotto interrogazione
Soto interrogasiòn



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In the end.../Alla fine.../À la fine...

```
WITH s1 AS ( SELECT session_id, timestamp, message,
                COALESCE( user_id,
                    (SELECT user_id FROM logs l1
                     WHERE l1.session_id = l.session_id AND
                          user_id IS NOT NULL AND
                          l1.timestamp >= l.timestamp
                     ORDER BY l1.timestamp ASC LIMIT 1)
                ) AS user_id
            FROM logs l),

s2 AS ( SELECT session_id, timestamp, message,
                COALESCE( user_id,
                    (SELECT user_id FROM logs l1
                     WHERE l1.session_id = l.session_id AND
                          user_id IS NOT NULL AND
                          l1.timestamp <= l.timestamp
                     ORDER BY l1.timestamp DESC LIMIT 1)
                ) AS user_id
            FROM s1 l)
UPDATE logs SET user_id = s2.user_id FROM s2
WHERE logs.session_id = s2.session_id AND
      logs.timestamp = s2.timestamp AND
      logs.message = s2.message AND
      logs.user_id IS NULL;
```



Tweet Me!/Tuittami!/Cinguetéme!

#PgDayHelpMe



Thank You!/Grazie!/Grassie!

Smart Solutions

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 **@rtshome**

<http://www.gasparin.net>