

# ASSIGNMENT – 2

## DATABASE ( MYSQL, MONGODB )

Modern Application Development  
[JAVA SPRINGBOOT]

Drive Link:

[https://drive.google.com/drive/folders/1BfFnxyzUX1nkkKjtpxZ4UB1g7egcgGsv?usp=share\\_link](https://drive.google.com/drive/folders/1BfFnxyzUX1nkkKjtpxZ4UB1g7egcgGsv?usp=share_link)

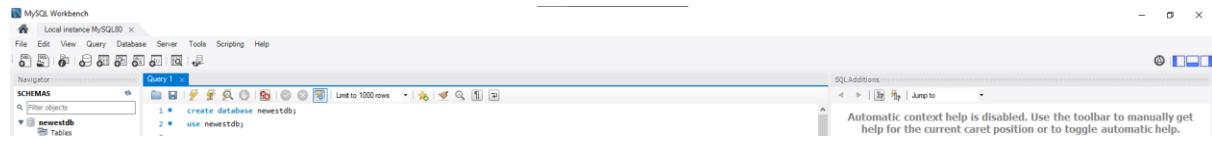
Keerthi Nidhi A R

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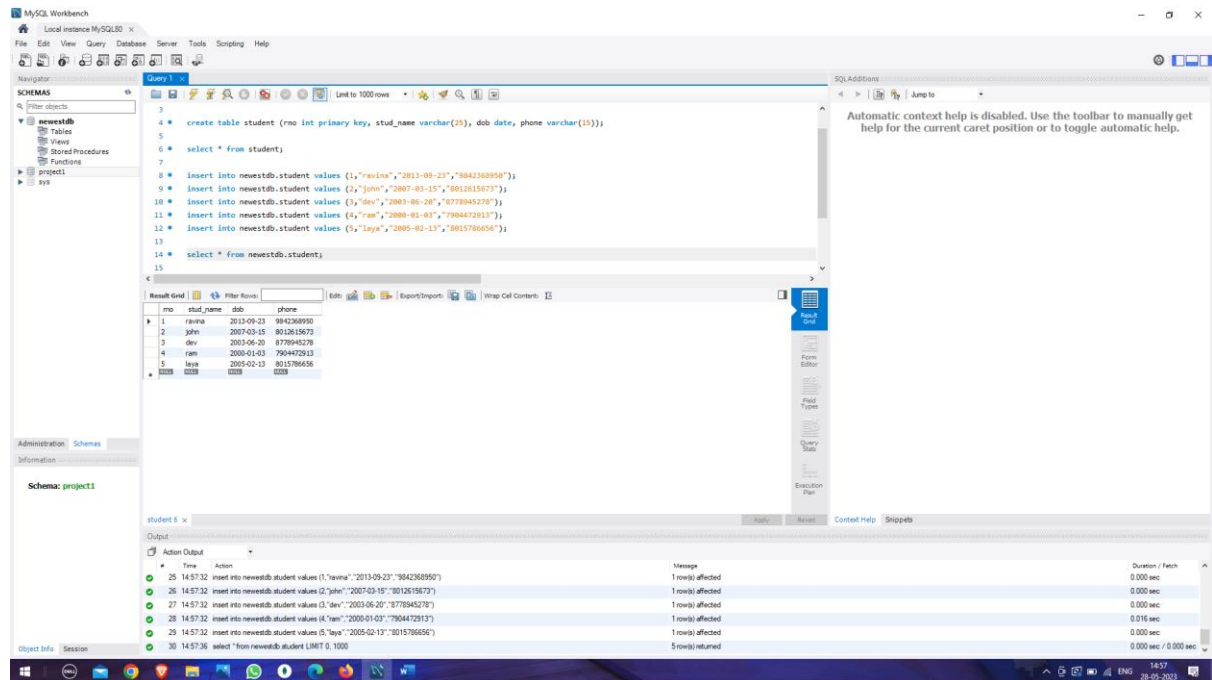
(VIT Vellore)

