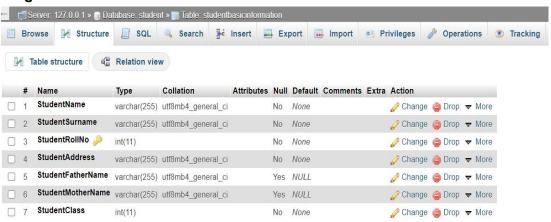
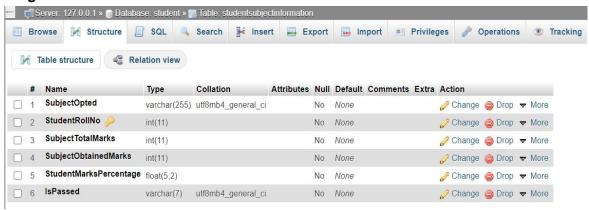
- Create Student Database Done using MySQL UI.
- 2. Create the following table under the Student Database:
 - a) StudentBasicInformation
 - i) <u>Command -</u> create table StudentBasicInformation(StudentName varchar(255) NOT NULL, StudentSurname varchar(255) NOT NULL, StudentRollNo INT PRIMARY KEY, StudentAddress varchar(255) NOT NULL, StudentFatherName varchar(255), StudentMotherName varchar(255), StudentClass INT NOT NULL);
 - ii) Image -



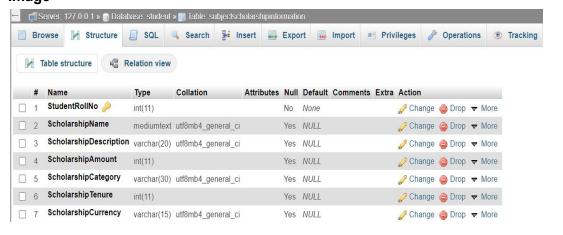
- b) StudentAdmissionPaymentDetails-
 - i) <u>Command</u>- create table StudentAdmissionPaymentDetails(StudentRollNo INT PRIMARY KEY, AmountPaid INT NOT NULL, AmountBalance INT, Fines INT, MethodOfPayment varchar(100) NOT NULL, Hosteller varchar(3) NOT NULL, LateAdmission varchar(3) NOT NULL);
 - ii) Image-



- c) StudentSubjectInformation
 - i) <u>Command</u>-create table StudentSubjectInformation(SubjectOpted varchar(255) NOT NULL, StudentRollNo INT PRIMARY KEY, SubjectTotalMarks INT NOT NULL, SubjectObtainedMarks INT NOT NULL, StudentMarksPercentage FLOAT(5,2) NOT NULL, IsPassed varchar(7) NOT NULL);
 - ii) Image-



- d) SubjectScholarshipInformation
 - i) <u>Command</u>- create table SubjectScholarshipInformation(StudentRollNo INT PRIMARY KEY, ScholarshipName MEDIUMTEXT, ScholarshipDescription Varchar(20), ScholarshipAmount INT, ScholarshipCategory varchar(30), ScholarshipTenure INT, ScholarshipCurrency varchar(15));
 - ii) Image-



3 and 4.- Snap of the all the tables once the insertion is completed. Insert more than 10 records in each and every table created

a) studentbasicinformation-



b) studentadmissionpaymentdetails

+ Options								
← T→	~	StudentRollNo	AmountPaid	AmountBalance	Fines	MethodOfPayment	Hosteller	LateAdmission
☐ 🥜 Edit 👫 Copy 🥥	Delete	673689	335001	92318	3880	Debit Card	no	no
☐ 🖉 Edit 👫 Copy 🥥	Delete	1734814	366445	115831	5727	Cheque	no	no
☐ 🥜 Edit 👫 Copy 🥥	Delete	1919195	453461	89191	8378	Debit Card	no	no
☐ 🥜 Edit 🛂 Copy 🥥	Delete	3895324	8425112	98397	9331	UPI	no	yes
☐ 🥜 Edit 🛂 Copy 🥥	Delete	4135393	149257	91773	8465	UPI	no	yes
☐ 🖉 Edit 🛂 Copy 🥥	Delete	4739818	45556	117197	2644	Cash	yes	yes
☐ 🥜 Edit 👫 Copy 🥥	Delete	7789414	6439006	184931	710	UPI	no	no
☐ Ø Edit ♣ Copy ⊜	Delete	8034935	987463	70051	1358	Demand Draft	no	yes
☐ 🥜 Edit 👫 Copy 🥥	Delete	8451379	9746662	56651	2300	Credit Card	no	yes
☐ 🥜 Edit 🛂 Copy 🥥	Delete	8862816	544449	79902	6390	UPI	no	no
☐ 🥜 Edit 🛂 Copy 🥥	Delete	8867862	99455	188461	1727	Cheque	no	yes
☐ 🥜 Edit 🛂 Copy 🥥	Delete	9341595	123424	6123	3851	UPI	yes	no

