# **About the project:-**

To put it simply, it will contain a load of Bangladeshi cricket players along with their career statistics. It will also have many categories to divide the players based on their style. Same player can be on different records so that we can find out the relations between them. And, at the end, we will select the best 15 players for the Bangladesh National Cricket team by figuring out the records that we will store in our database. With the help of MySql workbench and it's query language I was able to manipulate and organize the records in order to do specific operations.

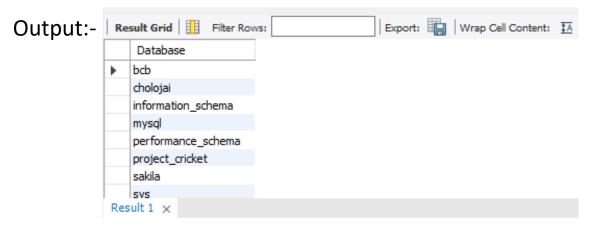
In the following project I have used 30+ operations in order to organize my data or records. I have created 8 tables at first, as I gone through the project I have created more tables to understand and make relations among the records of different tables.

Let us see the operations that I have used in order to elaborate my project,

### **Operations:**

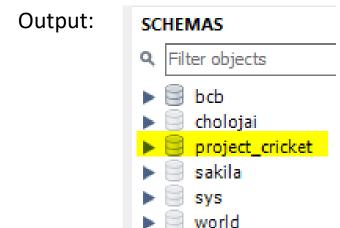
- 1)Successfully installed MySql workbench and its components.
- 2)I wanted to know the existing databases that are pre-installed in the workbench,

Code: Show databases;



3)Then, I created my selected database for the project to get started,

Code:- Create database project\_Cricket;



- 4)In order to delete a database, the necessary code is, Code:- Drop database databaseName;
- 5)I have created a table naming 'players',

Code:- CREATE TABLE players (

'Jersey NO.' INT NOT NULL,

'Name' VARCHAR(45) NOT NULL,

`Player Type` VARCHAR(45) NULL,

'Age' INT NULL,

`State` VARCHAR(45) NULL,

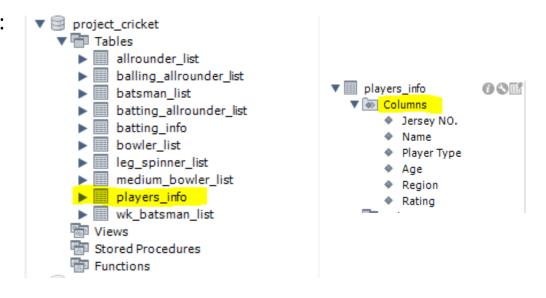
`Region` VARCHAR(45) NULL,

`Rating` FLOAT NULL,

PRIMARY KEY ('Jersey NO.', 'Name');

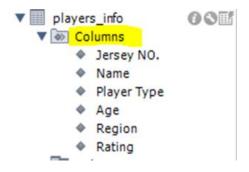
6)I renamed the 'players' table to 'players\_info',

Code:- Rename table players to players\_info;



7) I have dropped the column 'State' from the players\_info table, Code:- ALTER TABLE players\_info DROP COLUMN `State`;

Output:



8)Inserted data into the players\_info table,

Code:- INSERT INTO table name

**VALUES** 

(75, 'Shakib Al Hasan', 'All-rounder', 34, 'Magura', 8.0)

(18, 'Afif Hossain Dhrubo', 'Batting All-rounder', 31,

'Khulna', 6.5)......