# MYSQL

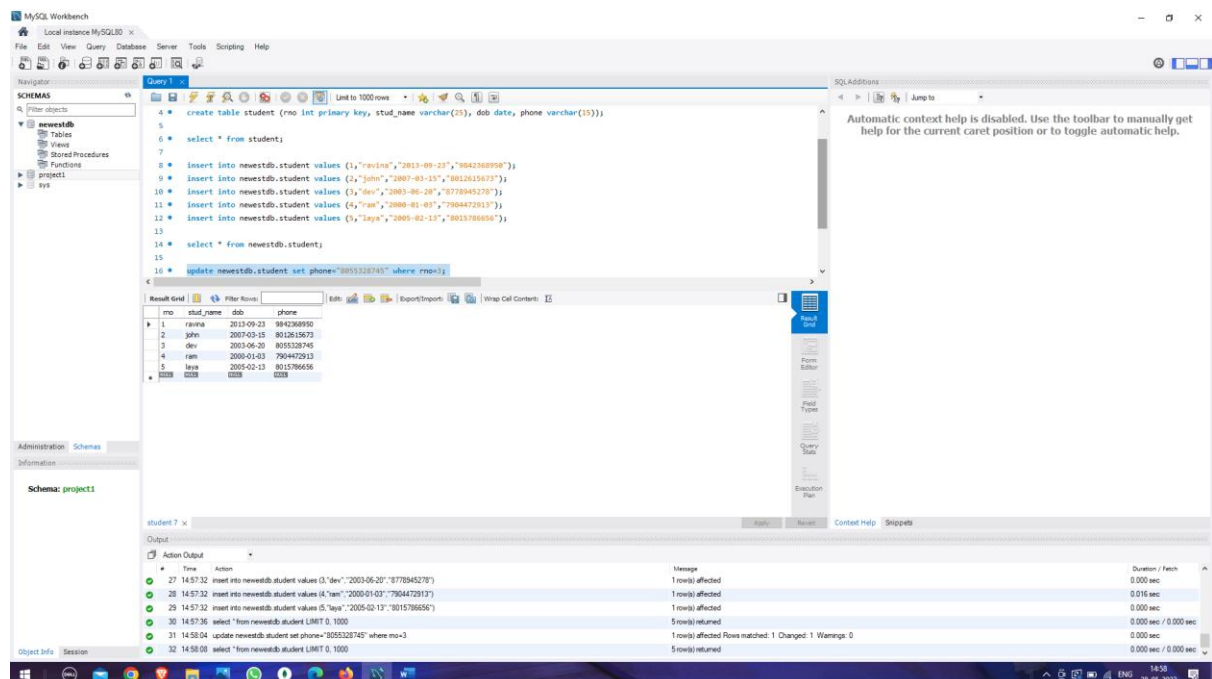


## TABLE: Student

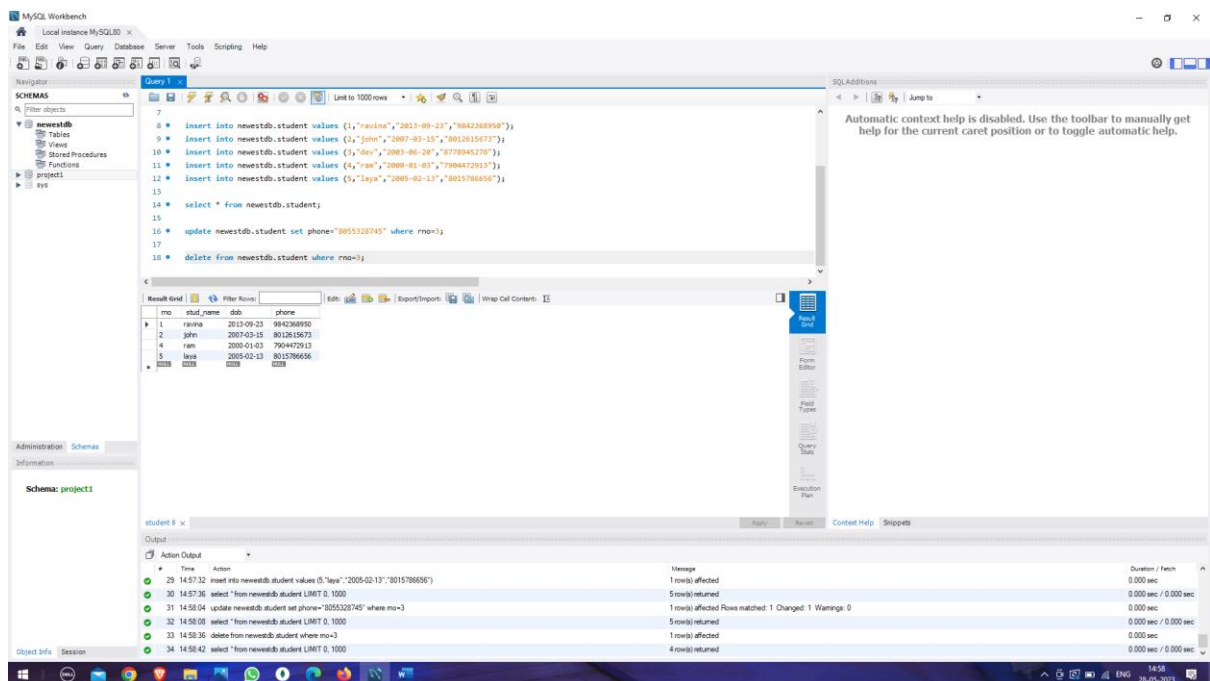
### Create and insert values into table:



### Update Values:

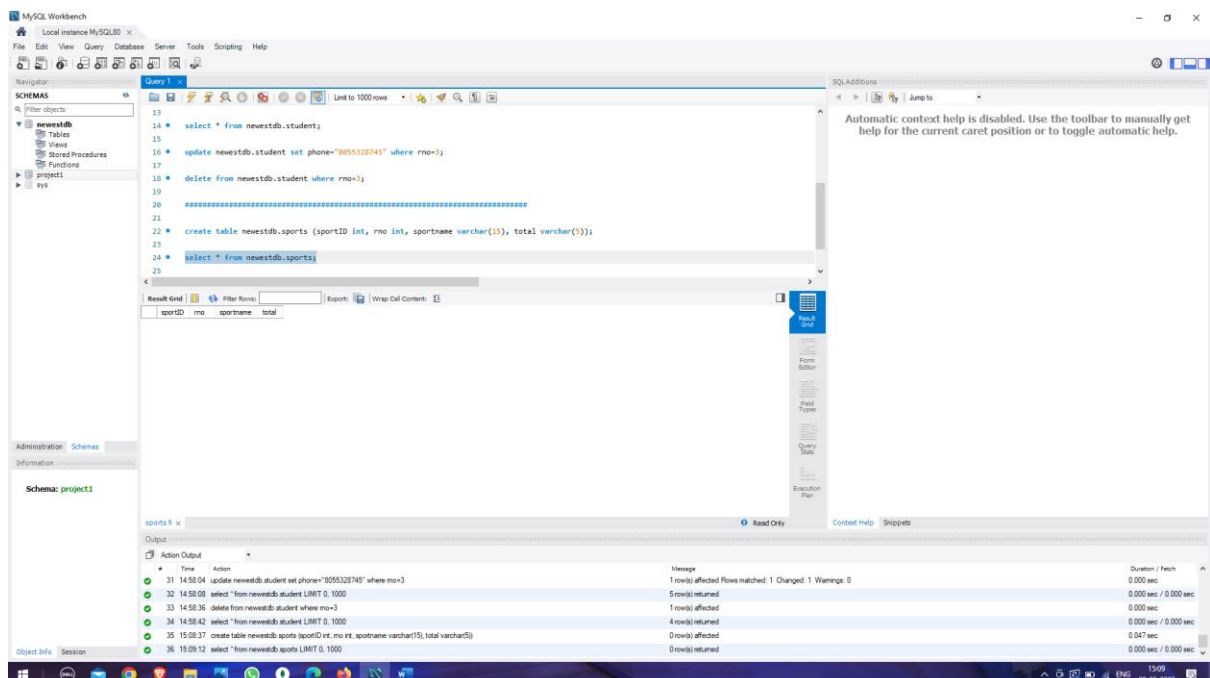


## Delete value:



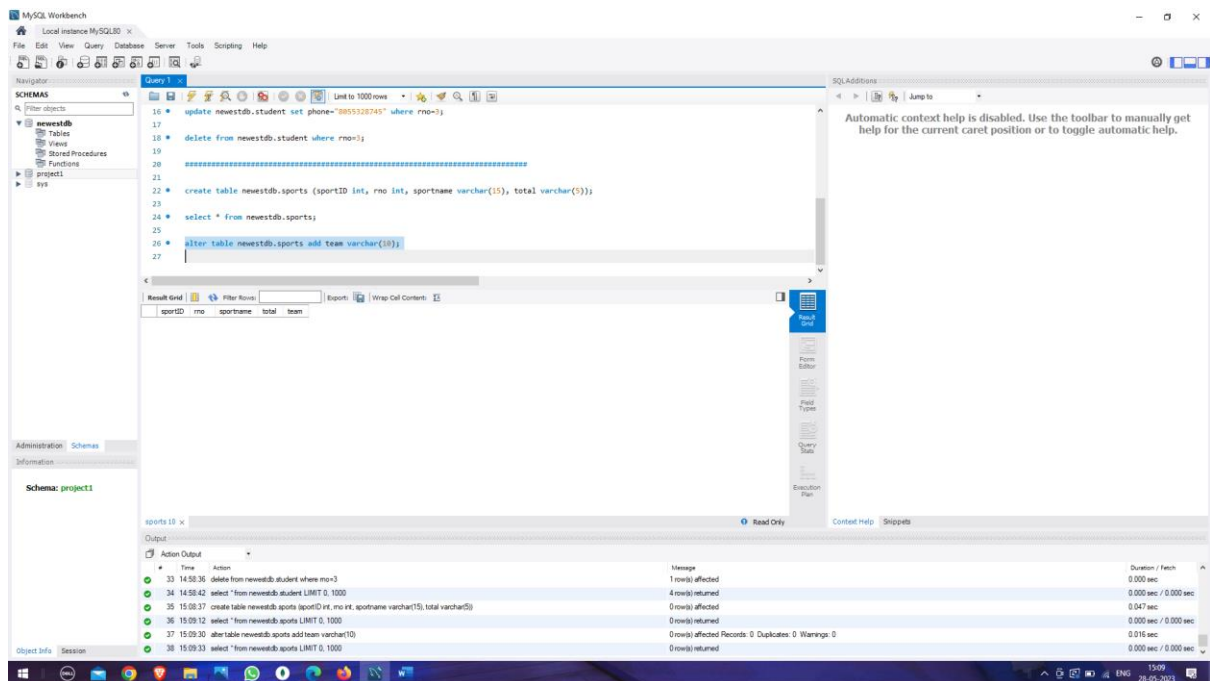
## TABLE: Sports

### Create table:

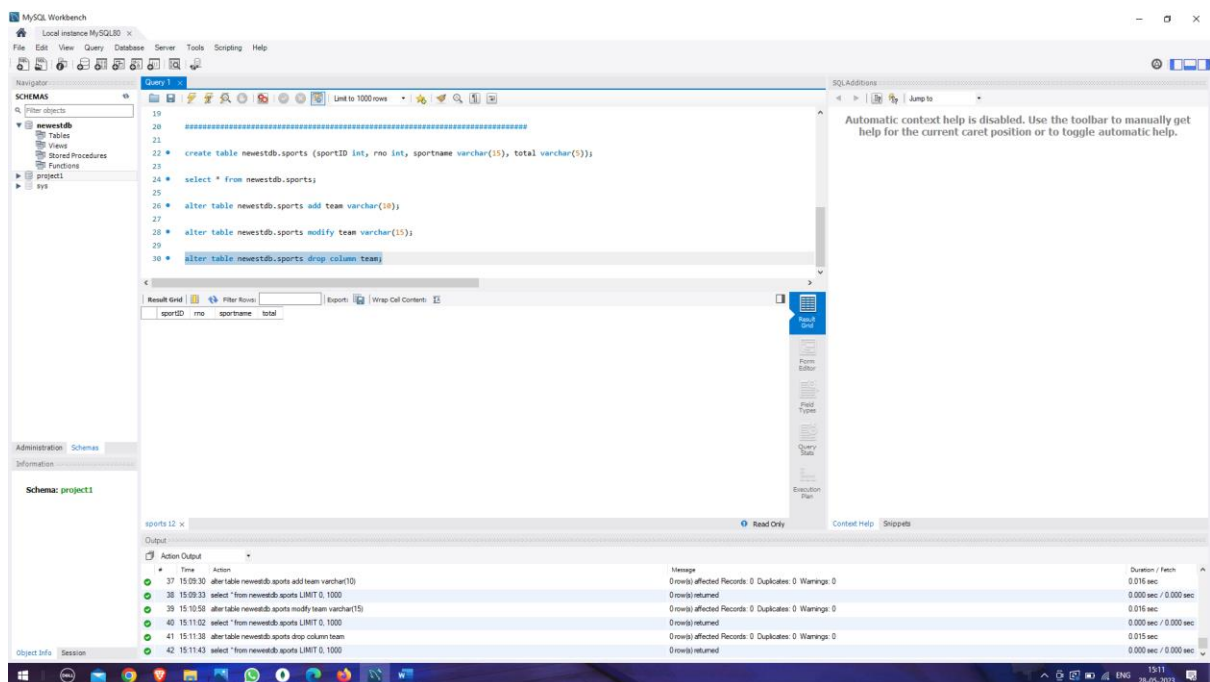


## Alter table:

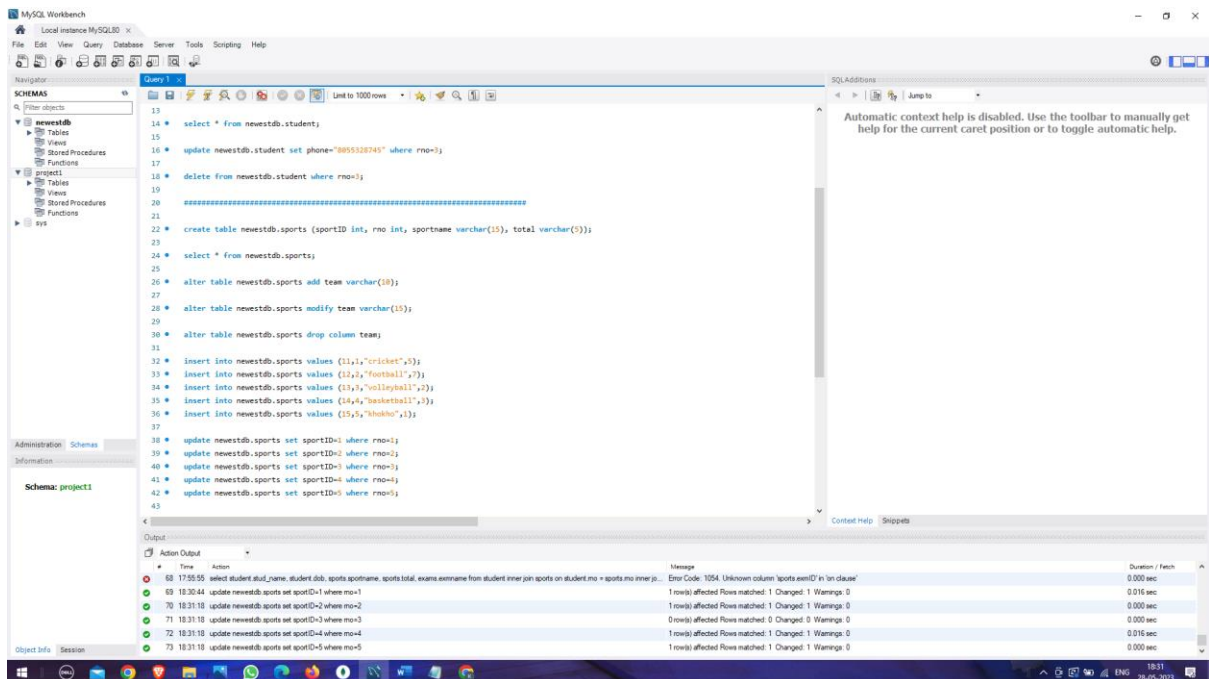
- Add column



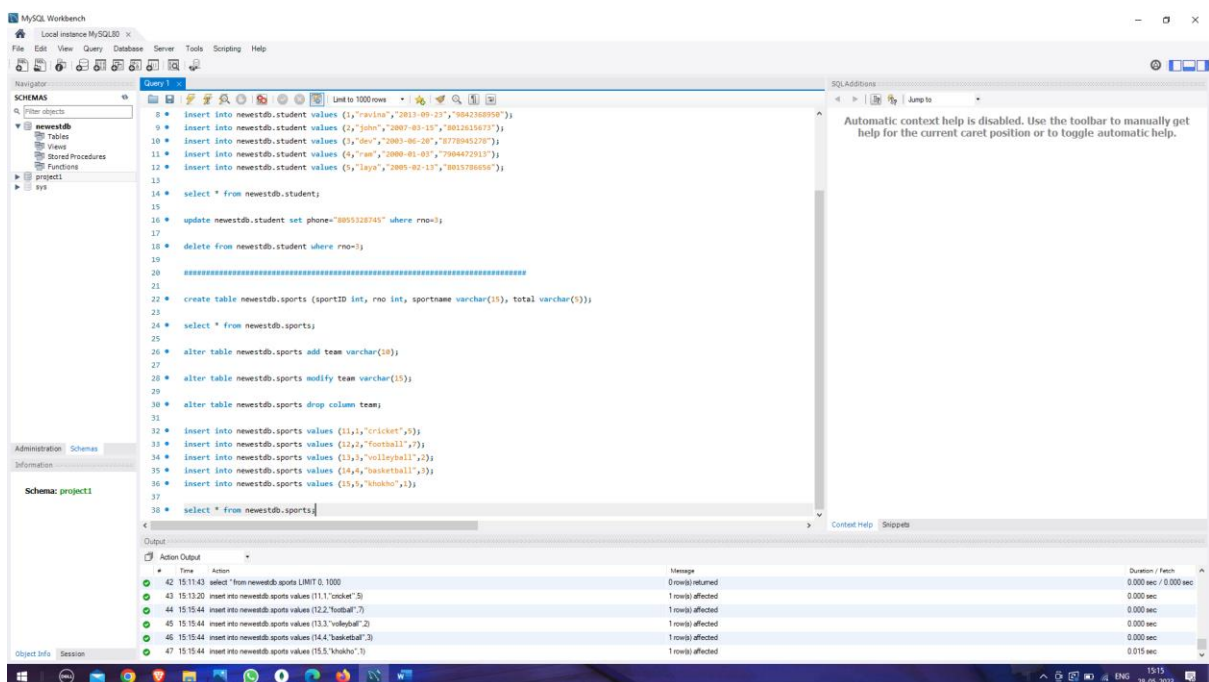
- Modify column and,
- Drop column

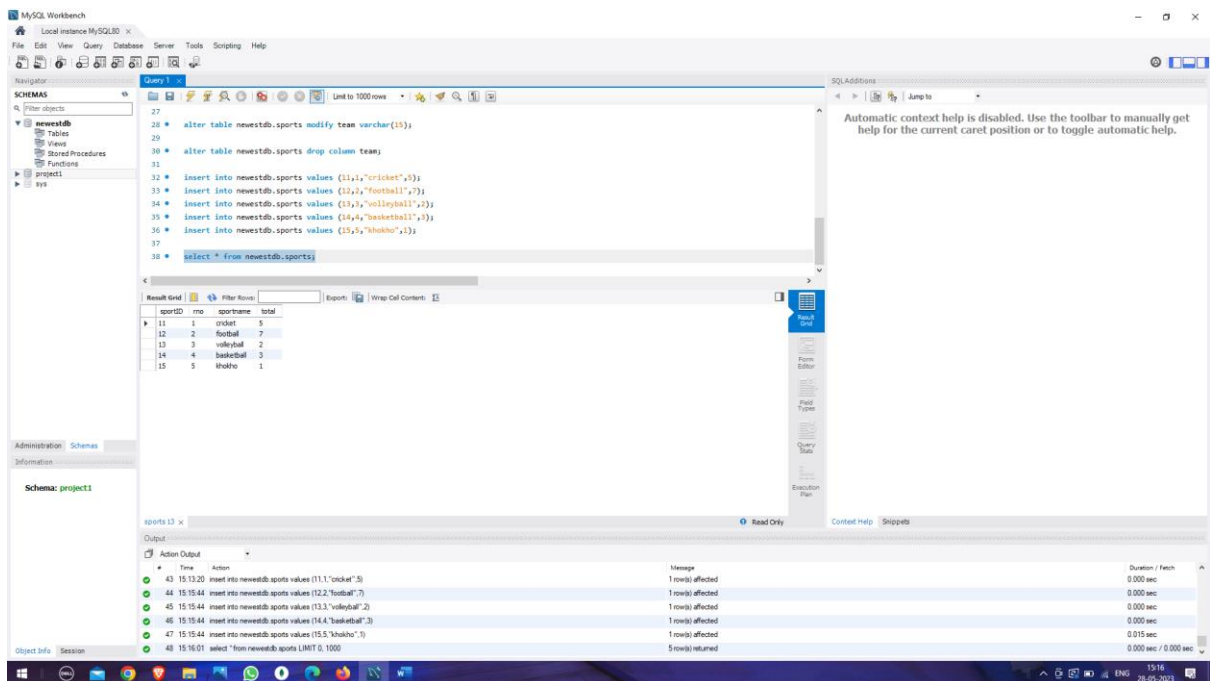


## Insert and Update values into table:

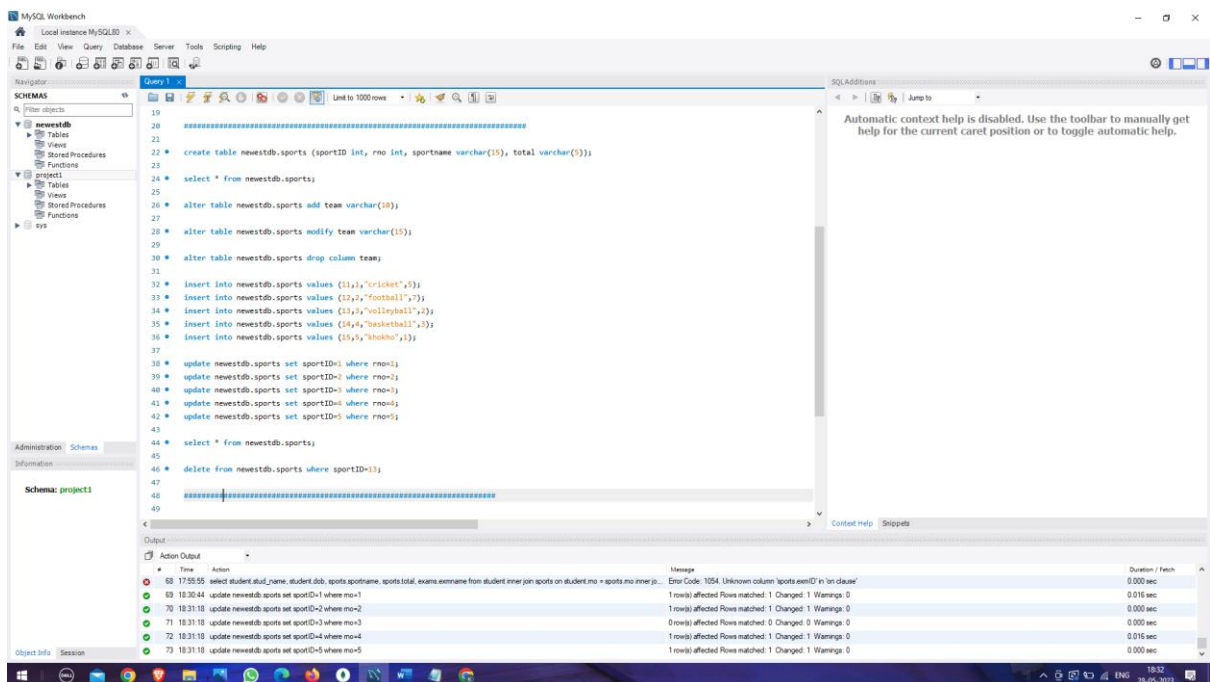


## Select command from table:

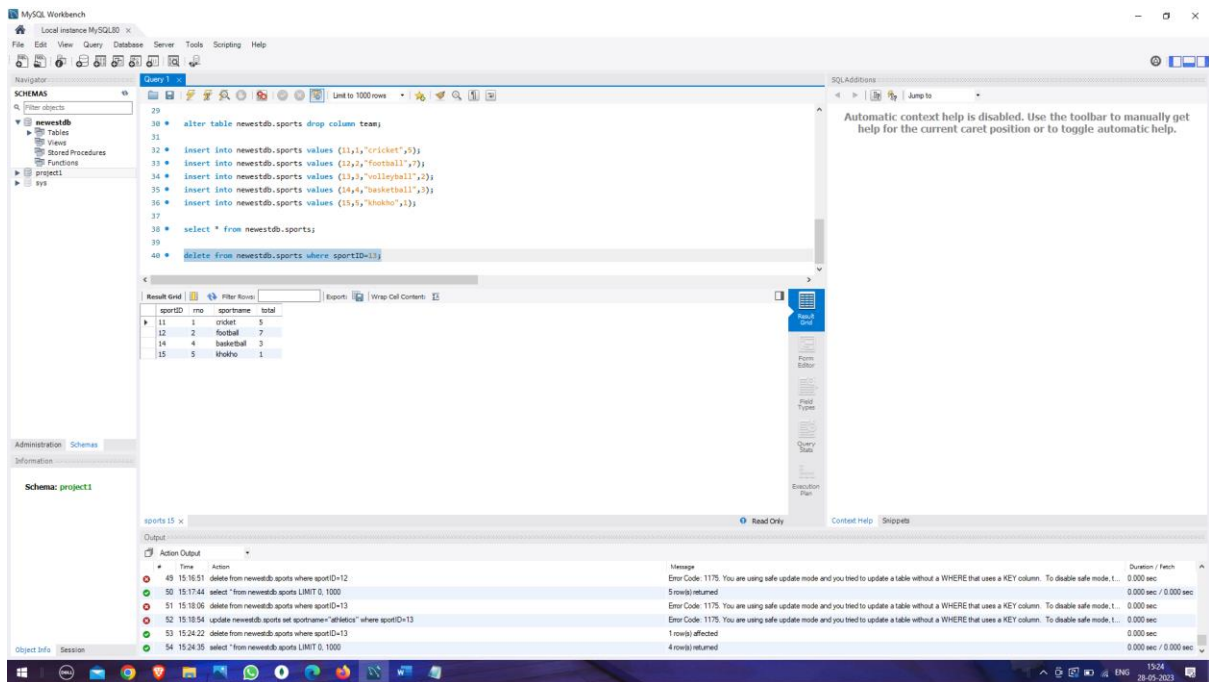




## Delete value of table:

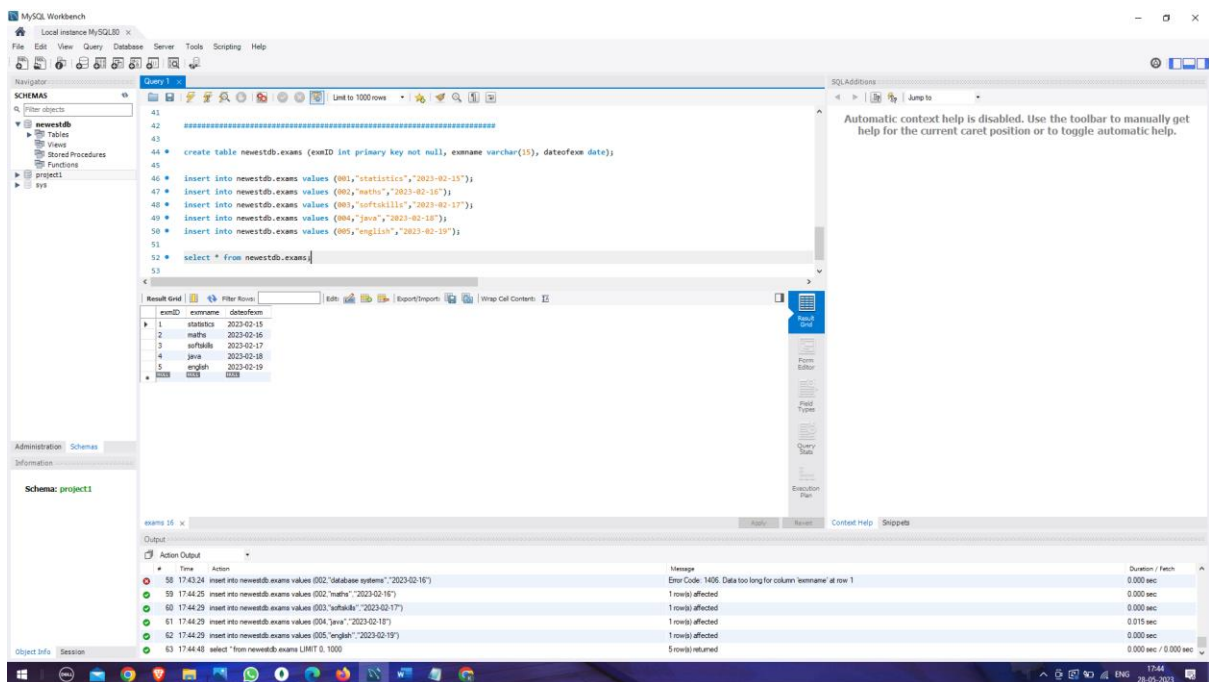






## TABLE: Exams

Create and Insert values of table and display using Select command:



# JOINS

- Inner Join

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
42 * update newestdb.sports set sportID=1 where row=3;
