**DB ||**

**Day3 || 18 july 2022**

**—---------------------------------------------------------------------------------------------------------**

**SQL Assignment 1**

Ques 7:

You don't have *full joins* in MySQL, but you can sure [emulate them](http://dev.mysql.com/doc/refman/5.0/en/outer-join-simplification.html).

For a code *sample* transcribed from [this Stack Overflow question](https://stackoverflow.com/questions/2384298/mysql-full-outer-join-syntax-error) you have:

With two tables t1, t2:

SELECT \* FROM t1 LEFT JOIN t2 ON t1.id = t2.id UNION SELECT \* FROM t1 RIGHT JOIN t2 ON t1.id = t2.id

**Ques8:**

SELECT A.CustomerName AS CustomerName1, B.CustomerName AS CustomerName2, A.City

FROM Customers A, Customers B

WHERE A.CustomerID <> B.CustomerID

AND A.City = B.City

ORDER BY A.City;

**mysql> create table customers(ID int primary key auto\_increment ,name varchar(20),age int ,address varchar(20),salary int );**

**Query OK, 0 rows affected (0.10 sec)**

**mysql> create table orders(o\_id int primary key auto\_increment ,O\_date date ,ID int ,foreign key (ID) references customers(ID);**

**ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '' at line 1**

**mysql> create table orders(o\_id int primary key auto\_increment ,O\_date date ,ID int ,foreign key (ID) references customers(ID));**

**Query OK, 0 rows affected (0.13 sec)**

**mysql> desc customers, orders;**

**ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near ', orders' at line 1**

**mysql> desc customers;**

**+---------+-------------+------+-----+---------+----------------+**

**| Field | Type | Null | Key | Default | Extra |**

**+---------+-------------+------+-----+---------+----------------+**

**| ID | int | NO | PRI | NULL | auto\_increment |**

**| name | varchar(20) | YES | | NULL | |**

**| age | int | YES | | NULL | |**

**| address | varchar(20) | YES | | NULL | |**

**| salary | int | YES | | NULL | |**

**+---------+-------------+------+-----+---------+----------------+**

**5 rows in set (0.02 sec)**

**mysql> desc orders;**

**+--------+------+------+-----+---------+----------------+**

**| Field | Type | Null | Key | Default | Extra |**

**+--------+------+------+-----+---------+----------------+**

**| o\_id | int | NO | PRI | NULL | auto\_increment |**

**| O\_date | date | YES | | NULL | |**

**| ID | int | YES | MUL | NULL | |**

**+--------+------+------+-----+---------+----------------+**

**3 rows in set (0.01 sec)**

**mysql> insert into customers(ID,name,age,address,salary) values('devansh',22,'Kanpur',45000);**

**ERROR 1136 (21S01): Column count doesn't match value count at row 1**

**mysql> insert into customers(name,age,address,salary) values('devansh',22,'Kanpur',45000);**

**Query OK, 1 row affected (0.01 sec)**

**mysql> insert into customers(name,age,address,salary) values('devayush',23,'Bhopal',46000),('Baniya',23,'Jhashi',67000),('negi',23,'Kanpur',67000),('Manish',24,'Gorakhpur',37000);**

**Query OK, 4 rows affected (0.01 sec)**

**Records: 4 Duplicates: 0 Warnings: 0**

**mysql> select \* from customers;**

**+----+----------+------+-----------+--------+**

**| ID | name | age | address | salary |**

**+----+----------+------+-----------+--------+**

**| 1 | devansh | 22 | Kanpur | 45000 |**

**| 2 | devayush | 23 | Bhopal | 46000 |**

**| 3 | Baniya | 23 | Jhashi | 67000 |**

**| 4 | negi | 23 | Kanpur | 67000 |**

**| 5 | Manish | 24 | Gorakhpur | 37000 |**

**+----+----------+------+-----------+--------+**

**5 rows in set (0.00 sec)**

**mysql> insert into orders(o\_date,ID) values('2022-07-11',2) ,('2022-05-10',4) ,('2021-05-10',3),('2021-06-11',5),('2020-10-11',6);**

