
DBMS LAB – ASSIGNMENT-02



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Registration ID: 2021PGCACA011

Course: MCA 3rd Semester

Date: 26-08-2022

Instructor- D.A. KHAN

ASSIGNMENT-02

Using the information, implement the schema using Transact SQL (show SQL statements for each table). Implement the constraints as well.

1. Create the table shown here in SQL and show the statements you used. Table: Employee

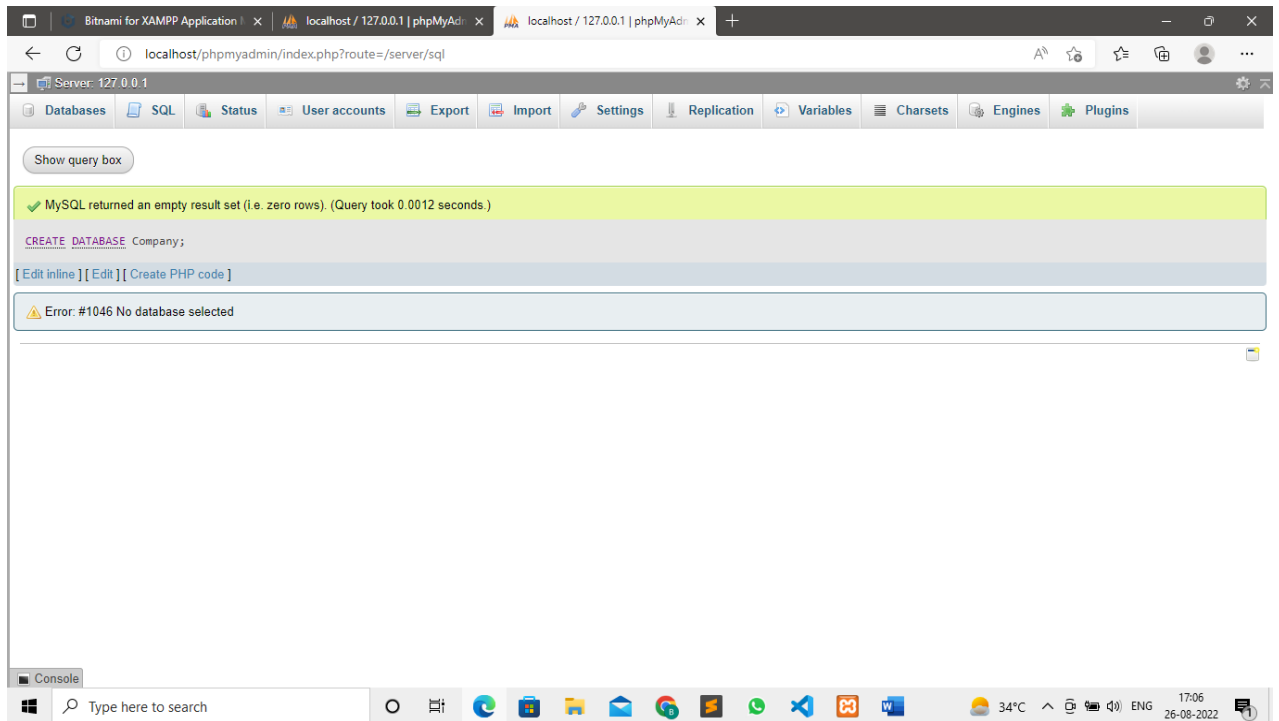
EMPLOYEE	FNAME	MINIT	LNAME	SSN	BDATE	ADDRESS	SEX	SALARY	SUPERSSN	DNO
	John	B	Smith	123456789	1955-01-09	731 Fondren, Houston, TX	M	30000	333445555	5
	Franklin	T	Wong	333445555	1955-12-08	638 Voss, Houston, TX	M	40000	888665555	5
	Alicia	J	Zelaya	999009777	1990-07-19	3321 Castle, Spring, TX	F	25000	987654321	4
	Jennifer	S	Wallace	987654321	1941-06-20	291 Berry, Belknap, TX	F	43000	888665555	4
	Ramoth	K	Narasim	888894444	1962-09-15	975 Pine Oak, Humble, TX	M	39000	333445555	5
	Joyce	A	English	453453453	1972-07-31	5631 Rice, Houston, TX	F	25000	333445555	5
	Ahmad	V	Jabbar	997907907	1999-03-29	900 Dallas, Houston, TX	M	25000	987654321	4
	James	E	Borg	888665555	1937-11-10	450 Stone, Houston, TX	M	55000	null	1