c) StudentSubjectInformation

Τ→	~	SubjectOpted	StudentRollNo	SubjectTotalMarks	SubjectObtainedMarks	StudentMarksPercentage	IsPassed
🥜 Edit 🛂 € Copy	Delete	Earth Sciences, Environmental Sciences	45556	200	118	59.13	YES
Ø Edit 3€ Copy	Delete	Earth Sciences, Environmental Sciences, Food Science	99455	400	129	32.25	NO
🥜 Edit 🛂 € Copy	Delete	Life Sciences, Materials Sciences	123424	200	67	33.50	YES
Ø Edit 3€ Copy	Delete	Food Science and Technology	335001	100	41	41.13	YES
🥜 Edit 🛂 € Copy	Delete	${\it Chemistry, Earth\ Sciences, Environmental\ Sciences, Fo}$	366445	500	125	25.13	NO
Ø Edit ₃å Copy	Delete	Environmental Sciences,Food Science and Technology	453461	500	497	99.40	YES
🥜 Edit 🛂 € Copy	Delete	${\bf Biomedical, Sciences, Chemistry, Earth\ Sciences, Envir}$	987463	600	398	66.33	YES
Ø Edit ∰å Copy	Delete	Food Science and Technology, General Sciences, Life	6439006	600	6	1.13	NO
🥜 Edit 🛂 € Copy	Delete	Earth Sciences	8425112	100	81	81.13	YES
Ø Edit 3€ Copy	Delete	Life Sciences, Materials Sciences	9746662	200	20	10.13	NO

d) SubjectScholarshipInformation



5. Update 5 Records-

3

- 6. Snap of Updated Database
 - a) studentbasicinformation-

update StudentBasicInformation set StudentAddress='96968 Anderson Centers Suite 901 Williamsport, MI 90376' where StudentRollNo=453461; update StudentBasicInformation set StudentAddress='265 Cameron Ferry South Sheila, AL 85300' where StudentRollNo=8425112; update StudentBasicInformation set StudentAddress='886 Teresa Course South Dennisland, RI 22917' where StudentRollNo=366445; update StudentBasicInformation set StudentAddress='0331 Jon Route Robertfort, MI 84482' where StudentRollNo=987463; update StudentBasicInformation set StudentAddress='0506 Maria Via Apt. 031 Saratown, SC 20954' where StudentRollNo=99455;

✓ 0 rows affected. (Query took 0.0055 seconds.)	
pdate StudentBasicInformation set StudentAddress='96968 Anderson Centers Suite 901 Williamsport, MI 90376' where StudentRollNo=453461	
pdate StudentBasicInformation set StudentAddress='265 Cameron Ferry South Sheila, AL 85300' where StudentRollNo=8425112	
Ø 1 rows affected. (Query took 0.0010 seconds.)	
pdate StudentBasicInformation set StudentAddress='886 Teresa Course South Dennisland, RI 22917' where StudentRollNo=366445	
✓ 0 rows affected. (Query took 0.0009 seconds.)	
pdate StudentBasicInformation set StudentAddress='0331 Jon Route Robertfort, MI 84482' where StudentRollNo=987463	
	ota
✓ 0 rows affected. (Query took 0.0010 seconds.)	'n
pdate StudentBasicInformation set StudentAddress='0506 Maria Via Apt. 031 Saratown, SC 20954' where StudentRollNo=99455	

b) <u>studentadmissionpaymentdetails</u>

StudentAdmissionPaymentDetails set MethodOfPayment='UPI' where

```
update StudentAdmissionPaymentDetails set

MethodOfPayment='UPI' where StudentRollNo=335001;
    update StudentAdmissionPaymentDetails set

MethodOfPayment='Cheque' where StudentRollNo=544449;
    update StudentAdmissionPaymentDetails set

MethodOfPayment='Cheque' where StudentRollNo=9746662;
    update StudentAdmissionPaymentDetails set

MethodOfPayment='Cash' where StudentRollNo=99455;
```

Show query box



7. Select the student details records who has received the scholarship more than 5000Rs/-

select t1.studentname, t1.studentrollno, t4.scholarshipamount from studentbasicinformation t1, subjectscholarshipinformation t4 where t1.studentrollno=t4.studentrollno and t4.ScholarshipAmount>5000

