CASE STUDY FOR PUBG

INTRODUCTION

PUBG is a popular online multiplayer battle royale game developed and published by pubg corporation.The game has a vast player base and the generates a large amount of data related player activities, matches, level and game statistic.To efficiently manage this data,a database system like MySQL can be utilised.

MySQL is an open- source relational database managements system that provides a robust platforms for storing, user_id , organising, and queries data.By using MySQL ,PUBG can effectively store and manage its diverse range of data,including user_name,characters,tier,match,level,map_name related information.

To create a database schema in MySQl ….

```
create database case_study;
use case_study;
```

1ST TABLE CREATE FROM THE PUBG

```
-----------------------------------------------------------------------------------------------------
create database case_study;
use case_study;
-----------------------------------------------------------------------------------------------------
create table pubg(user_id int,
user_name varchar(20),character_name varchar(20),
level int,tier varchar(20),
map_name varchar(33),ww_chicken_dinner varchar(80),
matchs int);
-----------------------------------------------------------------------------------------------------
insert into pubg values (100001,'Sam','Sara',73,'Ace','Erangle','Winner Winner Chicken_dinner',5),
                        (100002,'Jai','Victor',74,'Platinum','Livik','Winner Winner Chicken_dinner',6),
                        (100003,'Santhosh','Carlo',72,'Conqueror','Miramar','Lose',5),
                        (100004,'Gokul','Andy',48,'Diamond','Karakin','Lose',3),
                        (100005,'Dinesh','Anna',55,'Crown','Nusa','Lose',2),
                        (100006,'Zoro','Emilia',30,'Gold','Sanhok','Winner Winner Chicken_dinner',2);
select*from pubg;
```

OUTPUT :

user_id	user_name	character_name	level	tier	map_name	ww_chicken_dinner	matchs
100001	Sam	Sara	73	Ace	Erangle	Winner Winner Chicken_dinner	5
100002	Jai	Victor	74	Platinum	Livik	Winner Winner Chicken_dinner	6
100003	Santhosh	Carlo	72	Conqueror	Miramar	Lose	5
100004	Gokul	Andy	48	Diamond	Karakin	Lose	3
100005	Dinesh	Anna	55	Ace	Nusa	Lose	2
100006	Zoro	Emilia	30	Gold	Sanhok	Winner Winner Chicken_dinner	2

2RD TABLE CREATE FROM THE MAP

```
-----------------------------------------------------------------------------------
create table map(user_id int,
map_name varchar(30),
map_size varchar(60),
duration varchar(20),
air_drop int,
exclusive_weapons varchar(60));

insert into map values(100001,'Erangle','8km x 8km','35min',5,'M416'),
                      (100006,'Sanhok','4km x 4km','20min',3,'QBZ'),
                      (100007,'Livik','2km x 2km','15min',4,'Famas'),
                      (100002,'Nusa','1km x 1km','10min',2,'Aug'),
                      (100003,'Vikendi','6km x 6km','30min',4,'G36C'),
                      (100004,'Miramar','8km x 8km','35min',5,'Win94'),
                      (100005,'karakin','2km x 2km','15min',3,'M762');

select*from map;
```

OUTPUT :

user_id	map_name	map_size	duration	air_drop	exclusive_weapons
100001	Erangle	8km x 8km	35min	5	M416
100006	Sanhok	4km x 4km	20min	3	QBZ
100007	Livik	2km x 2km	15min	4	Famas
100002	Nusa	1km x 1km	10min	2	Aug
100003	Vikendi	6km x 6km	30min	4	G36C
100004	Miramar	8km x 8km	35min	5	Win94
100005	karakin	2km x 2km	15min	3	M762