DEPARTMENT	DNAME	DNUMBER	MGRSSN	MGRSTARTDATE
	Research	5	333445555	1988-05-22
	Administration	4	987654321	1995-01-01
	Headquarters	1	888665555	1981-06-10

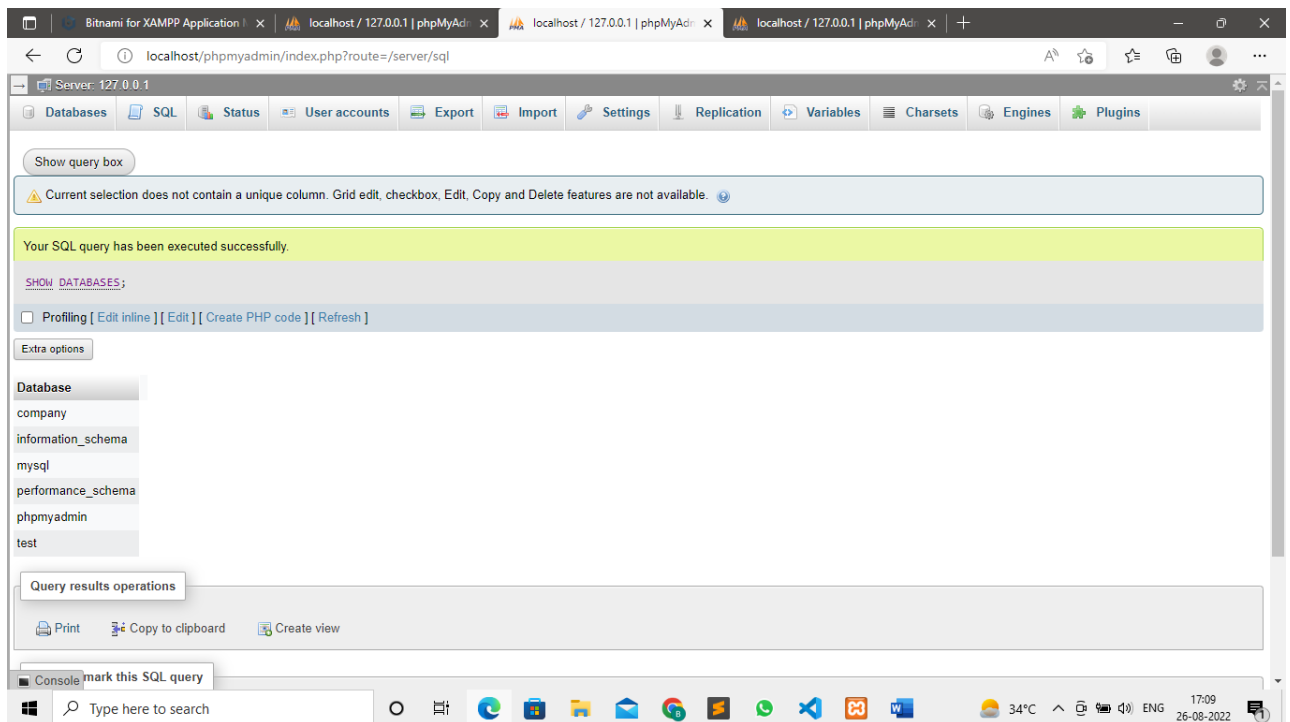
Perform the following:

1. Create company database
2. Viewing all databases
3. Viewing all Tables in a Database,
4. Creating Tables (With and Without Constraints)
5. Inserting/Updating/Deleting Records in a Table
6. Saving (Commit) and Undoing (rollback)