43
44 * select * from newestdb.sports;
45
46 * delete from newestdb.sports where sportID=13;
47
48 =====
49
50 create table newestdb.exams (examID int primary key not null, examname varchar(15), dateofex date);
51
52 insert into newestdb.exams values (001,"statistics","2023-02-15");
53 insert into newestdb.exams values (002,"maths","2023-02-16");
54 insert into newestdb.exams values (003,"softskills","2023-02-17");
55 insert into newestdb.exams values (004,"java","2023-02-18");
56 insert into newestdb.exams values (005,"english","2023-02-19");
57
58 select * from newestdb.exams;
59
60 select student.stud_name, student.dob, sports.sportname, sports.total, exams.examname
61 from student
62 inner join sports on student.mo = sports.mo
63 inner join exams on sports.sportID = exams.examID;
64
```

The Results grid shows the following data:

stud_name	dob	sportname	total	examname
ram	2013-09-23	cricket	5	statistics
jam	2007-03-15	football	7	maths
ram	2000-01-03	baseball	3	java
laya	2005-02-13	hockey	1	english

The Action Output pane shows the execution of the query, with messages indicating the number of rows returned for each statement.

- Left join

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
46 * delete from newestdb.sports where sportID=13;
47
48 =====
49
50 create table newestdb.exams (examID int primary key not null, examname varchar(15), dateofex date);
51
52 insert into newestdb.exams values (001,"statistics","2023-02-15");
53 insert into newestdb.exams values (002,"maths","2023-02-16");
54 insert into newestdb.exams values (003,"softskills","2023-02-17");
55 insert into newestdb.exams values (004,"java","2023-02-18");
56 insert into newestdb.exams values (005,"english","2023-02-19");
57
58 select * from newestdb.exams;
59
60 select student.stud_name, student.dob, sports.sportname, sports.total, exams.examname
61 from student
62 inner join sports on student.mo = sports.mo
63 inner join exams on sports.sportID = exams.examID;
64
65 select student.stud_name, student.dob, sports.sportname, sports.total, exams.examname
66 from student
67 left join sports on student.mo = sports.mo
68 left join exams on sports.sportID = exams.examID;
69
```

The Results grid shows the following data:

stud_name	dob	sportname	total	examname
ram	2013-09-23	cricket	5	statistics
jam	2007-03-15	football	7	maths
ram	2000-01-03	baseball	3	java
laya	2005-02-13	hockey	1	english

The Action Output pane shows the execution of the query, with messages indicating the number of rows returned for each statement.



