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1 Week 1: Players

1.1 Display player name, team id, stadium, and mdate for every German player

Code.

```
select goal.player, goal.teamid, game.stadium, game.mdate
from goal join game on goal.matchid=game.id
where goal.teamid='GER'
```

Output.

"PLAYER"	"TEAMID"	"STADIUM"	"MDATE"
"Mario Gmez"	"GER"	"Arena Lviv"	"09-JUN-12"
"Mario Gmez"	"GER"	"Metalist Stadium"	"13-JUN-12"
"Mario Gmez"	"GER"	"Metalist Stadium"	"13-JUN-12"
"Lars Bender"	"GER"	"Arena Lviv"	"17-JUN-12"
"Lukas Podolski"	"GER"	"Arena Lviv"	"17-JUN-12"

1.2 Show team1 and team2 and player for every goal scored by a player named 'Mario'

Code.

```
select game.team1, game.team2, goal.player from goal
join game on goal.matchid=game.id where goal.player like 'Mario_%'
```

Output.

"TEAM1"	"TEAM2"	"PLAYER"
"GER"	"POR"	"Mario Gmez"
"NED"	"GER"	"Mario Gmez"
"NED"	"GER"	"Mario Gmez"
"IRL"	"CRO"	"Mario Mandukic"
"IRL"	"CRO"	"Mario Mandukic"
"ITA"	"CRO"	"Mario Mandukic"
"ITA"	"IRL"	"Mario Balotelli"

1.3 Show player, teamid, coach, gtime, for all goals scored in the first 10 mins

Code.

```
select goal.player, goal.teamid, eteam.coach, goal.gtime
from goal join eteam on goal.teamid=eteam.id where goal.gtime <= 10
```

Output.

"PLAYER"	"TEAMID"	"COACH"	"GTIME"
"Vclav Pilar"	"CZE"	"Michal Blek"	"6"
"Petr Jircek"	"CZE"	"Michal Blek"	"3"
"Fernando Torres"	"ESP"	"Vicente del Bosque"	"4"
"Mario Mandukic"	"CRO"	"Slaven Bilic"	"3"

1.4 List the player for every goal scored in a game whre the stadium was 'National Stadium, Warsaw'

Code.

```
select goal.player
from game join goal
on game.id=goal.matchid
where game.stadium='National Stadium , Warsaw '
```

Output.

"PLAYER"
"Robert Lewandowski"
"Dimitris Salpingidis"
"Jakub Blaszczykowski"
"Alan Dzagoev"
"Giorgos Karagounis"

1.5 Show the name of the player who scored a goal against Germany('GER')

Code.

```
select goal.player
from game join goal
on goal.matchid=game.id
where (game.team2='GER' or game.team1='GER') and goal.teamid!='GER'
```

Output.

"PLAYER"
"Robin van Persie"
"Michael Krohn-Dehli"

1.6 Show the stadium and the number of goals scored in each stadium. Use count()

Code.

```
select game.stadium, count(*)
from goal join game
on goal.matchid=game.id
group by game.stadium
order by count(*) asc
```

Output.

"STADIUM"	"COUNT(*)"
"Donbass Arena"	"2"
"Olimpiyskiy National Sports Complex"	"3"
"Metalist Stadium"	"7"
"PGE Arena Gdansk"	"7"
"Stadion Miejski (Poznan)"	"8"
"Stadion Miejski (Wroclaw)"	"9"
"Arena Lviv"	"9"

1.7 List dates of all matches with 'Fernando Santos' as team1 coach

Code.

```
select game.mdate, eteam.teamname
from game join eteam
on game.team1=etteam.id
where eteam.coach='Fernando_Santos '
```

Output.