1. CREATE DATABASE Company;

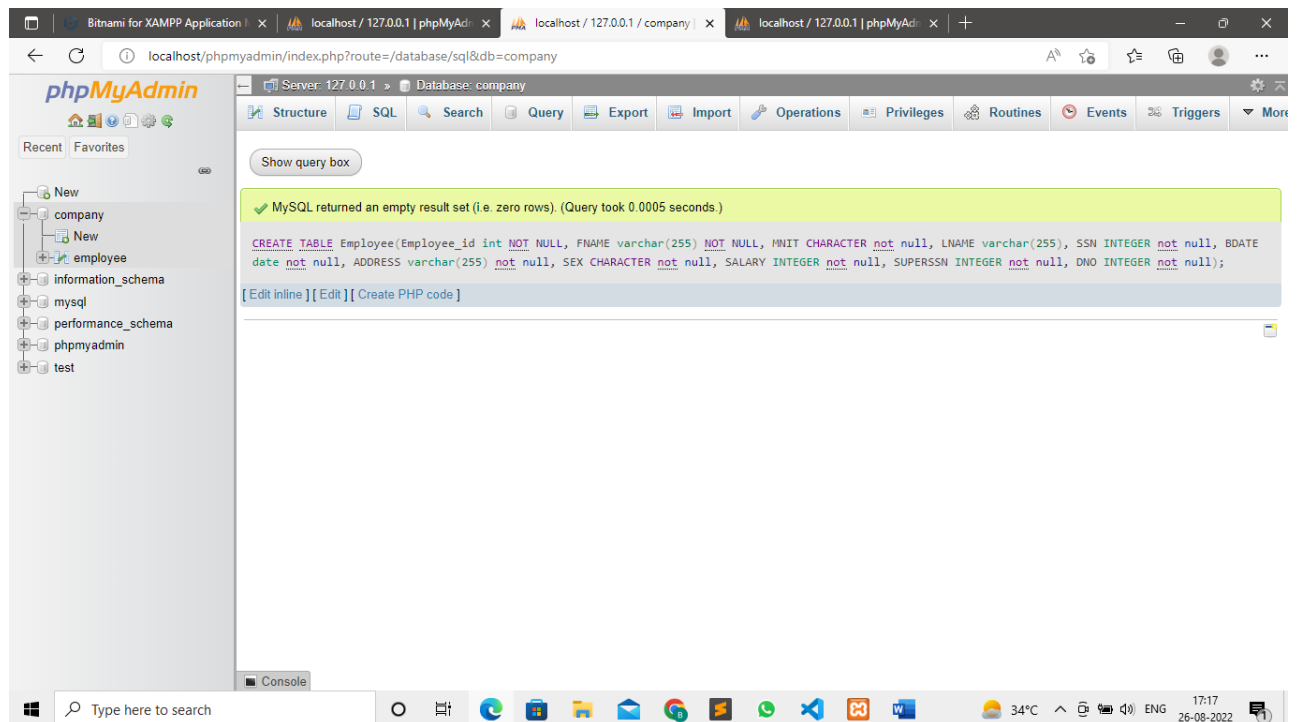


2. SHOW DATABASES;



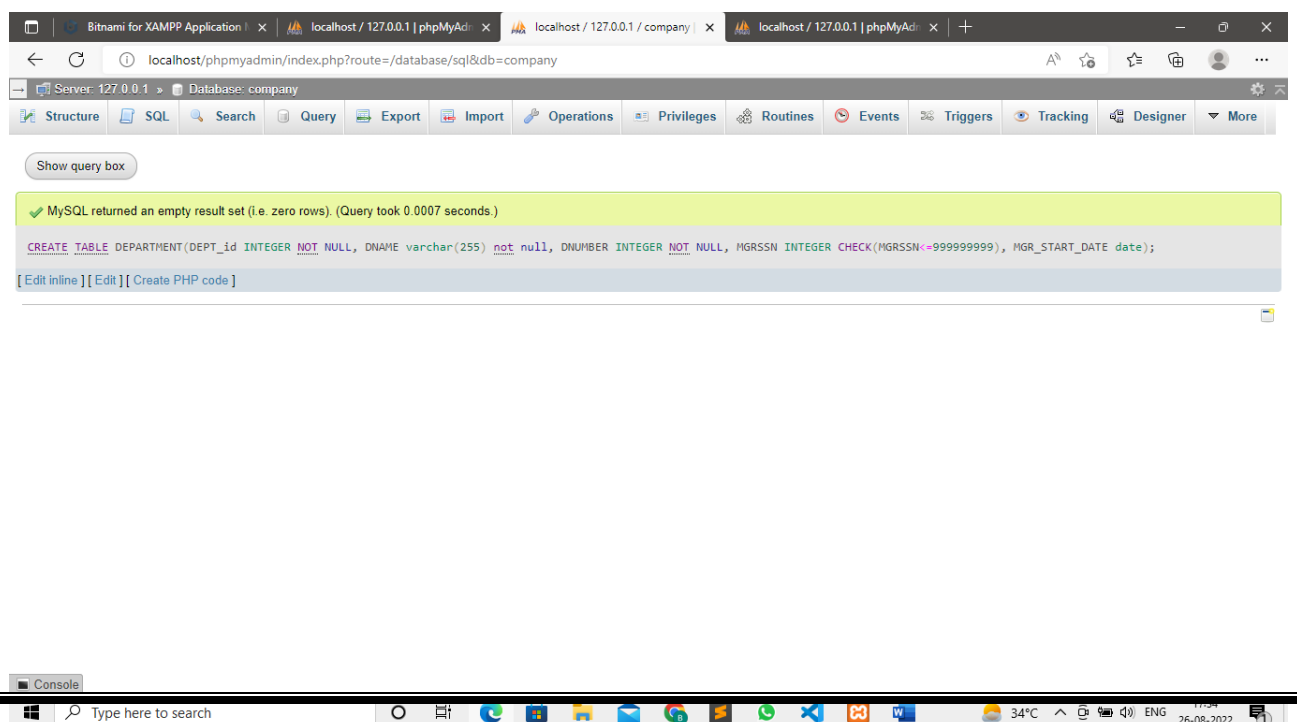
4. Creating table without Constraints

```
CREATE TABLE Employee(Employee_id int NOT NULL, FNAME varchar(255) NOT NULL, MNAME CHARACTER not null, LNAME varchar(255), SSN INTEGER not null, BDATE date not null, ADDRESS varchar(255) not null, SEX CHARACTER not null, SALARY INTEGER not null, SUPERSSN INTEGER not null, DNO INTEGER not null);
```