- Right join

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```

52 * insert into newestdb.exams values (901,"statistics","2023-02-15");
53 * insert into newestdb.exams values (902,"maths","2023-02-16");
54 * insert into newestdb.exams values (903,"softskills","2023-02-17");
55 * insert into newestdb.exams values (904,"java","2023-02-18");
56 * insert into newestdb.exams values (905,"english","2023-02-19");
57
58 * select * from newestdb.exams;
59
60 * select student.stud_name, student.dob, sports.sportname, sports.total, exams.exname
61 from student
62 inner join sports on student.rno = sports.rno
63 inner join exams on sports.sportID = exams.examID;
64
65 * select student.stud_name, student.dob, sports.sportname, sports.total, exams.exname
66 from student
67 left join sports on student.rno = sports.rno
68 left join exams on sports.sportID = exams.examID;
69
70 * select student.stud_name, student.dob, sports.sportname, sports.total, exams.exname
71 from student
72 right join sports on student.rno = sports.rno
73 right join exams on sports.sportID = exams.examID;
74

```

The Results Grid shows the following data:

stud_name	dob	sportname	total	exname
rahma	2013-09-23	cricket	5	statistics
john	2007-03-15	football	7	maths
ram	2005-01-03	basketball	3	java
laya	2005-02-13	hockey	1	english

The Output tab shows the execution of the query, including the right join operation. The message indicates that the column 'exams.sportID' is unknown in the clause.

# MONGO DB

**TABLE: student**

**Create table:**

The screenshot shows the MongoDB Compass interface for the 'project1.student' collection. The left sidebar lists databases and collections, with 'student' selected. The main panel displays 5 documents in a JSON format. The documents contain fields: \_id, dob, phone, rno, and stud\_name.

_id	dob	phone	rno	stud_name
ObjectId('64734a134f21f779742baa8')	"2013-09-23"	"9842368958"	"1"	"ravina"
ObjectId('64734b384f21f779742baa9')	"2007-03-15"	"9812615673"	"2"	"john"
ObjectId('64734b9c4f21f779742baaa')	"2003-06-28"	"9778945278"	"3"	"dev"
ObjectId('64734c554f21f779742baab')	"2000-01-03"	"798447913"	"4"	"ram"
ObjectId('64734c984f21f779742baac')	"2005-02-13"	"9815786556"	"5"	"Laya"

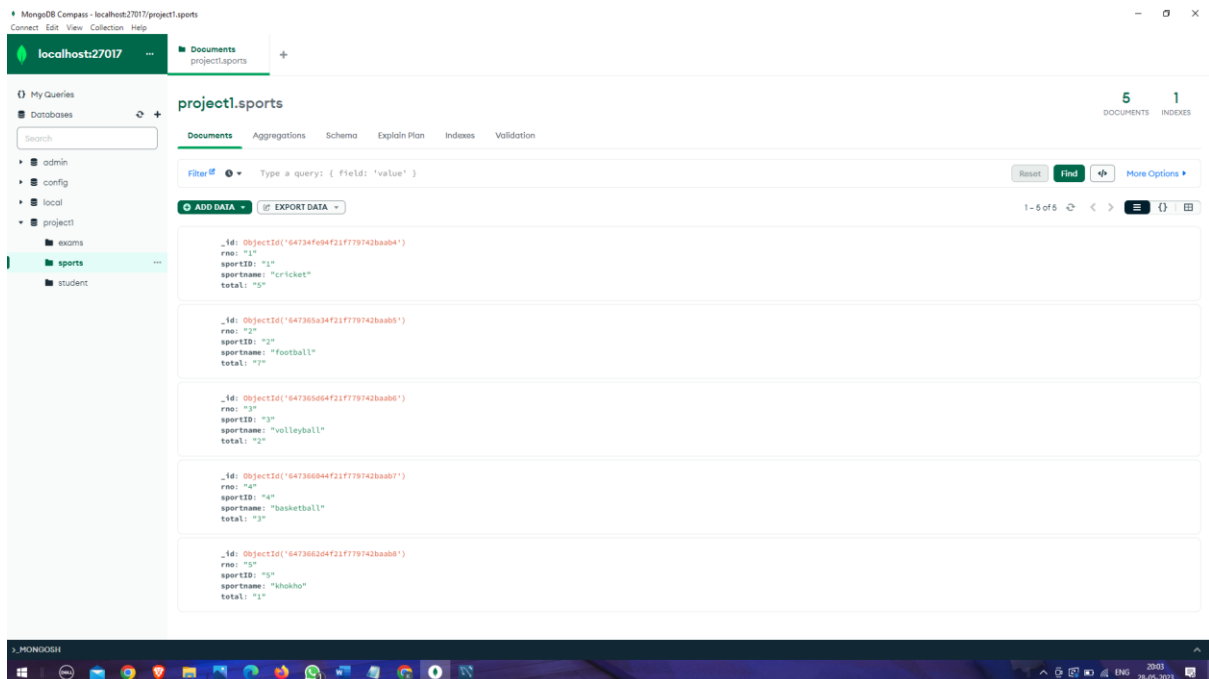
**Insert values into table:**

The screenshot shows the MongoDB Compass interface for the 'project1.student' collection, displaying the same 5 documents in a table view. The table has columns for \_id, dob, phone, rno, and stud\_name, with each cell containing the corresponding value from the documents.

_id	dob	phone	rno	stud_name
ObjectId('64734a134f21f779742baa8')	"2013-09-23"	"9842368958"	"1"	"ravina"
ObjectId('64734b384f21f779742baa9')	"2007-03-15"	"9812615673"	"2"	"john"
ObjectId('64734b9c4f21f779742baaa')	"2003-06-28"	"9778945278"	"3"	"dev"
ObjectId('64734c554f21f779742baab')	"2000-01-03"	"798447913"	"4"	"ram"
ObjectId('64734c984f21f779742baac')	"2005-02-13"	"9815786556"	"5"	"Laya"

## TABLE: sports

### Create table:



MongoDB Compass - localhost:27017/project1.sports

localhost:27017 Documents project1.sports

My Queries Databases Search

- admin
- config
- local
- project1
  - exams
  - sports
  - student

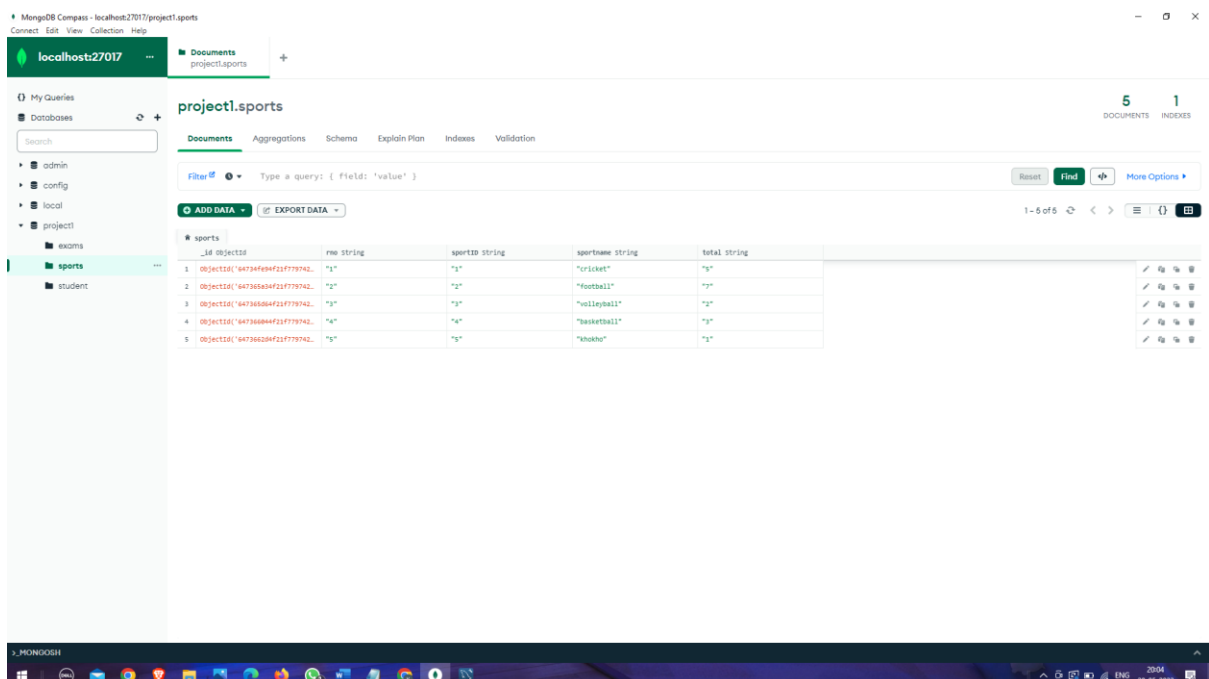
project1.sports Documents Aggregations Schema Explain Plan Indexes Validation

Filter Filter Type a query: { field: 'value' } Reset Find More Options

ADD DATA EXPORT DATA 1-5 of 5