T OPHOLIS

studentname	studentrollno	scholarshipamount
Ishfaq	45556	12000
Laxmi	99455	730000
Renu	123424	117000
Mansi	366445	25000
Sahil	987463	8500
Ravi	6439006	25000
Sameer	8425112	100000
Ishika	9746662	12000

8. Select the students who opted for scholarship but has not got the scholarship

select t1.studentname, t1.studentrollno, t4.scholarshipamount from studentbasicinformation t1, subjectscholarshipinformation t4 where t1.studentrollno<>t4.studentrollno

studentname	studentrollno	scholarshipamount
Laxmi	99455	12000
Renu	123424	12000
Akshit	335001	12000
Mansi	366445	12000
Mohit	453461	12000
Ankita	544449	12000
Sahil	987463	12000
Ravi	6439006	12000

9. Fill in data for the percentage column i.e. StudentMarksPercentage in the table StudentSubjectInformation by creating and using the stored procedure created

```
DELIMITER //
CREATE PROCEDURE updatePer(IN targetRoll INT)
BEGIN
update studentsubjectinformation
set studentmarkspercentage%=D(subjectobtainedmarks*100)/subjecttotalmarks
-> where studentrollnorrollno;
END//
```

10. Difference between the Triggers, Stored Procedures, Views and Functions

Stored Procedure	Function	Trigger	
Cannot be executed automatically.	Cannot be executed automatically.	Can be executed automatically.	
Can't be called from functions but can be called from triggers.	Can be called from stored procedures or triggers.	Can't be called from stored procedure or triggers.	
	Can accept any type of parameter but don't have an OUT parameter.	Can't accept a parameter.	
May or may not a value on execution.	Function must return a value.	Can never return a value.	

11. Try to use all the three types of join learned today in a relevant way, and explain the same why you thought of using that particular join for your selected scenarios (try to cover relevant and real time scenarios for all the three studied joins)

Left Join-

SELECT StudentName,StudentSurname FROM StudentBasicInformation LEFT JOIN StudentSubjectInformation ON StudentBasicInformation.StudentRollNo= StudentSubjectInformation.StudentRollNo where StudentSubjectInformation.isPassed='no';

StudentName	StudentSurname
Laxmi	Gupta
Mansi	Rana
Ravi	Bansal
Ishika	Bansal

Right Join

SELECT AVG(StudentMarksPercentage) FROM StudentSubjectInformation RIGHT JOIN StudentBasicInformation ON StudentSubjectInformation.StudentRollNo= StudentBasicInformation.StudentRollNo where StudentBasicInformation.optedForScholarship='yes';

AVG(StudentMarksPercentage)

44.926000

12. Mention the differences between the delete, drop and truncate commands

DELETE:

Removes rows from a table. Delete rows one at a time & records an entry in the transaction log for each deleted row.

Deleted data can be rollback.

DML command

When the DELETE statement is executed using a row lock, each row in the table is locked for deletion.

TRUNCATE:

TRUNCATE removes all rows from a table.

TRUNCATE TABLE always locks the table and page but not each row.

If we truncate a table, then truncate table statement cannot be rolled back in some of the database.

Truncate table statement is a Data Definition Language.

DROP:

The DROP in SQL command removes a table from the database

13. Get the count of the Scholarship category which is highly been availed by the students, i.e., get the count of the total number of students corresponding to each scholarship's category.

Select scholarshipcategory, count(scholarshipcategory) from SubjectScholarshipInformation group by scholarshipcategory;



14. Try to retrieve the maximum used scholarship category.

Select scholarshipcategory,count(scholarshipcategory) from SubjectScholarshipInformation group by scholarshipcategory ORDER BY `count(scholarshipcategory)` DESC LIMIT 1



15. Retrieve the percentage of the students along with students detailed information who has scored the highest percentage along with availing the maximum scholarship amount

select StudentName, StudentSurname, T1.StudentRollNo, StudentMarksPercentage, ScholarshipAmount from StudentBasicInformation T1 join StudentSubjectInformation T3 on T1.StudentRollNo=T3.StudentRollNo left join SubjectScholarshipInformation T4 on T1.StudentRollNo=T4.StudentRollNo order by StudentMarksPercentage desc,ScholarshipAmount desc limit 1;

+ Options

StudentName	StudentSurname	StudentRollNo	StudentMarksPercentage	ScholarshipAmount
Mohit	Gupta	453461	99.40	1800