20 more records

	Jersey NO.	Name	Player Type	Age	Region	Rating
•	2	Mashrafee Mortaza	Fast-medium Bowler	37	Narail	6.75
	3	Taskin Ahmed	Fast Bowler	26	Dhaka	6.5
	7	Mominul Haque	Batsman	29	Cox's Bazar	8
	15	Mushfigur Rahim	Wk. Batsman	32	Rajshahi	7
	16	Liton Kumar Das	Wk. Batsman	26	Dinajpur	6.5
	18	Afif Hossain Dhrubo	Batting All-rounder	21	Khulna	6.5
	23	Mohammad Naim Sheikh	Batsman	21	Dhaka	6.5
	26	Nurul Hasan Sohan	Wk. Batsman	27	Khulna	6.75
	28	Tamim Iqbal	Batsman	32	Chattrogram	7.5
	29	Shamim Hasan Patwari	Batting All-rounder	20	Chandpur	7
	30	Mahmudullah Riyad	Batting All-rounder	33	Mymensingh	7
	32	Mosaddek Hossain	Batting All-rounder	25	Mymensingh	6.5
	34	Rubel Hossain	Fast-medium Bowler	31	Khulna	6.5
	47	Mohammad Shoriful Islam	Fast bowler	21	Panchagor	6.75
	52	Mehidy Hasan	Balling All-rounder	23	Khulna	6.75
	59	Soumya Sarkar	Batsman	28	Satkhira	6.5
	67	Zubayer Hossan Likhon	Leg Spinner	23	Magura	6.5
	69	Anisur Rahman Tonu	All-rounder	21	Gazipur	8
	72	Mohammad Saifuddin	Balling All-rounder	24	Feni	6.5
	75	Shakib Al Hasan	All-rounder	34	Magura	8
	77	Aminul Islam Biplob	Leg Spinner	22	Rajshahi	6.25
	90	Mustafizur Rahman	Fast Bowler	25	Satkhira	7.5

9)Showing the records:-

Code:- Select \* from players\_info;

Output:

	Jersey NO.	Name	Player Type	Age	Region	Rating
•	2	Mashrafee Mortaza	Fast-medium Bowler	37	Narail	6.75
	3	Taskin Ahmed	Fast Bowler	26	Dhaka	6.5
	7	Mominul Haque	Batsman	29 32 26 21	Cox's Bazar	8
	15	Mushfigur Rahim	Wk. Batsman		Rajshahi Dinajpur Khulna	7
	16	Liton Kumar Das	Wk. Batsman Batting All-rounder			6.5
	18	Afif Hossain Dhrubo				6.5
	23	Mohammad Naim Sheikh	Batsman	21	Dhaka	6.5
	26	Nurul Hasan Sohan	Wk. Batsman	27	Khulna	6.75
	28	Tamim Iqbal	Batsman	32	Chattrogram	7.5
	29	Shamim Hasan Patwari	Batting All-rounder	20	Chandpur	7
	30	Mahmudullah Riyad	Batting All-rounder	33	Mymensingh	7
	32	Mosaddek Hossain	Batting All-rounder	25	Mymensingh	6.5
	34	Rubel Hossain	Fast-medium Bowler	31	Khulna	6.5
	47	Mohammad Shoriful Islam	Fast bowler	21	Panchagor	6.75
	52	Mehidy Hasan	Balling All-rounder	23	Khulna	6.75
	59	Soumya Sarkar	Batsman	28	Satkhira	6.5
	67	Zubayer Hossan Likhon	Leg Spinner	23	Magura	6.5
	69	Anisur Rahman Tonu	All-rounder	21	Gazipur	8
	72	Mohammad Saifuddin	Balling All-rounder	24	Feni	6.5
	75	Shakib Al Hasan	All-rounder	34	Magura	8
	77	Aminul Islam Biplob	Leg Spinner	22	Rajshahi	6.25
	90	Mustafizur Rahman	Fast Bowler	25	Satkhira	7.5

# 10) Distinct column show:-

Code:-select distinct Region from players\_info;