3RD TABLE CREATE FROM THE WEAPONS

```
--------------------------------------------------------------------------------
create table weapons (assault_rifle varchar(60),
sniper_rifle varchar(60),shotgun varchar(60),
pistol varchar(60),exclusive_weapons varchar(60));

insert into weapons values ('AKM','Kar98K','S12K','P92','M416');
insert into weapons values ('M416','M24','DBS','Desert eagle','Win94');
insert into weapons values ('Groza','AWM','S686','Skorpion','M762');
insert into weapons values ('M762','Win94','M1014','Flare gun','Aug');
insert into weapons values ('Famas','AMR','S1897','R45','G36C');
insert into weapons values ('QBZ','Mosin Nagant','NS2000','P18C','Famas');

select *from weapons;
```

OUTPUT :

assault_rifle	sniper_rifle	shotgun	pistol	exclusive_weapons
AKM	Kar98K	S12K	P92	M416
M416	M24	DBS	Desert eagle	Win94
Groza	AWM	S686	Skorpion	M762
M762	Win94	M1014	Flare gun	Aug
Famas	AMR	S1897	R45	G36C
QBZ	Mosin Nagant	NS2000	P18C	Famas

-

4TH TABLE CREATE FROM THE USER_PROFILE

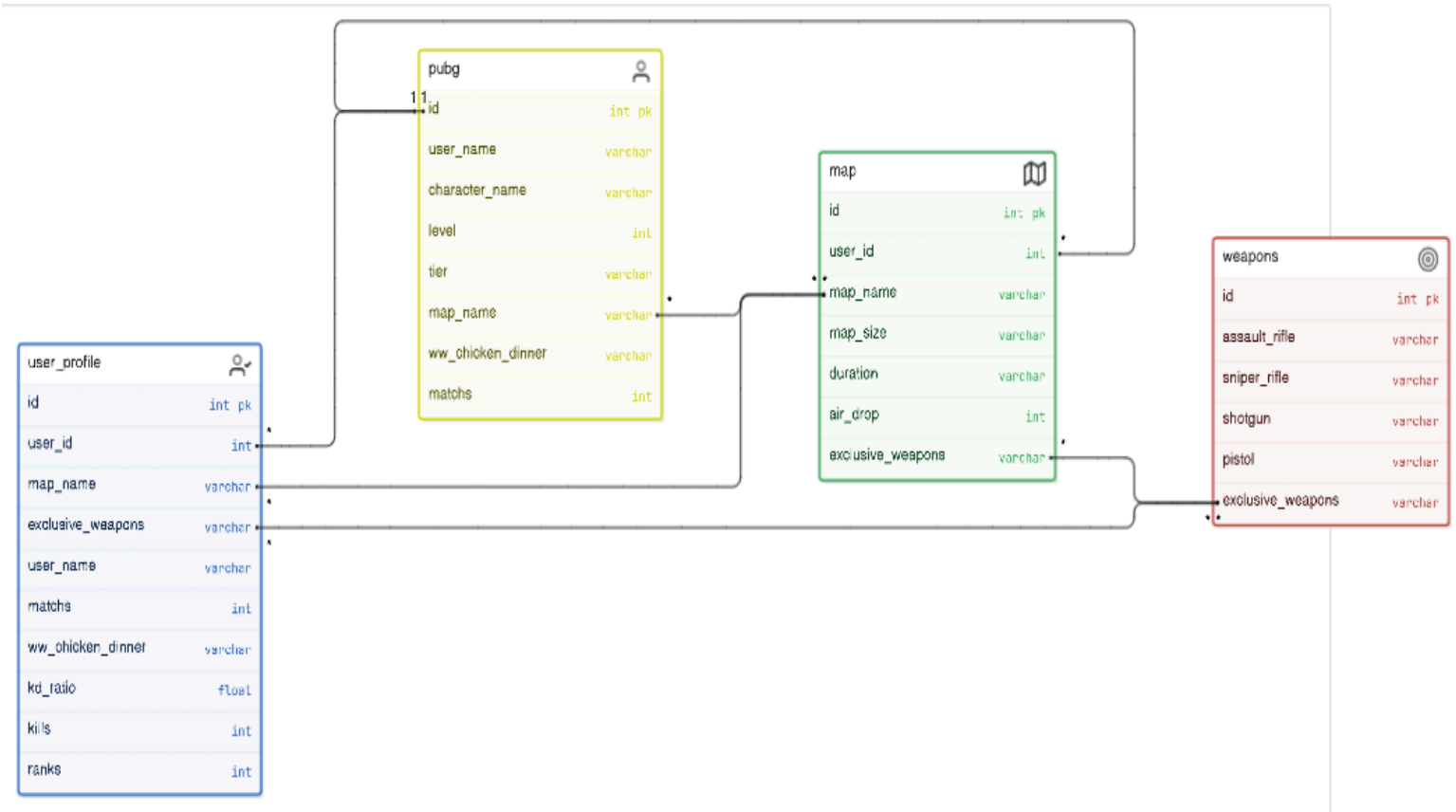
```
create table user_profile (user_name varchar(20),
user_id int,map_name varchar(30),
matchs int,ww_chicken_dinner varchar(80),
exclusive_weapons varchar(60),kd_ratio float,
kills int,ranks int);

insert into user_profile values('Sam',100001,'Erangle',5,'Winner Winner Chicken_dinner','M416',2.0,7,1),
                               ('Jai',100002,'Livik',5,'Winner Winner Chicken_dinner','FAMAS',3.4,8,2),
                               ('Gokul',100003,'Sanhok',3,'Lose','QBZ',2.50,3,4),
                               ('Santhosh',100004,'Nusa',5,'Lose','Aug',4.0,12,5),
                               ('Dinesh',100005,'Vikendi',2,'Lose','G36C',2.8,8,6),
                               ('Zoro',100006,'Miramar',2,'Winner Winner Chicken_dinner','Win94',2.6,6,3),
                               ('Luffy',100007,'Erangle',8,'Lose','M416',3.0,5,6);

select *from user_profile;
```