"PLAYER"
"Robert Lewandowski"
"Dimitris Salpingidis"
"Jakub Blaszczykowski"
"Alan Dzagoev"
"Giorgos Karagounis"

2 Week 2: Joins

2.1 Insert a tuple in eteam

Code.

```
insert into eteam (id, teamname, coach) values ( 'ARG', 'Argentina',
'Diego_Maradona' )
```

```
1 row(s) inserted.
```

```
0.13 seconds
```

2.2 Show the matchdate, stadium, player name, goal time for match ids 1019 and 1021

Code.

```
select game.mdate, game.stadium, goal.player, goal.gtime
from game left join goal
on goal.matchid=game.id
where game.id=1019 or game.id=1021
```

Output.

"MDATE"	"STADIUM"	"PLAYER"	"GTIME"
"11-JUN-12"	"Donbass Arena"	"Samir Nasri"	"39"
"11-JUN-12"	"Donbass Arena"	"Joleon Lescott"	"30"
"15-JUN-12"	"Donbass Arena"	" "	" "

2.3 Show all the goal time,player, stadium where first team was Germany

Code.

```
select goal.gtime, goal.player, game.stadium
from game left join goal
on goal.matchid=game.id
where game.team1='GER'
```

Output.

"GTIME"	"PLAYER"	"STADIUM"
"72"	"Mario Gmez"	"Arena Lviv"
" "	" "	"PGE Arena Gdansk"

2.4 Show the matchdate,stadium,teamname where Diego Maradona was the coach. Use right join

Code.

```
select game.mdate, game.stadium, eteam.teamname
from game right join eteam
on game.team1=etteam.id or game.team2=etteam.id
where eteam.coach='Diego Maradona'
```

Output.

"MDATE"	"STADIUM"	"TEAMNAME"
" "	" "	"Argentina"

2.5 Show id,matchdate,stadium,coach and team name for all team2. Use full outer join

Code.

```
select game.id, game.mdate, game.stadium, eteam.coach, eteam.teamname
from game full outer join eteam
on game.team2=etteam.id
```

Output.

"ID"	"MDATE"	"STADIUM"	"COACH"	"TEAMNAME"
"1005"	"16-JUN-12"	"Stadion Miejski (Wroclaw)"	"Franciszek Smuda"	"Poland"
"1003"	"12-JUN-12"	"Stadion Miejski (Wroclaw)"	"Michal Blek"	"Czech Rep"
"1002"	"08-JUN-12"	"Stadion Miejski (Wroclaw)"	"Michal Blek"	"Czech Rep"
"1026"	"22-JUN-12"	"PGE Arena Gdansk"	"Fernando Santos"	"Greece"
"1011"	"17-JUN-12"	"Metalist Stadium"	"Bert van Marwijk"	"Netherlands"
"1007"	"09-JUN-12"	"Metalist Stadium"	"Morten Olsen"	"Denmark"
"1012"	"17-JUN-12"	"Arena Lviv"	"Joachim Low"	"Germany"
"1010"	"13-JUN-12"	"Metalist Stadium"	"Joachim Low"	"Germany"
"1009"	"13-JUN-12"	"Arena Lviv"	"Paulo Bento"	"Portugal"
"1008"	"09-JUN-12"	"Arena Lviv"	"Paulo Bento"	"Portugal"
"1029"	"27-JUN-12"	"Donbass Arena"	"Vicente del Bosque"	"Spain"
"1017"	"18-JUN-12"	"PGE Arena Gdansk"	"Vicente del Bosque"	"Spain"
"1031"	"01-JUL-12"	"Olimpiyskiy National Sports Complex"	"Cesare Prandelli"	"Italy"
"1028"	"24-JUN-12"	"Olimpiyskiy National Sports Complex"	"Cesare Prandelli"	"Italy"
"1013"	"10-JUN-12"	"PGE Arena Gdansk"	"Cesare Prandelli"	"Italy"
"1018"	"18-JUN-12"	"Stadion Miejski (Poznan)"	"Giovanni Trapattoni"	"Republic of Ireland"
"1016"	"14-JUN-12"	"PGE Arena Gdansk"	"Giovanni Trapattoni"	"Republic of Ireland"
"1015"	"14-JUN-12"	"Stadion Miejski (Poznan)"	"Slaven Bilic"	"Croatia"
"1014"	"10-JUN-12"	"Stadion Miejski (Poznan)"	"Slaven Bilic"	"Croatia"
"1023"	"19-JUN-12"	"Donbass Arena"	"Oleh Blokhin"	"Ukraine"
"1020"	"11-JUN-12"	"Olimpiyskiy National Sports Complex"	"Erik Hamrn"	"Sweden"
"1022"	"15-JUN-12"	"Olimpiyskiy National Sports Complex"	"Roy Hodgson"	"England"
"1019"	"11-JUN-12"	"Donbass Arena"	"Roy Hodgson"	"England"
"1027"	"23-JUN-12"	"Donbass Arena"	"Laurent Blanc"	"France"
"1024"	"19-JUN-12"	"Olimpiyskiy National Sports Complex"	"Laurent Blanc"	"France"
"1021"	"15-JUN-12"	"Donbass Arena"	"Laurent Blanc"	"France"
""	"	"	"Diego Maradona"	"Argentina"