11) Updating a selective column:-

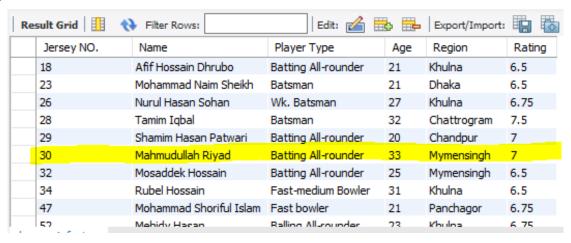
Code:- UPDATE players\_info`

SET `Region` = 'Mymensingh'

WHERE ('Jersey NO.' = '30') and

(`Name` = 'Mahmudullah Riyad');

### Output:



# 12) Showing limited records:-

Code:- select \* from players\_info limit 5;

Output:

3 Taskin Ahmed Fast Bowler	37 26	Narail Dhaka	6.75 6.5
		Dhaka	6.5
7 Mominul Haque Batsman	29	Cox's Bazar	8
15 Mushfiqur Rahim Wk. Batsman	32	Rajshahi	7
16 Liton Kumar Das Wk. Batsman	26	Dinajpur	6.5
NULL NULL	NULL	NULL	NULL

### 13) Order by asc, desc:-

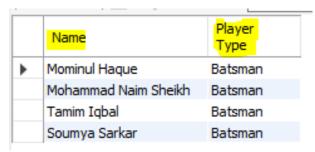
Code:- select Name, Age from players\_info order by Age;

Re	sult Grid 🔢 🙌 Filter R	ows:
	Name	Age
•	Shamim Hasan Patwari	20
	Afif Hossain Dhrubo	21
	Mohammad Naim Sheikh	21
	Mohammad Shoriful Islam	21
	Anisur Rahman Tonu	21
	Aminul Islam Biplob	22
	Mehidy Hasan	23
	Zubayer Hossan Likhon	23
	Mohammad Saifuddin	24
	Mosaddek Hossain	25
	Mustafizur Rahman	25
	Taskin Ahmed	26
	Liton Kumar Das	26
	Nurul Hasan Sohan	27
	Soumya Sarkar	28
	Mominul Haque	29

14) Where clause for selective records showing:-

Code:- select `Name`, `Player Type` from players\_info where `Player Type` = "Batsman";

Output:



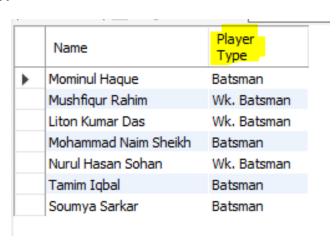
15) Between clause for selective records showing:Code:- select `Name`, `Player Type`, Rating from players\_info
where Rating between 7.00 and 8.00

Output:

1			
	Name	Player Type	Rating
•	Mominul Haque	Batsman	8
	Mushfigur Rahim	Wk. Batsman	7
	Tamim Iqbal	Batsman	7.5
	Shamim Hasan Patwari	Batting All-rounder	7
	Mahmudullah Riyad	Batting All-rounder	7
	Anisur Rahman Tonu	All-rounder	8
	Shakib Al Hasan	All-rounder	8
	Mustafizur Rahman	Fast Bowler	7.5

# 16) Or operation:-

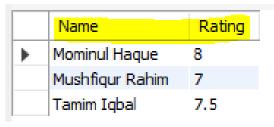
Code:- select `Name`, `Player Type` from players\_info where `Player Type`= "Wk. Batsman" OR `Player Type`= "Batsman"



### 17) And operation:-

Code-> select `Name`, Rating from players\_info where (`Player Type`= "Wk. Batsman" OR `Player Type`= "Batsman") and (Rating>=7.00)

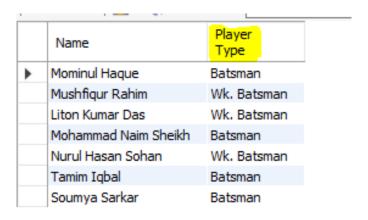
Output:



# 18) In operations:-

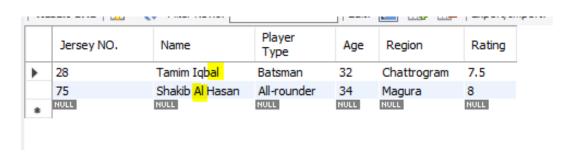
Code->select `Name`, `Player Type` from players\_info where `Player Type` in ("Batsman", "Wk. Batsman")

Output:



### 19) Like operaion:-

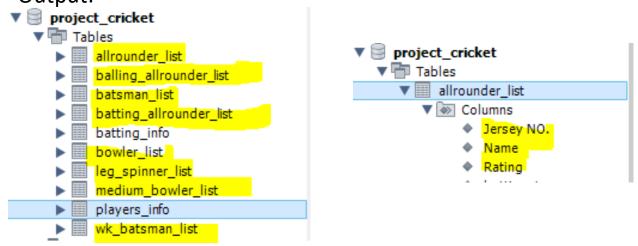
Code->select\* from players\_info where Name like "%al%"



20) Creating table from another table with data:-

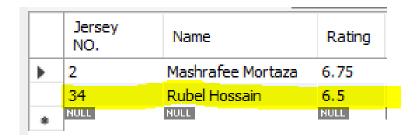
Code-> create table batsman\_list as select `Jersey NO.`, Name, Rating from players\_info where `Player Type`="Batsman"

\*\* In the same way I have created more 7 tables and I have inherited the same three columns from the table players\_info \*\* Output:



21) Copying one data from one table to nother:-

Code-> insert into medium\_bowler\_list select `Jersey NO.`, Name, Rating from players\_info where `Jersey NO.` = 34;



### 22) Adding a column:-

Code-> alter table bowler\_list
add (batting\_type varchar(45) not null,
batting\_position varchar(45) not null,
batting\_average float not null,
batting\_strikeRate float not null,
bowling\_style varchar(45) not null,
bowling average float not null,

bowling\_economyRate float not null)

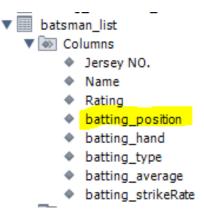
\*\* in the same way I have added columns into the other recently created tables besides players info \*\*

Output:

| bowler\_list |
| Columns |
| Jersey NO. |
| Name |
| Rating |
| batting\_type |
| batting\_hand |
| batting\_position |
| batting\_average |
| bowling\_strikeRate |
| bowling\_strike |
| bowling\_hand |
| bowling\_average |
| bowling\_average |
| bowling\_average |
| bowling\_economyRate |
|

# 23) Changin a column name:-

Code-> ALTER TABLE `project\_cricket`.`batsman\_list`
CHANGE COLUMN `batting\_psoition` `batting\_position`
VARCHAR(30) NOT NULL;



24) Updating or setting the values of newly added columns:-Code-> update batsman list

set batting\_position = "Middle Order", batting\_type =
"Defensive", batting\_average = 44.50, batting\_strikeRate =
87.65

where 'Name' = "Mominul Haque"

\*\* In the same way I have updated the values of newly added columns of other tables \*\*

### Output:

	Jersey NO.	Name	Rating	batting_position	batting_hand	batting_type	batting_average	batting_strikeRate
•	7	Mominul Haque	8	Middle Order	Left	Defensive	44.5	87.65
	23	Mohammad Naim Sheikh	6.5	Opener	Left	Moderate	29.5	95.65
	28	Tamim Iqbal	7.5	Opener	Left	Aggresive	39.5	97.65
	59	Soumya Sarkar	6.5	Opener	Left	Aggreseive	29.5	98.65

### 25) Adding column in between columns:-

Code-> ALTER TABLE balling\_allrounder\_list

ADD COLUMN `batting\_hand` VARCHAR(45) NULL AFTER `batting\_type`,

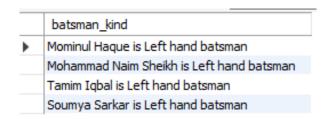
ADD COLUMN `bowling\_hand` VARCHAR(45) NULL AFTER `bowling\_style`;