OUTPUT :

esult Grid | Filter Rows: | Export: | Wrap Cell Content:

user_name	user_id	map_name	matchs	ww_chicken_dinner	exclusive_weapons	kd_ratio	kills	ranks
Sam	100001	Erangle	5	Winner Winner Chicken_dinner	M416	2	7	1
Jai	100002	Livik	5	Winner Winner Chicken_dinner	FAMAS	3.4	8	2
Gokul	100003	Sanhok	3	Lose	QBZ	2.5	3	4
Santhosh	100004	Nusa	5	Lose	Aug	4	10	5
Dinesh	100005	Vikendi	2	Lose	G36C	2.7	8	6
Zoro	100006	Miramar	2	Winner Winner Chicken_dinner	Win94	2.6	6	3

ENTITY RELATIONSHIP DIAGRAM



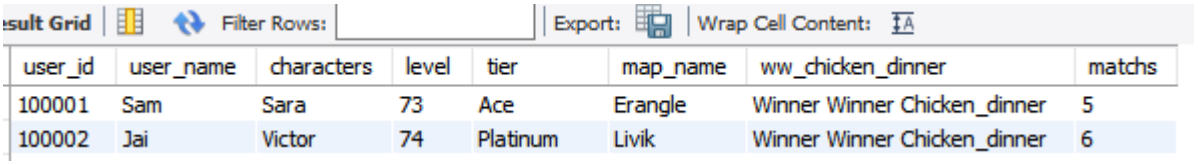
Case studies questions and answer

1 Alter table rename column character_name into characters ?

SYNTAX :

```
alter table pubg rename column character_name to characters;
```

OUTPUT :



user_id	user_name	characters	level	tier	map_name	ww_chicken_dinner	matchs
100001	Sam	Sara	73	Ace	Erangle	Winner Winner Chicken_dinner	5
100002	Jai	Victor	74	Platinum	Livik	Winner Winner Chicken_dinner	6

2 Update column values ace into ace dominator ?

SYNTAX :

```
update pubg set tier = 'Ace dominator' where user_name = 'dinesh';
```