3 Week 3: Employee

3.1 Show employee name and Manager name for Employee ID 4 and 6

Code.

```
select b.name as Employee, a.name as Manager
from employee a,employee b
where a.empid=b.manager and (b.empid=4 or b.empid=6)
```

Output.

EMPLOYEE	MANAGER
Ananya Majumder	Palash Roy
Palash Roy	Prasanna Santra

3.2 Show the entire list of employee name and employee id under manager "Palash Roy"

Code.

```
select distinct emp.name as Employee, man.name as Manager
from employee emp,employee man
```

```
where emp.manager=man.empid and man.empid=4
```

Output.

EMPLOYEE	MANAGER
Ananya Majumder	Palash Roy
Joy Bannerjee	Palash Roy

4 Week 4: Client Master

4.1 Retrieve the list of names, city and the states of all the clients

Code.

```
select name, city, state from client_master
```

Output.

NAME	CITY	STATE
Ahana Banerjee	Kolkata	West Bengal
Mamta Paul	Chennai	Tamil Nadu
Chhya Banker	Mumbai	Maharashtra
Ashwini Joshi	Bangalore	Karnataka
Deepak Sharma	Mangalore	Karnataka

4.2 List all the clients who are located in Mumbai

Code.

```
select name from client_master  
where city='Mumbai'
```

Output.

CLIENT-NO	NAME	CITY	PINCODE	STATE
C00003	Chhya Banker	Mumbai	400057	Maharashtra

4.3 List the various products available from the PRODUCT-MASTER table

Code.

```
select description from product_master
```

Output.

DESCRIPTION
T-Shirt
Shirts
Cotton Jeans
Trousers
Pull Overs

4.4 Change the city of Client_No 'C00005' to Bangalore

Code.

```
update client_master  
set city='Bangalore'  
where client_no='C00005'
```


Output.

CLIENT-NO	NAME	ADDRESS	CITY	PINCODE	STATE
C00001	Ahana Banerjee		Kolkata	700006	West Bengal
C00002	Mamta Paul		Chennai	780001	Tamil Nadu
C00003	Chhya Banker		Mumbai	400057	Maharashtra
C00004	Ashwini Joshi		Bangalore	560001	Karnataka
C00005	Deepak Sharma		Bangalore	560050	Karnataka

4.5 Add a column called 'Telephone' of datatype 'number' and size='10' to the Client_Master table

Code.

```
alter table client_master  
add Telephone number(10)
```

Output.

4.6 Delete the column 'Telephone'

Code.

```
alter table client_master  
drop column Telephone
```

Output.

4.7 Change the name of Client_Master to Clnt_Mast

Code.

```
rename client_master to clnt_mast
```

Output.

4.8 List the names of all clients having 'a' letter in their names

Code.

```
select name from clnt_mast  
where name like '%a%'
```

Output.

4.9 List the names of the clients who stay in 'Bangalore' or 'Mangalore'

Code.

```
select name from clnt_mast  
where city like '_angalore'
```

Output.

NAME
Ahana Banerjee
Mamta Paul
Chhya Banker
Deepak Sharma

4.10 List the names of the clients having 'h' as the second letter in their names

Code.

```
select name from clnt_mast
where name like '_h%'
```

Output.