**ERROR 1452 (23000): Cannot add or update a child row: a foreign key constraint fails (`sampledb`.`orders`, CONSTRAINT `orders\_ibfk\_1` FOREIGN KEY (`ID`) REFERENCES `customers` (`ID`))**

**mysql> insert into orders(o\_date,ID) values('2022-07-11',2) ,('2022-05-10',4) ,('2021-05-10',3),('2021-06-11',5),('2020-10-11',1);**

**Query OK, 5 rows affected (0.02 sec)**

**Records: 5 Duplicates: 0 Warnings: 0**

**mysql> desc orders;**

**+--------+------+------+-----+---------+----------------+**

**| Field | Type | Null | Key | Default | Extra |**

**+--------+------+------+-----+---------+----------------+**

**| o\_id | int | NO | PRI | NULL | auto\_increment |**

**| O\_date | date | YES | | NULL | |**

**| ID | int | YES | MUL | NULL | |**

**+--------+------+------+-----+---------+----------------+**

**3 rows in set (0.01 sec)**

**mysql> select \* from orders;**

**+------+------------+------+**

**| o\_id | O\_date | ID |**

**+------+------------+------+**

**| 6 | 2022-07-11 | 2 |**

**| 7 | 2022-05-10 | 4 |**

**| 8 | 2021-05-10 | 3 |**

**| 9 | 2021-06-11 | 5 |**

**| 10 | 2020-10-11 | 1 |**

**+------+------------+------+**

**5 rows in set (0.00 sec)**

**mysql> select ID,name ,salary,o\_date from customers inner join orders on customers.ID = orders.id;**

**ERROR 1052 (23000): Column 'ID' in field list is ambiguous**

**mysql> select customers.ID,name ,salary,o\_date from customers inner join orders on customers.ID = orders.id;**

**+----+----------+--------+------------+**

**| ID | name | salary | o\_date |**

**+----+----------+--------+------------+**

**| 1 | devansh | 45000 | 2020-10-11 |**

**| 2 | devayush | 46000 | 2022-07-11 |**

**| 3 | Baniya | 67000 | 2021-05-10 |**

**| 4 | negi | 67000 | 2022-05-10 |**

**| 5 | Manish | 37000 | 2021-06-11 |**

**+----+----------+--------+------------+**

**5 rows in set (0.00 sec)**

**mysql> select customers.ID,name ,salary,o\_date from customers left join orders on customers.ID = orders.id;**

**+----+----------+--------+------------+**

**| ID | name | salary | o\_date |**

**+----+----------+--------+------------+**

**| 1 | devansh | 45000 | 2020-10-11 |**

**| 2 | devayush | 46000 | 2022-07-11 |**

**| 3 | Baniya | 67000 | 2021-05-10 |**

**| 4 | negi | 67000 | 2022-05-10 |**

**| 5 | Manish | 37000 | 2021-06-11 |**

**+----+----------+--------+------------+**

**5 rows in set (0.00 sec)**

**mysql> select customers.ID,name ,salary,o\_date from customers right join orders on customers.ID = orders.id;**

**+------+----------+--------+------------+**

**| ID | name | salary | o\_date |**

**+------+----------+--------+------------+**

**| 2 | devayush | 46000 | 2022-07-11 |**

**| 4 | negi | 67000 | 2022-05-10 |**

**| 3 | Baniya | 67000 | 2021-05-10 |**

**| 5 | Manish | 37000 | 2021-06-11 |**

**| 1 | devansh | 45000 | 2020-10-11 |**

**+------+----------+--------+------------+**

**5 rows in set (0.00 sec)**

**mysql> select customers.ID,name ,salary,o\_date from customers full outer join orders on customers.ID = orders.id;**

**ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'outer join orders on customers.ID = orders.id' at line 1**

**mysql> select customers.ID,name ,salary,o\_date from customers full join orders on customers.ID = orders.id;**

**ERROR 1054 (42S22): Unknown column 'customers.ID' in 'field list'**