OUTPUT :

user_id	user_name	characters	level	tier	map_name	ww_chicken_dinner	matchs
100001	Sam	Sara	73	Ace	Erangle	Winner Winner Chicken_dinner	5
100002	Jai	Victor	74	Platinum	Livik	Winner Winner Chicken_dinner	6
100003	Santhosh	Carlo	72	Conqueror	Miramar	Lose	5
100004	Gokul	Andy	48	Diamond	Karakin	Lose	3
100005	Dinesh	Anna	55	Ace dominator	Nusa	Lose	2
100006	Zoro	Emilia	30	Gold	Sanhok	Winner Winner Chicken_dinner	2

3 List down the maps where map_name contains ‘ang’ ?

SYNTAX :

```
select*from map where map_name like '%ang%';
```

OUTPUT :

user_id	map_name	map_size	duration	air_drop	exclusive_weapons
100001	Erangle	8km x 8km	35min	5	M416

4 Return a list of user_profile tables with the following user_name [Sam,Jai,Santhosh] ?

SYNTAX :

```
select * from user_profile where user_name = 'sam'
or user_name = 'jai' or user_name = 'santhosh';
```

OUTPUT :

user_name	user_id	map_name	matchs	ww_chicken_dinner	exclusive_weapons	kd_ratio	kills	ranks
Sam	100001	Erangle	5	Winner Winner Chicken_dinner	M416	2	7	1
Jai	100002	Livik	5	Winner Winner Chicken_dinner	FAMAS	3.4	8	2
Santhosh	100004	Nusa	5	Lose	Aug	4	12	5

6 Return a list of weapons with the following shotgun [M1014,DBS,S12K] using In value ?

SYNTAX :

```
select * from weapons where shotgun in('M1014','DBS','S12K');
```

OUTPUT :

assault_rifle	sniper_rifle	shotgun	pistol	exclusive_weapons
AKM	Kar98K	S12K	P92	M416
M416	M24	DBS	Desert eagle	Win94
M762	Win94	M1014	Flare gun	Aug

7 Count user_name from the table pubg?

SYNTAX :

```
select count(user_name)from pubg;
```

OUTPUT :

count(user_name)
6

8 How to use the ‘Distinct’ keyword in MySQL ?

SYNTAX :

```
select distinct user_id,user_name from user_profile;
```

OUTPUT :

user_id	user_name
100001	Sam
100002	Jai
100003	Gokul
100004	Santhosh
100005	Dinesh
100006	Zoro

9 Use the aggregate function avg (column name) level to retrieve the table pubg (column name) user_id ,user_name,level,tier ?

SYNTAX :

```
select avg(level),user_id,user_name,level,tier from pubg
group by user_id,user_name,level,tier order by avg(level) asc limit 3;
```

OUTPUT :

avg(level)	user_id	user_name	level	tier
30.0000	100006	Zoro	30	Gold
48.0000	100004	Gokul	48	Diamond
55.0000	100005	Dinesh	55	Ace dominator

10 Find out the max and min from the table name pubg column values level ?

SYNTAX :

```
select max(level),min(level) from pubg;
```

OUTPUT :

	max(level)	min(level)
▶	74	30

11 Combine the map_name and map_size from table map ?

SYNTAX :

```
select concat(map_name," ",map_size)as map_details
 from map group by map_name,map_size;
```

OUTPUT :

map_details
Erangle 8km x 8km
Sanhok 4km x 4km
Livik 2km x 2km
Nusa 1km x 1km
Vikendi 6km x 6km
Miramar 8km x 8km
karakin 2km x 2km

12 Find the average matchs from the table pubg ?

SYNTAX :

```
select user_id,user_name,matchs,
(select avg(matchs)from pubg)as
 avg_match from pubg;
```

OUTPUT :

user_id	user_name	matchs	avg_match
100001	Sam	5	3.8333
100002	Jai	6	3.8333
100003	Santhosh	5	3.8333
100004	Gokul	3	3.8333
100005	Dinesh	2	3.8333
100006	Zoro	2	3.8333