CLIENT-NO	NAME	ADDRESS	CITY	PINCODE	STATE
C00004	Ashwini Joshi		Bangalore	560001	Karnataka
C00005	Deepak Sharma		Bangalore	560050	Karnataka

4.11 List all the information from the Sales_Order table for orders placed in the month of June

Code.

```
select * from sales_order
where order_date like '%JUN%'
```

Output.

NAME
Ahana Banerjee
Chhya Banker

4.12 List the information for Client_No 'C00001' and 'C00002'

Code.

```
select * from sales_order
where client_no='C00001' or client_no='C00002'
```

Output.

ORDER-NO	CLIENT-NO	ORDER-DATE	DELYDATE	ORDER-STATUS
O19001	C00001	12-JUN-17	20-JUL-17	In Process
O19002	C00002	25-JUN-17	27-JUL-17	Cancelled

4.13 List products whose selling price is greater than 500 and less than 700

Code.

```
select * from product_master
where sell_price > 500 and sell_price < 700
```

Output.

ORDER-NO	CLIENT-NO	ORDER-DATE	DELYDATE	ORDER-STATUS
O19001	C00001	12-JUN-17	20-JUL-17	In Process
O19002	C00002	25-JUN-17	27-JUL-17	Cancelled
O19003	C00001	03-APR-17	07-APR-17	Fulfilled

4.14 List the names, city and states of clients who are not in the state of 'Maharashtra'

Code.

```
select name,city ,state from clnt_mast
where state <> 'Maharashtra'
```

Output.

DESCRIPTION
Cotton Jeans

4.15 List the products whose selling price is more than 500. Calculate a new selling price as, original selling price * 15. Rename the new column in the output of the above query as New_Price.

Code.

```
select description , sell_price*15 as new_price
from product_master
where sell_price > 500
```

Output.

NAME	CITY	STATE
Ahana Banerjee	Kolkata	West Bengal
Mamta Paul	Chennai	Tamil Nadu
Ashwini Joshi	Bangalore	Karnataka
Deepak Sharma	Bangalore	Karnataka

4.16 Count the number of products having sell_price less than or equal to 500.

Code.

```
select count(sell_price) from product_master
where sell_price <= 500
```

Output.

PRODUCT-NO	DESCRIPTION	PROFIT-PERCENT	UNIT-MEASURE	SELL-PRICE	COST
P00001	T-Shirt	5	Piece	350	250
P0345	Shirts	6	Piece	500	350
P06734	Cotton Jeans	5	Piece	600	450
P07868	Trousers	2	Piece	850	550
P07885	Pull Overs	2.5	Piece	700	450

4.17 List the order number and day on which clients placed their order.

Code.

```
select name,order_no,order_date,to_char(to_date(order_date,
'dd/mm/yyyy'),'DY') as day
from sales_order join clnt_mast on
clnt_mast.client_no=sales_order.client_no
```

Output.

NAME	ORDER-NO	ORDER-DATE	DAY	SELL-PRICE	COST-PRICE
Ahana Banerjee	O19003	03-APR-17	SAT	350	250
Ahana Banerjee	O19001	12-JUN-17	SAT	500	350
Mamta Paul	O19002	25-JUN-17	FRI	600	450
Chhya Banker	O46865	18-FEB-17	THU	850	550
Ashwini Joshi	O46866	20-MAY-17	THU	700	450

5 Week 5

5.1 Show the stadium and the number of goals scored in each stadium. For every match where 'GER' scored, show matchid, match date and the number of goals scored by 'GER'.

Code.

```
select matchid,mdate,count(*)
from game join goal
on goal.matchid=game.id
where teamid='GER'
group by mdate,matchid
```

Output.

6 Week 6: NULL

6.1 List the teachers who have NULL for their department

```
select name from teacher where dept is null
```

6.2 Show teacher name and dept. name for teachers having not null in dept.

Code.

```
select teacher.name, dept.name as dept
from teacher join dept on teacher.dept=dept.id
where teacher.dept is not null
```

Output.