**mysql> select ID,name ,salary,o\_date from customers full join orders on customers.ID = orders.id;**

**ERROR 1052 (23000): Column 'ID' in field list is ambiguous**

**mysql> select orders.ID,name ,salary,o\_date from customers full join orders on customers.ID = orders.id;**

**ERROR 1054 (42S22): Unknown column 'customers.ID' in 'on clause'**

**mysql> select orders.ID,customers.name ,customers.salary,orders.o\_date from customers full join orders on customers.ID = orders.id;**

**ERROR 1054 (42S22): Unknown column 'customers.name' in 'field list'**

**mysql> select orders.ID,name ,salary,o\_date from customers full join orders on customers.ID = orders.id where 1=1;**

**ERROR 1054 (42S22): Unknown column 'customers.ID' in 'on clause'**

**mysql> select \* from customers union select \* from orders;**

**ERROR 1222 (21000): The used SELECT statements have a different number of columns**

**mysql> select \* from customers left join orders on customers.ID = orders.id union ;**

**ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '' at line 1**

**mysql> select \* from customers left join orders on customers.ID = orders.id union**

**-> select \* from customers right join orders on customers.ID = orders.id;**

**+------+----------+------+-----------+--------+------+------------+------+**

**| ID | name | age | address | salary | o\_id | O\_date | ID |**

**+------+----------+------+-----------+--------+------+------------+------+**

**| 1 | devansh | 22 | Kanpur | 45000 | 10 | 2020-10-11 | 1 |**

**| 2 | devayush | 23 | Bhopal | 46000 | 6 | 2022-07-11 | 2 |**

**| 3 | Baniya | 23 | Jhashi | 67000 | 8 | 2021-05-10 | 3 |**

**| 4 | negi | 23 | Kanpur | 67000 | 7 | 2022-05-10 | 4 |**

**| 5 | Manish | 24 | Gorakhpur | 37000 | 9 | 2021-06-11 | 5 |**

**+------+----------+------+-----------+--------+------+------------+------+**

**5 rows in set (0.01 sec)**

**mysql> select \* from customers;**

**+----+----------+------+-----------+--------+**

**| ID | name | age | address | salary |**

**+----+----------+------+-----------+--------+**

**| 1 | devansh | 22 | Kanpur | 45000 |**

**| 2 | devayush | 23 | Bhopal | 46000 |**

**| 3 | Baniya | 23 | Jhashi | 67000 |**

**| 4 | negi | 23 | Kanpur | 67000 |**

**| 5 | Manish | 24 | Gorakhpur | 37000 |**

**+----+----------+------+-----------+--------+**

**5 rows in set (0.00 sec)**

**mysql> select \* from orders;**

**+------+------------+------+**

**| o\_id | O\_date | ID |**

**+------+------------+------+**

**| 6 | 2022-07-11 | 2 |**

**| 7 | 2022-05-10 | 4 |**

**| 8 | 2021-05-10 | 3 |**

**| 9 | 2021-06-11 | 5 |**

**| 10 | 2020-10-11 | 1 |**

**+------+------------+------+**

**5 rows in set (0.00 sec)**

**mysql> select \* from customers left join orders on customers.ID = orders.id union**

**-> select \* except (ID) from customers right join orders on customers.ID = orders.id;**

**ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'except (ID) from customers right join orders on customers.ID = orders.id' at line 2**

**mysql> select \* from customers left join orders on customers.ID = orders.id union**

**-> select \* except (orders.ID) from customers right join orders on customers.ID = orders.id;**

**ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'except (orders.ID) from customers right join orders on customers.ID = orders.id' at line 2**