13 Find the kills greater than and retrieve min kills using limit ?

SYNTAX :

```
select*from user_profile where kills >
(select min(kills) from user_profile)limit 3 ;
```

OUTPUT :

user_name	user_id	map_name	matchs	ww_chicken_dinner	exclusive_weapons	kd_ratio	kills	ranks
Sam	100001	Erangle	5	Winner Winner Chicken_dinner	M416	2	7	1
Jai	100002	Livik	5	Winner Winner Chicken_dinner	FAMAS	3.4	8	2
Santhosh	100004	Nusa	5	Lose	Aug	4	10	5

14 Join the three tables using multiple joins ?

SYNTAX :

```
select p.user_name,p.characters,p.tier,up.kills,up.ranks,
m.map_name,m.duration,up.ww_chicken_dinner from pubg p
join user_profile up on p.user_id = up.user_id join map m
on up.user_id = m.user_id;
```

OUTPUT :

user_name	characters	tier	kills	ranks	map_name	duration	ww_chicken_dinner
Sam	Sara	Ace	7	1	Erangle	35min	Winner Winner Chicken_dinner
Zoro	Emilia	Gold	6	3	Sanhok	20min	Winner Winner Chicken_dinner
Jai	Victor	Platinum	8	2	Nusa	10min	Winner Winner Chicken_dinner
Santhosh	Carlo	Conqueror	3	4	Vikendi	30min	Lose
Gokul	Andy	Diamond	10	5	Miramar	35min	Lose
Dinesh	Anna	Ace dominator	8	6	karakin	15min	Lose

15 Retrieve the left joins using the table user_profile and weapons ?

SYNTAX :

```
select up.user_name,up.map_name,w.assault_rifle,w.exclusive_weapons,
up.ww_chicken_dinner from weapons w left join user_profile up
on w.exclusive_weapons = up.exclusive_weapons is not null;
```

OUTPUT

user_name	map_name	assault_rifle	exclusive_weapons	ww_chicken_dinner
Luffy	Erangle	AKM	M416	Lose
Zoro	Miramar	AKM	M416	Winner Winner Chicken_dinner
Dinesh	Vikendi	AKM	M416	Lose
Santhosh	Nusa	AKM	M416	Lose
Gokul	Sanhok	AKM	M416	Lose
Jai	Livik	AKM	M416	Winner Winner Chicken_dinner
Sam	Erangle	AKM	M416	Winner Winner Chicken_dinner
Luffy	Erangle	M416	Win94	Lose

16 Retrieve the right joins using the table user_profile and weapons ?

SYNTAX :

```
select up.user_name,up.map_name,w.assault_rifle,w.exclusive_weapons,
up.ww_chicken_dinner from weapons w right join user_profile up
on w.exclusive_weapons = up.exclusive_weapons ;
```

OUTPUT :

user_name	map_name	assault_rifle	exclusive_weapons	ww_chicken_dinner
Sam	Erangle	AKM	M416	Winner Winner Chicken_dinner
Jai	Livik	QBZ	Famas	Winner Winner Chicken_dinner
Gokul	Sanhok	NULL	NULL	Lose
Santhosh	Nusa	M762	Aug	Lose
Dinesh	Vikendi	Famas	G36C	Lose
Zoro	Miramar	M416	Win94	Winner Winner Chicken_dinner
Luffy	Erangle	AKM	M416	Lose

17 Using a union all query from the tables pubg and user_profile ?

SYNTAX :

```
select user_name,ww_chicken_dinner from pubg
union all
select user_name,ww_chicken_dinner from user_profile order by user_name;
```

OUTPUT :

user_name	ww_chicken_dinner
Dinesh	Lose
Dinesh	Lose
Gokul	Lose
Gokul	Lose
Jai	Winner Winner Chicken_dinner
Jai	Winner Winner Chicken_dinner
Luffy	Lose
Sam	Winner Winner Chicken_dinner
Sam	Winner Winner Chicken_dinner
Santhosh	Lose
Santhosh	Lose
Zoro	Winner Winner Chicken_dinner
Zoro	Winner Winner Chicken_dinner