### 26) Concat Function:-

Code-> select concat(Name, " is ", batting\_hand, " hand batsman") as batsman\_kind from batsman\_list

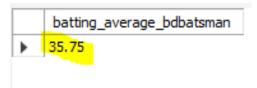
Output:



### 27) Average Functions:-

Code->select avg(batting\_average) as batting\_average\_bdbatsman from batsman\_list;

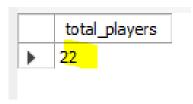
Output:



# 28) Count function:-

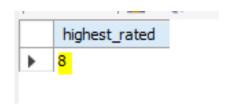
Code-> select count(\*) as total\_players from players\_info

Output:



# 29) Max function:-

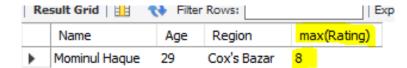
Code-> select max(Rating) as highest\_rated from players info



### 30) Sql query:-

Code-> select Name, Age, Region, max(Rating) from players\_info where `Player Type` = 'Batsman'

### **Output:**



### 31) Sub query:-

Code-> select \* from batsman\_list where batting\_average> (select avg(batting\_average) from batsman\_list)

\*\* We can do other type of searching or queries like this \*\* Output:



# 32) Group by clause:-

Code-> select `Player Type`, truncate(avg(Rating), 3) from players\_info group by `Player Type` order by avg(Rating) desc

	Player Type	truncate(avg(Rating), 3)
•	All-rounder	8
	Batsman	7.125
	Fast Bowler	6.916
	Wk. Batsman	6.75
	Batting All-rounder	6.75
	Fast-medium Bowler	6.625
	Balling All-rounder	6.625
	Leg Spinner	6.375

### 33) Normal join:-

Code-> select players\_info.`Jersey NO.`, players\_info.Name, batting\_type,batting\_hand,batting\_average,batting\_strikeRate from players\_info, batting\_allrounder\_list

Where

players\_info.`JerseyNO.`=batting\_allrounder\_list.`JerseyNO.`
Output:

	Jersey NO.	Name	batting_type	batting_hand	batting_average	batting_strikeRate
•	18	Afif Hossain Dhrubo	Aggressive	Left	28.64	96.3
	29	Shamim Hasan Patwari	Aggressive	Left	30.65	201.35
	30	Mahmudullah Riyad	Balanced	Right	31.26	95.58
	32	Mosaddek Hossain	Moderate	Right	29.45	94.25

### 34) Join clause:-

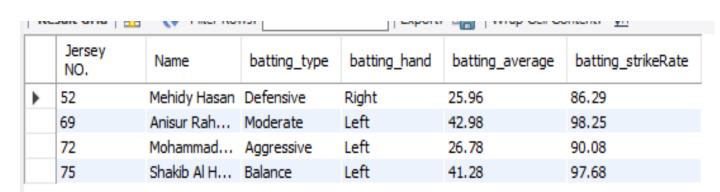
Code-> select pi.`Jersey NO.`, pi.Name,pi.Region batting\_type,batting\_average,batting\_strikeRate from players\_info as pi join batting\_allrounder\_list as bata on pi.`Jersey NO.` = bata.`Jersey NO.`

	Jersey NO.	Name	Region	batting_type	batting_average	batting_strikeRate
•	18	Afif Hossain Dhrubo	Khulna	Aggressive	28.64	96.3
	29	Shamim Hasan Patwari	Chandpur	Aggressive	30.65	201.35
	30	Mahmudullah Riyad	Mymensingh	Balanced	31.26	95.58
	32	Mosaddek Hossain	Mymensingh	Moderate	29.45	94.25

```
35) Union with Join:-
```