**mysql> select \* from customers left join orders on customers.ID = orders.id union**

**-> select o\_id,o\_date from customers right join orders on customers.ID = orders.id;**

**ERROR 1222 (21000): The used SELECT statements have a different number of columns**

**mysql> select customers.id,name,age,address,salary from customers left join orders on customers.ID = orders.id union select o\_id,o\_date from customers right join orders on customers.id =orders.id ;**

**ERROR 1222 (21000): The used SELECT statements have a different number of columns**

**mysql> select id,name,salary,o\_date from customers left join orders on customers.id=orders.id union all select id,name,salary,o\_date from customers right join orders on customers.id=orders.id;**

**ERROR 1052 (23000): Column 'id' in field list is ambiguous**

**mysql> select customers.id,name,salary,o\_date from customers left join orders on customers.id=orders.id union all select id,name,salary,o\_date from customers right join orders on customers.id=orders.id;**

**ERROR 1052 (23000): Column 'id' in field list is ambiguous**

**mysql> select customers.id,name,salary,o\_date from customers left join orders on customers.id=orders.id union all select customers.id,name,salary,o\_date from customers right join orders on customers.id=orders.id;**

**+------+----------+--------+------------+**

**| id | name | salary | o\_date |**

**+------+----------+--------+------------+**

**| 1 | devansh | 45000 | 2020-10-11 |**

**| 2 | devayush | 46000 | 2022-07-11 |**

**| 3 | Baniya | 67000 | 2021-05-10 |**

**| 4 | negi | 67000 | 2022-05-10 |**

**| 5 | Manish | 37000 | 2021-06-11 |**

**| 2 | devayush | 46000 | 2022-07-11 |**

**| 4 | negi | 67000 | 2022-05-10 |**

**| 3 | Baniya | 67000 | 2021-05-10 |**

**| 5 | Manish | 37000 | 2021-06-11 |**

**| 1 | devansh | 45000 | 2020-10-11 |**

**+------+----------+--------+------------+**

**10 rows in set (0.00 sec)**

**mysql> select a.name ,a.salary from customers a ,customers b where a.city=b.city and a.id<> b.id;**

**ERROR 1054 (42S22): Unknown column 'a.city' in 'where clause'**

**mysql> select a.name ,a.salary from customers as a ,customers as b where a.city=b.city and a.id<> b.id;**

**ERROR 1054 (42S22): Unknown column 'a.city' in 'where clause'**

**mysql> select a.name ,a.salary from customers a ,customers b where a.adress=b.address and a.id<> b.id;**

**ERROR 1054 (42S22): Unknown column 'a.adress' in 'where clause'**

**mysql> select a.name ,a.salary from customers a ,customers b where a.address=b.address and a.id<> b.id;**

**+---------+--------+**

**| name | salary |**

**+---------+--------+**

**| negi | 67000 |**

**| devansh | 45000 |**

**+---------+--------+**

**2 rows in set (0.00 sec)**

**mysql> select \* from customers a ,customers b where a.address=b.address and a.id<> b.id;**

**+----+---------+------+---------+--------+----+---------+------+---------+--------+**

**| ID | name | age | address | salary | ID | name | age | address | salary |**

**+----+---------+------+---------+--------+----+---------+------+---------+--------+**

**| 4 | negi | 23 | Kanpur | 67000 | 1 | devansh | 22 | Kanpur | 45000 |**

**| 1 | devansh | 22 | Kanpur | 45000 | 4 | negi | 23 | Kanpur | 67000 |**

**+----+---------+------+---------+--------+----+---------+------+---------+--------+**

**2 rows in set (0.00 sec)**

**mysql> select customers.id,name ,salary,o\_date from customers cross join orders;**

**+----+----------+--------+------------+**

**| id | name | salary | o\_date |**

**+----+----------+--------+------------+**

**| 5 | Manish | 37000 | 2022-07-11 |**

**| 4 | negi | 67000 | 2022-07-11 |**

**| 3 | Baniya | 67000 | 2022-07-11 |**

**| 2 | devayush | 46000 | 2022-07-11 |**

**| 1 | devansh | 45000 | 2022-07-11 |**

**| 5 | Manish | 37000 | 2022-05-10 |**

**| 4 | negi | 67000 | 2022-05-10 |**

**| 3 | Baniya | 67000 | 2022-05-10 |**

**| 2 | devayush | 46000 | 2022-05-10 |**

**| 1 | devansh | 45000 | 2022-05-10 |**

**| 5 | Manish | 37000 | 2021-05-10 |**

**| 4 | negi | 67000 | 2021-05-10 |**

**| 3 | Baniya | 67000 | 2021-05-10 |**

**| 2 | devayush | 46000 | 2021-05-10 |**

**| 1 | devansh | 45000 | 2021-05-10 |**

**| 5 | Manish | 37000 | 2021-06-11 |**

**| 4 | negi | 67000 | 2021-06-11 |**

**| 3 | Baniya | 67000 | 2021-06-11 |**

**| 2 | devayush | 46000 | 2021-06-11 |**

**| 1 | devansh | 45000 | 2021-06-11 |**

**| 5 | Manish | 37000 | 2020-10-11 |**

**| 4 | negi | 67000 | 2020-10-11 |**

**| 3 | Baniya | 67000 | 2020-10-11 |**

**| 2 | devayush | 46000 | 2020-10-11 |**

**| 1 | devansh | 45000 | 2020-10-11 |**

**+----+----------+--------+------------+**

**25 rows in set (0.00 sec)**

**mysql> select \* from customers;**

**+----+----------+------+-----------+--------+**

**| ID | name | age | address | salary |**

**+----+----------+------+-----------+--------+**

**| 1 | devansh | 22 | Kanpur | 45000 |**

**| 2 | devayush | 23 | Bhopal | 46000 |**

**| 3 | Baniya | 23 | Jhashi | 67000 |**

**| 4 | negi | 23 | Kanpur | 67000 |**

**| 5 | Manish | 24 | Gorakhpur | 37000 |**

**+----+----------+------+-----------+--------+**

**5 rows in set (0.00 sec)**

**mysql> select \* from orders;**

**+------+------------+------+**

**| o\_id | O\_date | ID |**

**+------+------------+------+**

**| 6 | 2022-07-11 | 2 |**

**| 7 | 2022-05-10 | 4 |**

**| 8 | 2021-05-10 | 3 |**

**| 9 | 2021-06-11 | 5 |**

**| 10 | 2020-10-11 | 1 |**

**+------+------------+------+**

**5 rows in set (0.00 sec)**

**mysql> select \* customers.id,name,age,address ,o\_id,o\_date from select customers.id,name,salary,o\_date from customers left join orders on customers.id=orders.id union all select customers.id,name,salary,o\_date from customers right join orders on customers.id=orders.id where customers.salary>20000;**

**ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'customers.id,name,age,address ,o\_id,o\_date from select customers.id,name,salary,' at line 1**