18 Using a union query from the tables pubg and user_profile ?

SYNTAX :

```
select user_name,ww_chicken_dinner from pubg
union
select user_name,ww_chicken_dinner from user_profile order by user_name;
```

OUTPUT :

user_name	ww_chicken_dinner
Dinesh	Lose
Gokul	Lose
Jai	Winner Winner Chicken_dinner
Luffy	Lose
Sam	Winner Winner Chicken_dinner
Santhosh	Lose
Zoro	Winner Winner Chicken_dinner

19 Retrieve rank from the table user_profile ?

SYNTAX :

```
select user_name ,rank() over(order by ranks) from user_profile;
```

OUTPUT :

user_name	rank() over(order by ranks)
Sam	1
Jai	2
Zoro	3
Gokul	4
Santhosh	5
Dinesh	6
Luffy	6

20 **Retrieve** dense_rank from the table user_profile ?

SYNTAX :

```
select user_name, dense_rank() over(order by ranks)
as dense_ranks from user_profile;
```

OUTPUT :

user_name	dense_ranks
Sam	1
Jai	2
Zoro	3
Gokul	4
Santhosh	5
Dinesh	6
Luffy	6

21 Retrieve percent_rank from the table user_profile ?

SYNTAX :

```
select user_name, percent_rank() over(order by ranks)as
percentage from user_profile;
```

OUTPUT :

user_name	percentage
Sam	0
Jai	0.16666666666666666
Zoro	0.3333333333333333
Gokul	0.5
Santhosh	0.6666666666666666
Dinesh	0.8333333333333334
Luffy	0.8333333333333334

22 Delete the record user_id and retrieve it again using TCL commands ?

SYNTAX :

```
set autocommit=off;

delete from user_profile where user_id = 100001;

select * from user_profile;
```

OUTPUT :

user_name	user_id	map_name	matchs	ww_chicken_dinner	exclusive_weapons	kd_ratio	kills	ranks
Jai	100002	Livik	5	Winner Winner Chicken_dinner	FAMAS	3.4	8	2
Gokul	100003	Sanhok	3	Lose	QBZ	2.5	3	4
Santhosh	100004	Nusa	5	Lose	Aug	4	10	5
Dinesh	100005	Vikendi	2	Lose	G36C	2.7	8	6
Zoro	100006	Miramar	2	Winner Winner Chicken_dinner	Win94	2.6	6	3

After using rollback commands

SYNTAX :

```
rollback;
```

OUTPUT :

user_name	user_id	map_name	matchs	ww_chicken_dinner	exclusive_weapons	kd_ratio	kills	ranks
Sam	100001	Erangle	5	Winner Winner Chicken_dinner	M416	2	7	1
Jai	100002	Livik	5	Winner Winner Chicken_dinner	FAMAS	3.4	8	2
Gokul	100003	Sanhok	3	Lose	QBZ	2.5	3	4
Santhosh	100004	Nusa	5	Lose	Aug	4	10	5
Dinesh	100005	Vikendi	2	Lose	G36C	2.7	8	6
Zoro	100006	Miramar	2	Winner Winner Chicken_dinner	Win94	2.6	6	3

23 Replace the available name into another name ?

SYNTAX :

```
select replace('luffy','luffy','Naruto')as renames;
```

OUTPUT :

renames
Naruto

24 What is instr in MySQL ?

SYNTAX :

```
select instr('ace dominator','dominator');
```

OUTPUT :

instr('ace dominator','dominator')
5

25 How to use now() and current_date() ?

SYNTAX :

```
select now();
```

OUTPUT :

now()
2024-07-19 05:01:23

SYNTAX :

```
select current_date();
```

OUTPUT :

current_date()
2024-07-19

/