```
{ "_id": "ObjectID('64734f694f21f779742baa04')", "rno": "1", "sportID": "1", "sportname": "cricket", "total": "5" }
{ "_id": "ObjectID('64736ba34f21f779742baa05')", "rno": "2", "sportID": "2", "sportname": "football", "total": "3" }
{ "_id": "ObjectID('647365d64f21f779742baa06')", "rno": "3", "sportID": "3", "sportname": "volleyball", "total": "2" }
{ "_id": "ObjectID('647366844f21f779742baa07')", "rno": "4", "sportID": "4", "sportname": "basketball", "total": "3" }
{ "_id": "ObjectID('647366204f21f779742baa08')", "rno": "5", "sportID": "5", "sportname": "khokho", "total": "1" }
```

### Insert values to table:



MongoDB Compass - localhost:27017/project1.sports

localhost:27017 Documents project1.sports

My Queries Databases Search

- admin
- config
- local
- project1
  - exams
  - sports
  - student

project1.sports Documents Aggregations Schema Explain Plan Indexes Validation

Filter Filter Type a query: { field: 'value' } Reset Find More Options

ADD DATA EXPORT DATA 1-5 of 5

#	sports	_id ObjectId	rno string	sportID String	sportname string	total string
1		ObjectID('64734f694f21f779742...')	"1"	"1"	"cricket"	"5"
2		ObjectID('64736ba34f21f779742...')	"2"	"2"	"football"	"3"
3		ObjectID('647365d64f21f779742...')	"3"	"3"	"volleyball"	"2"
4		ObjectID('647366844f21f779742...')	"4"	"4"	"basketball"	"3"
5		ObjectID('647366204f21f779742...')	"5"	"5"	"khokho"	"1"

## TABLE: exams

### Create Table and insert values:

MongoDB Compass - localhost:27017/project1.sports

Documents project1.sports

5 DOCUMENTS 1 INDEXES

Filter: Type a query: { field: 'value' }

ADD DATA EXPORT DATA

_id	objectid	name	sportid	sportname	total
1	ObjectId("64736a58d4d4d03bfeaa6d6c")	"1"	"1"	"cricket"	"9"
2	ObjectId("64736a58d4d4d03bfeaa6d6c")	"2"	"2"	"football"	"7"

```
> use project1
> show collections
exams
sports
student
> db.exams.insertOne ({examId:001,examname:"Statistics",dateofexam:"2023-02-15"})
{ acknowledged: true,
  insertedId: ObjectId("64736a58d4d4d03bfeaa6d6c") }
> db.exams.insertOne ({examId:002,examname:"maths",dateofexam:"2023-02-15"})
{ acknowledged: true,
  insertedId: ObjectId("64736a58d4d4d03bfeaa6d6c") }
> db.exams.insertOne ({examId:003,examname:"softskills",dateofexam:"2023-02-17"})
```

MongoDB Compass - localhost:27017/project1.sports

Documents project1.sports

5 DOCUMENTS 1 INDEXES

Filter: Type a query: { field: 'value' }

ADD DATA EXPORT DATA

_id	objectid	name	sportid	sportname	total
1	ObjectId("64736a58d4d4d03bfeaa6d6c")	"1"	"1"	"cricket"	"9"
2	ObjectId("64736a58d4d4d03bfeaa6d6c")	"2"	"2"	"football"	"7"

```
> db.exams.insertOne ({examId:002,examname:"maths",dateofexam:"2023-02-15"})
{ acknowledged: true,
  insertedId: ObjectId("64736a58d4d4d03bfeaa6d6c") }
> db.exams.insertOne ({examId:003,examname:"softskills",dateofexam:"2023-02-17"})
{ acknowledged: true,
  insertedId: ObjectId("64736a58d4d4d03bfeaa6d6c") }
> db.exams.insertOne ({examId:004,examname:"java",dateofexam:"2023-02-18"})
{ acknowledged: true,
  insertedId: ObjectId("64736a58d4d4d03bfeaa6d6f") }
> db.exams.insertOne ({examId:005,examname:"english",dateofexam:"2023-02-19"})
{ acknowledged: true,
  insertedId: ObjectId("64736a58d4d4d03bfeaa6d70") }
```

MongoDB Compass - localhost:27017/project1.exams

localhost:27017 Documents project1.exams

My Queries Databases Search

- admin
- config
- local
- project1
  - exams
  - sports
  - student

project1.exams

Documents Aggregations Schema Explain Plan Indexes Validation

Filter Type a query: { field: 'value' } Reset Find More Options

ADD DATA EXPORT DATA 1-6 of 6

	_id	objectid	examID	int32	examname	string	dateofexam	string
1	objectid('647369b805040630fe...	1			"Statistics"		"2023-02-15"	
2	objectid('647369b805040630fe...	2			"maths"		"2023-02-15"	
3	objectid('647369b805040630fe...	1			"softskills"		"2023-02-17"	
4	objectid('647369b805040630fe...	1			"java"		"2023-02-18"	
5	objectid('647369b805040630fe...	1			"english"		"2023-02-19"	

J. PRINODISH 20:21 28-05-2023