**mysql> select \* from customers where salary >20000;**

**+----+----------+------+-----------+--------+**

**| ID | name | age | address | salary |**

**+----+----------+------+-----------+--------+**

**| 1 | devansh | 22 | Kanpur | 45000 |**

**| 2 | devayush | 23 | Bhopal | 46000 |**

**| 3 | Baniya | 23 | Jhashi | 67000 |**

**| 4 | negi | 23 | Kanpur | 67000 |**

**| 5 | Manish | 24 | Gorakhpur | 37000 |**

**+----+----------+------+-----------+--------+**

**5 rows in set (0.00 sec)**

**mysql> create table cust\_backup as select \* from customers;**

**Query OK, 5 rows affected (0.06 sec)**

**Records: 5 Duplicates: 0 Warnings: 0**

**mysql> select \* from cust\_backup;**

**+----+----------+------+-----------+--------+**

**| ID | name | age | address | salary |**

**+----+----------+------+-----------+--------+**

**| 1 | devansh | 22 | Kanpur | 45000 |**

**| 2 | devayush | 23 | Bhopal | 46000 |**

**| 3 | Baniya | 23 | Jhashi | 67000 |**

**| 4 | negi | 23 | Kanpur | 67000 |**

**| 5 | Manish | 24 | Gorakhpur | 37000 |**

**+----+----------+------+-----------+--------+**

**5 rows in set (0.00 sec)**

**mysql> update salary=salary+(salary/10) from cust\_backup where age>=24;**

**ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '=salary+(salary/10) from cust\_backup where age>=24' at line 1**

**mysql> update cust\_backup set salary=salary+(salary/10) where age>=24;**

**Query OK, 1 row affected (0.01 sec)**

**Rows matched: 1 Changed: 1 Warnings: 0**

**mysql> select \* from cust\_backup;**

**+----+----------+------+-----------+--------+**

**| ID | name | age | address | salary |**

**+----+----------+------+-----------+--------+**

**| 1 | devansh | 22 | Kanpur | 45000 |**

**| 2 | devayush | 23 | Bhopal | 46000 |**

**| 3 | Baniya | 23 | Jhashi | 67000 |**

**| 4 | negi | 23 | Kanpur | 67000 |**

**| 5 | Manish | 24 | Gorakhpur | 40700 |**

**+----+----------+------+-----------+--------+**

**5 rows in set (0.00 sec)**

**mysql> delete from customers where age>=24;**

**ERROR 1451 (23000): Cannot delete or update a parent row: a foreign key constraint fails (`sampledb`.`orders`, CONSTRAINT `orders\_ibfk\_1` FOREIGN KEY (`ID`) REFERENCES `customers` (`ID`))**

**mysql> delete from customers where age>=24 on delete cascade;**

**ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'on delete cascade' at line 1**

**mysql> select \* from customers;**

**+----+----------+------+-----------+--------+**

**| ID | name | age | address | salary |**

**+----+----------+------+-----------+--------+**

**| 1 | devansh | 22 | Kanpur | 45000 |**

**| 2 | devayush | 23 | Bhopal | 46000 |**

**| 3 | Baniya | 23 | Jhashi | 67000 |**

**| 4 | negi | 23 | Kanpur | 67000 |**

**| 5 | Manish | 24 | Gorakhpur | 37000 |**

**+----+----------+------+-----------+--------+**

**5 rows in set (0.00 sec)**

**mysql> select \* from orders;**

**+------+------------+------+**

**| o\_id | O\_date | ID |**

**+------+------------+------+**

**| 6 | 2022-07-11 | 2 |**

**| 7 | 2022-05-10 | 4 |**

**| 8 | 2021-05-10 | 3 |**

**| 9 | 2021-06-11 | 5 |**

**| 10 | 2020-10-11 | 1 |**

**+------+------------+------+**

**5 rows in set (0.00 sec)**

**mysql> delete from cust\_backup where age>=24 on delete cascade;**

**ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'on delete cascade' at line 1**

**mysql> delete from cust\_backup where age>=24;**

**Query OK, 1 row affected (0.01 sec)**

**mysql> select \* from cust\_backup;**

**+----+----------+------+---------+--------+**

**| ID | name | age | address | salary |**

**+----+----------+------+---------+--------+**

**| 1 | devansh | 22 | Kanpur | 45000 |**

**| 2 | devayush | 23 | Bhopal | 46000 |**

**| 3 | Baniya | 23 | Jhashi | 67000 |**

**| 4 | negi | 23 | Kanpur | 67000 |**

**+----+----------+------+---------+--------+**

**4 rows in set (0.00 sec)**

**mysql>**

Playlist 34-38 || 1-68 in a week

College Management System ERD minimization

Daily tasks.