**Output:** 

->select players\_info.`Jersey NO.`,players\_info.Name,
batting\_type,batting\_hand, batting\_average, batting\_strikeRate
from players\_info, allrounder\_list
where players\_info.`Jersey NO.` = allrounder\_list.`Jersey NO.`
union
select players\_info.`Jersey NO.`,players\_info.Name,
batting\_type,batting\_hand, batting\_average, batting\_strikeRate
from players\_info, balling\_allrounder\_list
where players\_info.`Jersey NO.` = balling\_allrounder\_list.`Jersey
NO.`
order by `Jersey NO.`



### 36) Showing the selected column values over all the table:-

```
Code->select players info.`Jersey NO.`,players info.Name,
batting type, batting hand, batting average, batting strikeRate
from players info, allrounder list
where players info. 'Jersey NO.' = allrounder list. 'Jersey NO.'
union
select players info. Jersey NO. , players info. Name, batting type, batting hand,
batting average, batting_strikeRate
from players info, balling allrounder list
where players info. 'Jersey NO.' = balling allrounder list. 'Jersey NO.'
union
select players info. 'Jersey NO.', players info. Name, batting type, batting hand,
batting average, batting strikeRate
from players info, batsman list
where players_info.`Jersey NO.` = batsman_list.`Jersey NO.`
union
select players_info.`Jersey NO.`,players_info.Name, batting_type,batting_hand,
batting average, batting_strikeRate
from players info, batting allrounder list
where players info. 'Jersey NO.' = batting allrounder list. 'Jersey NO.'
union
select players info. Jersey NO. , players info. Name, batting type, batting hand,
batting average, batting_strikeRate
from players info, bowler list
where players info. 'Jersey NO.' = bowler list. 'Jersey NO.'
union
select players info. 'Jersey NO.', players info. Name, batting type, batting hand,
batting average, batting strikeRate
from players info, leg spinner list
where players info. 'Jersey NO.' = leg spinner list.' Jersey NO.'
union
select players info. 'Jersey NO.', players info. Name, batting type, batting hand,
batting average, batting strikeRate
from players info, medium bowler list
where players_info.`Jersey NO.` = medium_bowler list.`Jersey NO.`
union
select players_info.`Jersey NO.`,players_info.Name, batting_type,batting_hand,
batting average, batting strikeRate
from players info, wk batsman list
where players info. 'Jersey NO.' = wk batsman list.' Jersey NO.'
order by 'Jersey NO.'
```

	Jersey NO.	Name	batting_type	batting_hand	batting_average	batting_strikeRate
•	2	Mashrafee	Aggressive	Right	19.58	93.25
	3	Taskin Ahmed	Defensive	Left	12.25	74.25
	7	Mominul Ha	Defensive	Left	44.5	87.65
	15	Mushfigur	Balance	Right	38.58	96.85
	16	Liton Kuma	Aggressive	Right	28.59	98.35
	18	Afif Hossai	Aggressive	Left	28.64	96.3
	23	Mohammad	Moderate	Left	29.5	95.65
	26	Nurul Hasa	Aggressive	Right	29.69	99.28
	28	Tamim Iqbal	Aggresive	Left	39.5	97.65
	29	Shamim Ha	Aggressive	Left	30.65	201.35
	30	Mahmudull	Balanced	Right	31.26	95.58
	32	Mosaddek	Moderate	Right	29.45	94.25
	34	Rubel Hossain	Defensive	Right	15.65	68.58
	47	Mohammad	Defensive	Right	5.68	65.32
	52	Mehidy Hasan	Defensive	Right	25.96	86.29
	59	Soumya Sa	Aggreseive	Left	29.5	98.65
	67	Zubayer H	Moderate	Right	12.15	55.36
	69	Anisur Rah	Moderate	Left	42.98	98.25
	72	Mohammad	Aggressive	Left	26.78	90.08
	75	Shakib Al H	Balance	Left	41.28	97.68
	77	Aminul Isla	Balanced	Right	21.02	85.36
	90	Mustafizur	Defensive	Left	15.63	83.25

