

10 Aug 23

Database Schema : DSOI

sibhapvv_mcte <b>dsoi</b>	
⊞	dsoi_no : char(3)
⊞	exp_head : char(10)
#	exp_amount : int(11)
📅	date_of_txn : date

sibhapvv_mcte <b>main</b>	
🔑	s_no : char(5)
⊞	name : varchar(20)
⊞	course : varchar(8)
⊞	cda_acct_no : varchar(12)
⊞	bankers : varchar(16)
⊞	bank_branch : varchar(20)
⊞	bankers_address : varchar(25)
⊞	ifsc_code : varchar(12)
⊞	dsoi_mem_no : varchar(4)
⊞	t_mem_no : char(4)
⊞	lib : char(4)
⊞	rk : varchar(20)

sibhapvv_mcte <b>library</b>	
🔑	id : int(11)
⊞	lib_no : char(3)
⊞	book_no : char(10)
📅	date_of_issue : date
📅	date_of_return : date

sibhapvv_mcte <b>tennis</b>	
⊞	t_mem_no : char(3)
📅	date : date

## Requirements

1. List names of three offrs topping the list in bar expenses.

Ser	Pseudocode	SQL Query
1	Identify the table storing bar expenses: <b>DSOI</b>	Select exp_amount from DSOI;
2	Aggregate the expenses	Select sum(exp_amount) from DSOI;
3	Group by member	Select sum(exp_amount) from DSOI group by dsoi_no;
4	Additionally group by exp_head	Select sum(exp_amount) from DSOI group by dsoi_no, exp_head;
5	Filter by bar expense	Select sum(exp_amount) from DSOI group by dsoi_no, exp_head having exp_head='liq';
6	Extract name from table <b>main</b>	Select sum(exp_amount) amount from DSOI t1 join main t2 on t1.dsoi_mem_no=t2.dsoi_no group by dsoi_no, exp_head having exp_head='liq';
7	Sort by expense , higher number first	Select sum(exp_amount) amount from DSOI t1 join main t2 on t1.dsoi_mem_no=t2.dsoi_no group by dsoi_no, exp_head having exp_head='liq' order by amount desc;
8	Display just three records	Select sum(exp_amount) amount from DSOI t1 join main t2 on t1.dsoi_mem_no=t2.dsoi_no group by dsoi_no, exp_head having exp_head='liq' order by amount desc limit 3;

## Final Query

```
Select
    sum(exp_amount) amount
from
    DSOI t1
    join
        main t2
        on t1.dsoi_mem_no = t2.dsoi_no
group by
    dsoi_no,
    exp_head
having
    exp_head = 'liq'
order by
    amount desc limit 3;
```