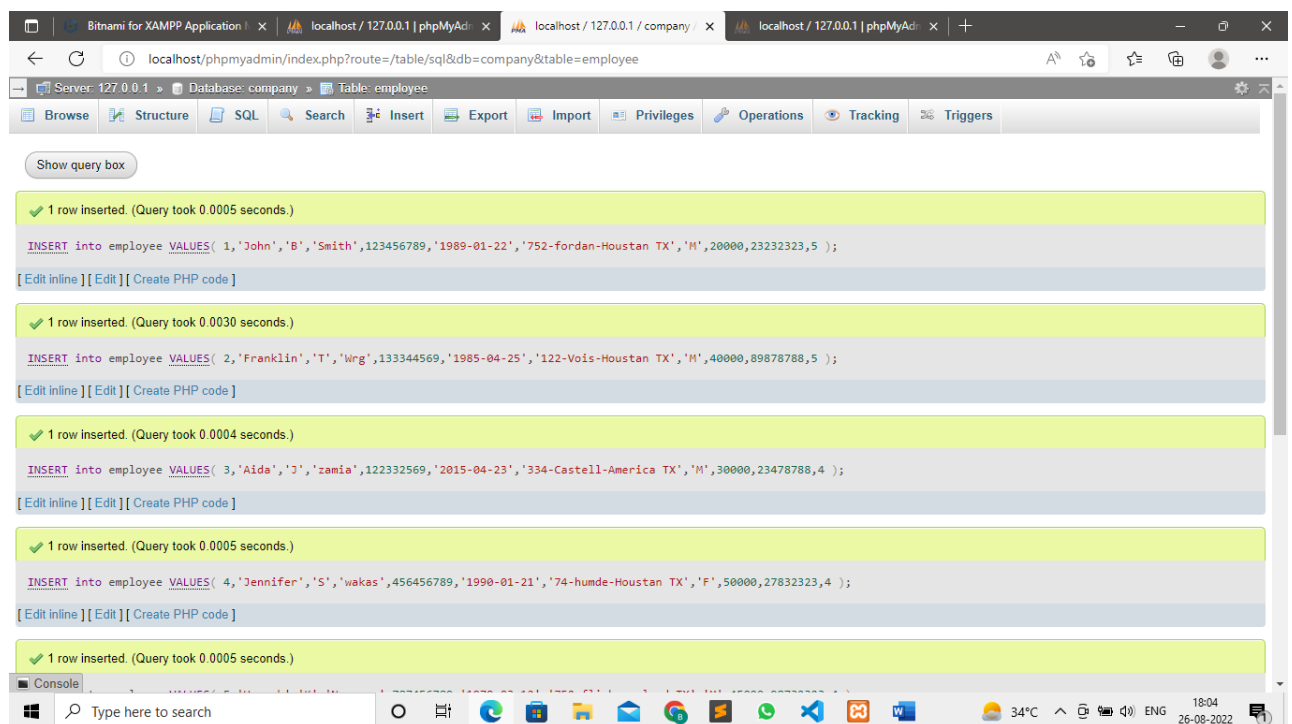
CREATING TABLE WITH CONSTRAINTS IN MGRSSN;

```
CREATE TABLE DEPARTMENT(DEPT_id INTEGER NOT NULL, DNAME varchar(255) not null, DNUMBER INTEGER NOT NULL, MGRSSN INTEGER CHECK(MGRSSN<=999999999), MGR_START_DATE date);
```