### 37) Transaction:

Code-> Start transaction;

update batsman\_list set batting\_average = 35.25 where `Jersey NO.` = 23;

# Ouput:

	Jersey NO.	Name	Rating	batting_position	batting_hand	batting_type	batting_average	batting_strikeRate
•	7	Mominul Haque	8	Middle Order	Left	Defensive	44.5	87.65
	23	Mohammad Naim Sheikh	6.5	Opener	Left	Moderate	35.25	95.65
	28	Tamim Iqbal	7.5	Opener	Left	Aggresive	39.5	97.65
	59	Soumya Sarkar	6.5	Opener	Left	Aggreseive	29.5	98.65

### Code-> rollback;

	Jersey NO.	Name	Rating	batting_position	batting_hand	batting_type	batting_average	batting_strikeRate
•	7	Mominul Haque	8	Middle Order	Left	Defensive	44.5	87.65
	23	Mohammad Naim Sheikh	6.5	Opener	Left	Moderate	31.25	95.65
	28	Tamim Iqbal	7.5	Opener	Left	Aggresive	39.5	97.65
	59	Soumya Sarkar	6.5	Opener	Left	Aggreseive	29.5	98.65

### 38)Transaction with savepoint:

Code-> Start transaction;

update batsman\_list set batting\_average = 41.25 where `Jersey NO.` = 7;update batsman\_list set batting\_average = 39.25

where `Jersey NO.` = 59; savepoint sv1;

	Jersey NO.	Name	Rating	batting_position	batting_hand	batting_type	batting_average	batting_strikeRate
٠	7	Mominul Haque	8	Middle Order	Left	Defensive	41.25	87.65
	23	Mohammad Naim Sheikh	6.5	Opener	Left	Moderate	31.25	95.65
	28	Tamim Iqbal	7.5	Opener	Left	Aggresive	39.5	97.65
	59	Soumya Sarkar	6.5	Opener	Left	Aggreseive	39.25	98.65

# Code-> update batsman\_list set batting\_strikeRate = batting\_strikeRate + 10.0where `Jersey NO` = 7 and `Jersey NO` = 59;

### Ouput:

	Jersey NO.	Name	Rating	batting_position	batting_hand	batting_type	batting_average	batting_strikeRate
•	7	Mominul Haque	8	Middle Order	Left	Defensive	41.25	97.65
	23	Mohammad Naim Sheikh	6.5	Opener	Left	Moderate	31.25	95.65
	28	Tamim Iqbal	7.5	Opener	Left	Aggresive	39.5	97.65
	59	Soumya Sarkar	6.5	Opener	Left	Aggreseive	39.25	108.65

# Code-> rollback to sv1; Output:

	Jersey NO.	Name	Rating	batting_position	batting_hand	batting_type	batting_average	batting_strikeRate
•	7	Mominul Haque	8	Middle Order	Left	Defensive	41.25	87.65
	23	Mohammad Naim Sheikh	6.5	Opener	Left	Moderate	31.25	95.65
	28	Tamim Iqbal	7.5	Opener	Left	Aggresive	39.5	97.65
	59	Soumya Sarkar	6.5	Opener	Left	Aggreseive	39.25	98.65

# Code-> update batsman\_list set batting\_average = 45.25 where `Jersey NO.` = 7; update batsman\_list set batting\_average = 29.25 where `Jersey NO.` = 59; commit;

	Jersey NO.	Name	Rating	batting_position	batting_hand	batting_type	batting_average	batting_strikeRate
•	7	Mominul Haque	8	Middle Order	Left	Defensive	45.25	87.65
	23	Mohammad Naim Sheikh	6.5	Opener	Left	Moderate	31.25	95.65
	28	Tamim Iqbal	7.5	Opener	Left	Aggresive	39.5	97.65
	59	Soumya Sarkar	6.5	Opener	Left	Aggreseive	29.25	98.65