NAME	DEPT
Shrivell	Computing
Throd	Computing
Splint	Computing
Cutflower	Design

6.3 Show teachers name, id, mobile and dept name

Code.

```
select teacher.name, teacher.id, teacher.mobile, dept.name
from dept full outer join teacher on teacher.dept=dept.id
```

Output.

NAME	ID	MOBILE	NAME
Shrivell	101	07986 555 1234	Computing
Throd	102	07122 555 1920	Computing
Splint	103		Computing
Cutflower	105	07996 555 6574	Design
			Engineering
Spiregrain	104		
Deadyawn	106		

6.4 Use a different JOIN so that all teachers are listed.

Code.

```
select teacher.name, teacher.id, dept.name
from dept left outer join teacher on teacher.dept=dept.id
```

Output.

NAME	ID	NAME	NAME
Splint	103	Computing	Computing
Throd	102	Computing	Computing
Shrivell	101	Computing	Computing
Cutflower	105	Design	Design
Deadyawn	106		Engineering
Spiregrain	104		
Deadyawn	106		

6.5 Use a different JOIN so that all departments are listed

Code.

```
select teacher.name, teacher.id, dept.name
from dept left outer join teacher on teacher.dept=dept.id
```

Output.

NAME	ID	DEPT
Shrivell	101	Computing
Throd	102	Computing
Splint	103	Computing
Cutflower	105	Design
		Engineering

6.6 Use COALESCE to print the mobile number. Use the number '07986 444 2266' if there is no number given. Show teacher name and mobile number or '07986 444 2266'

Code.

```
select name,  
coalesce (mobile, '07986 444 2266') as newmob  
from teacher
```

Output.

NAME	NEWMOB
Shrivell	07986 555 1234
Throd	07122 555 1920
Splint	07986 444 2266
Spiregrain	07986 444 2266
Cutflower	07996 555 6574
Deadyawn	07986 444 2266

6.7 Use the COALESCE function and a LEFT JOIN to print the teacher name and department name. Use the string 'None' where there is no department.

Code.

```
select teacher.name, coalesce(dept.name, 'None') as dept  
from teacher left join dept on teacher.dept=dept.id
```

Output.

NAME	DEPT
Splint	Computing
Throd	Computing
Shrivell	Computing
Cutflower	Design
Deadyawn	None
Spiregrain	None

6.8 Use COUNT to show the number of teachers and the number of mobile phones.

Code.

```
select count(name) as Total_Teachers ,  
count(mobile) as Total_Mobiles  
from teacher
```

Output.

TOTAL-TEACHERS	TOTAL-MOBILES
6	3

6.9 Use COUNT and GROUP BY dept.name to show each department and the number of staff. Use a RIGHT JOIN to ensure that the Engineering department is listed.

Code.

```
select dept.name, count(teacher.name) as Total_staff
from teacher right join dept on teacher.dept=dept.id
group by dept.name
```

Output.

NAME	TOTAL-STAFF
Computing	3
Engineering	0
Design	1

6.10 Use CASE to show the name of each teacher followed by 'Sci' if the teacher is in dept 1 or 2 and 'Art' otherwise.

Code.

```
select name,
case when dept=1 or dept=2 then 'Sci'
else 'Art'
end as Dept
from teacher
```

Output.

NAME	DEPT
Shrivell	Sci
Throd	Sci
Splint	Sci
Spiregrain	Art
Cutflower	Sci
Deadyawn	Art

6.11 Use CASE to show the name of each teacher followed by 'Sci' if the teacher is in dept 1 or 2, show 'Art' if the teacher's dept is 3 and 'None' otherwise.

Code.

```
select name,
case when dept=1 or dept=2 then 'Sci'
when dept=3 then 'Art'
else 'None'
end as Dept
from teacher
```

Output.

NAME	DEPT
Shrivell	Sci
Throd	Sci
Splint	Sci
Spiregrain	None
Cutflower	Sci
Deadyyawn	None