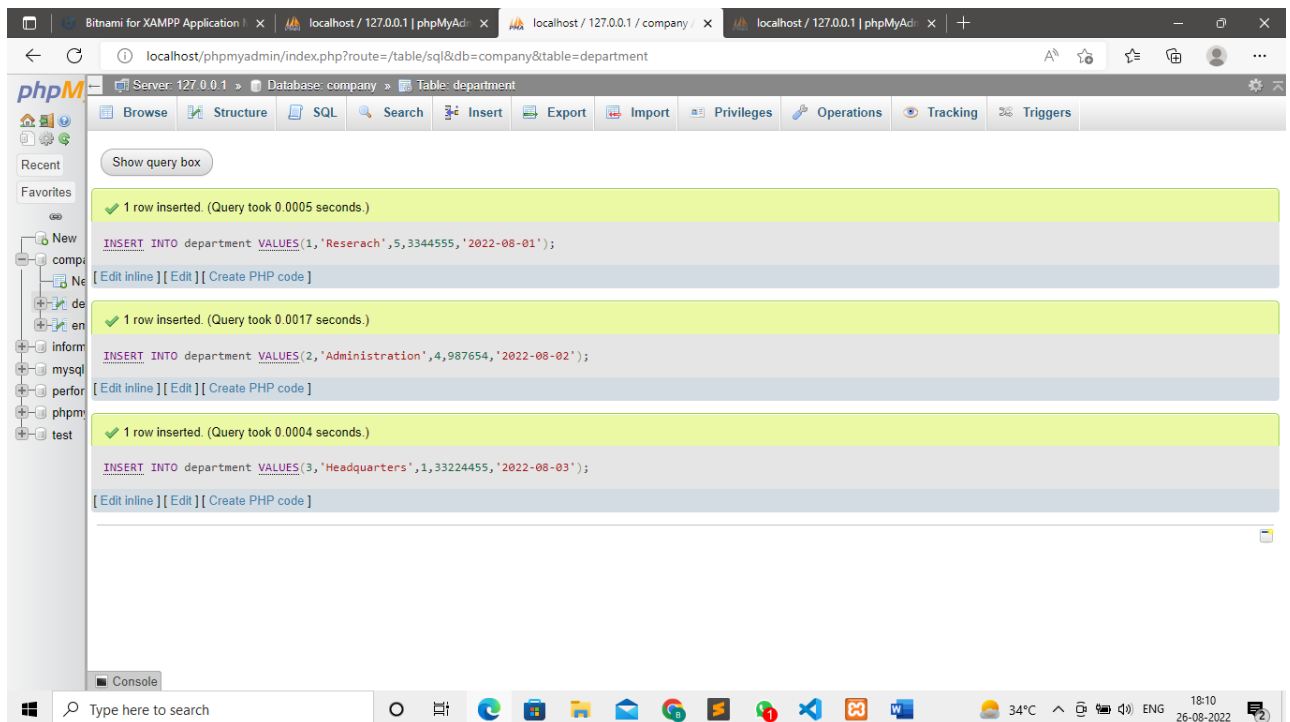
5. INSERT DATA INTO TABLE EMPLOYEE

```
1. INSERT into employee VALUES ( 1, 'John', 'B', 'Smith', 123456789, '1989-01-22', '752-fordan-Houston TX', 'M', 20000, 23232323, 5 );
2. INSERT into employee VALUES ( 2, 'Franklin', 'T', 'Wrg', 133344569, '1985-04-25', '122-Vois-Houston TX', 'M', 40000, 89878788, 5 );
3. INSERT into employee VALUES ( 3, 'Aida', 'J', 'zamia', 122332569, '2015-04-23', '334-Castell-America TX', 'M', 30000, 23478788, 4 );
4. INSERT into employee VALUES ( 4, 'Jennifer', 'S', 'wakas', 456456789, '1990-01-21', '74-humde-Houston TX', 'F', 50000, 27832323, 4 );
5. INSERT into employee VALUES ( 5, 'Harroh', 'K', 'Narayan', 787456789, '1979-03-12', '752-flick-england TX', 'M', 45000, 98732323, 4 );
6. INSERT into employee VALUES ( 6, 'Joya', 'A', 'English', 345456789, '2001-04-12', '75-Dalma-Houston TX', 'M', 10000, 11132323, 5 );
7. INSERT into employee VALUES ( 7, 'Arrhad', 'V', 'johar', 777456789, '2021-01-22', '952-fortan-Houston TX', 'F', 25000, 22232323, 1 );
8. INSERT into employee VALUES ( 8, 'Jumas', 'E', 'Bugs', 666456789, '1999-01-22', '752-soman-Houston TX', 'M', 150000, 99832323, 1 );
```



Insert into department

```
INSERT INTO department VALUES (1, 'Reserach', 5, 3344555, '2022-08-01');
INSERT INTO department VALUES (2, 'Administration', 4, 987654, '2022-08-02');
INSERT INTO department VALUES (3, 'Headquarters', 1, 33224455, '2022-08-03');
```

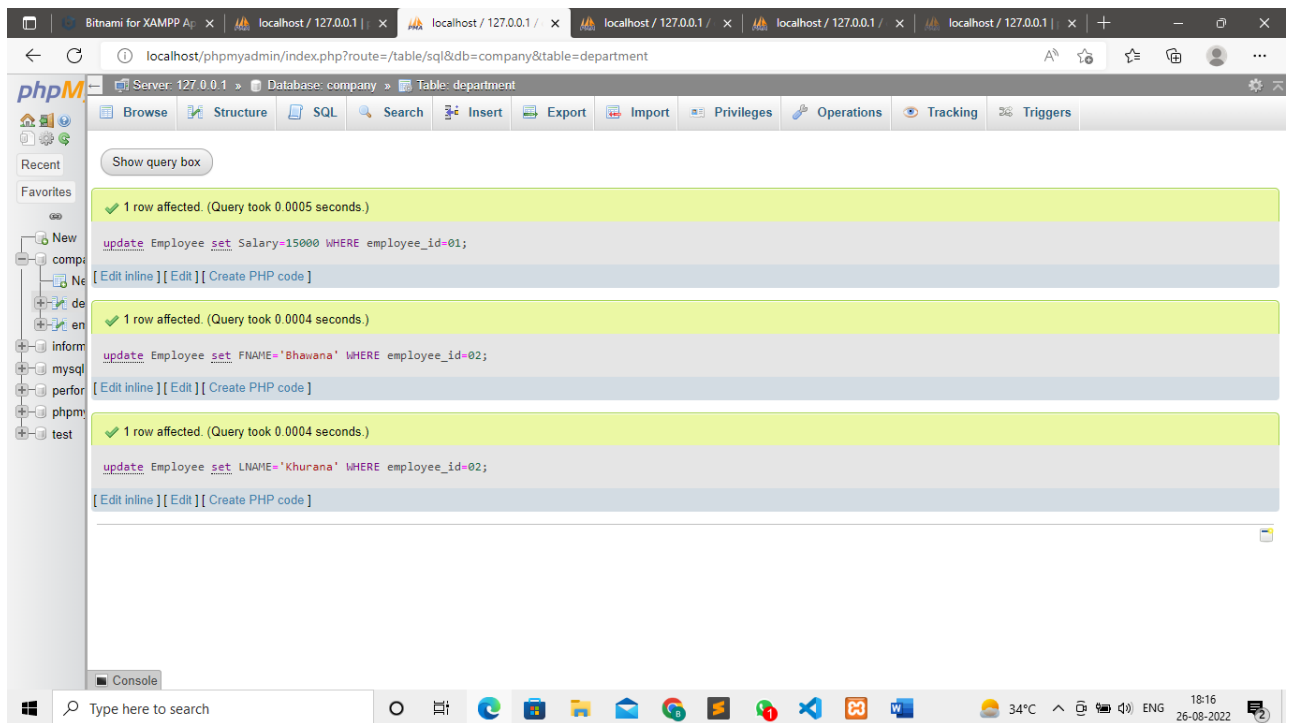


UPDATE

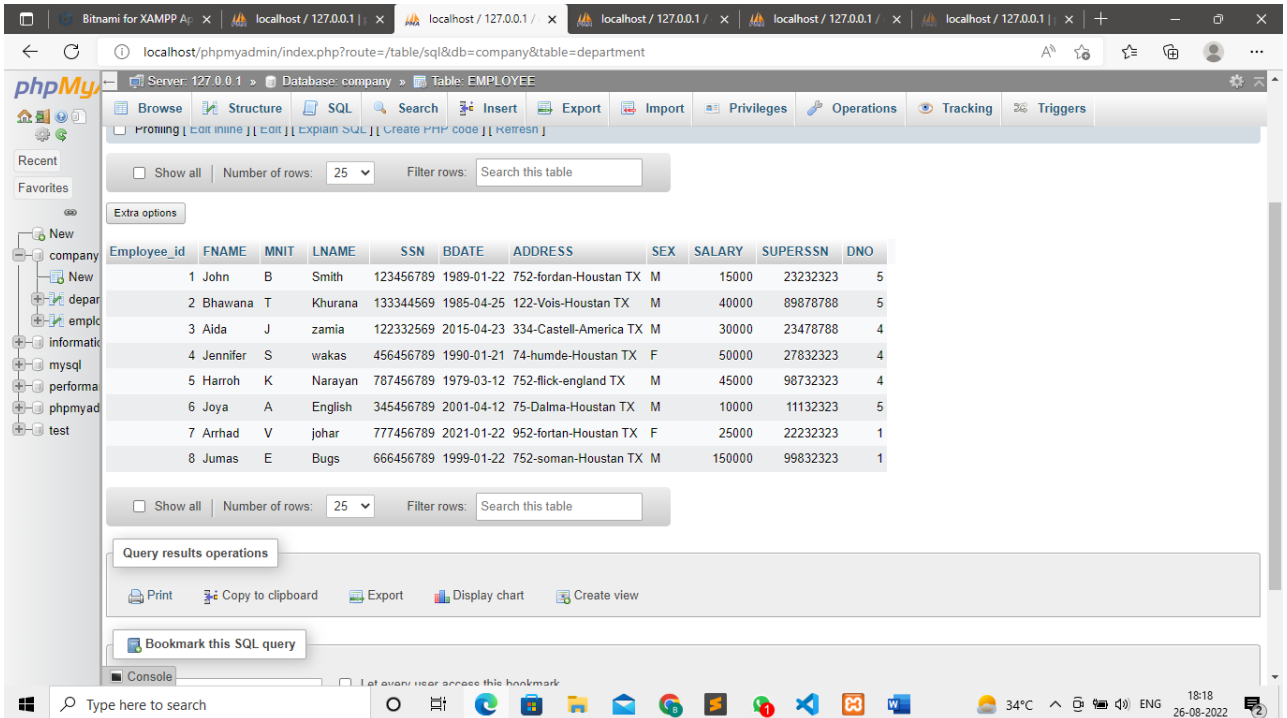
`update Employee set Salary=15000 WHERE employee_id=01;`

`update Employee set FNAME='Bhawana' WHERE employee_id=02;`

`update Employee set LNAME='Khurana' WHERE employee_id=02;`



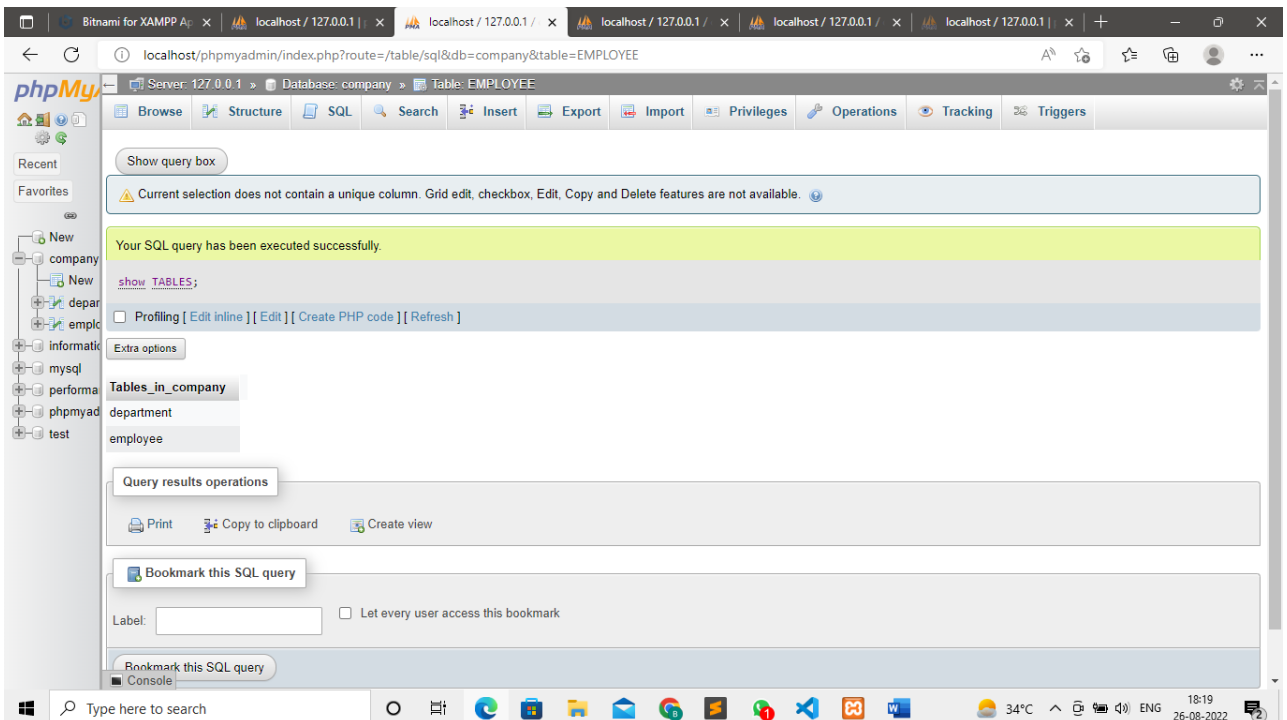
Show updated employee table



The screenshot shows the phpMyAdmin interface for the 'company' database. The 'EMPLOYEE' table is selected, and the 'Table' tab is active. The table structure is displayed with columns: Employee_id, FNAME, MNAME, LNAME, SSN, BDATE, ADDRESS, SEX, SALARY, SUPERSSN, and DNO. The table contains 8 rows of data.

Employee_id	FNAME	MNAME	LNAME	SSN	BDATE	ADDRESS	SEX	SALARY	SUPERSSN	DNO
1	John	B	Smith	123456789	1989-01-22	752-fordan-Houston TX	M	15000	23232323	5
2	Bhawana	T	Khurana	133344569	1985-04-25	122-Vois-Houston TX	M	40000	89878788	5
3	Aida	J	zamia	122332569	2015-04-23	334-Castell-America TX	M	30000	23478788	4
4	Jennifer	S	wakas	456456789	1990-01-21	74-humde-Houston TX	F	50000	27832323	4
5	Harroh	K	Narayan	787456789	1979-03-12	752-flick-england TX	M	45000	98732323	4
6	Joya	A	English	345456789	2001-04-12	75-Dalma-Houston TX	M	10000	11132323	5
7	Arrhad	V	johar	777456789	2021-01-22	952-fortan-Houston TX	F	25000	22232323	1
8	Jumas	E	Bugs	666456789	1999-01-22	752-soman-Houston TX	M	150000	99832323	1

Show tables;



The screenshot shows the phpMyAdmin interface for the 'company' database. The 'Tables' tab is active, displaying a list of tables: 'Tables_in_company', 'department', and 'employee'. A message indicates that the current selection does not contain a unique column, so grid edit, checkbox, Edit, Copy, and Delete features are not available.

Tables_in_company

- department
- employee

Employee table

The screenshot shows the phpMyAdmin interface with the 'EMPLOYEE' table selected. The table contains 8 rows of data. A message at the top states: 'Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.' The SQL query shown is 'SELECT * FROM `EMPLOYEE`;'.

Employee_id	FNAME	MNIT	LNAME	SSN	BDATE	ADDRESS	SEX	SALARY	SUPERSSN	DNO
1	John	B	Smith	123456789	1989-01-22	752-fordan-Houston TX	M	15000	23232323	5
2	Bhawana	T	Khurana	133344569	1985-04-25	122-Vois-Houston TX	M	40000	89878788	5
3	Aida	J	zamia	122332569	2015-04-23	334-Castell-America TX	M	30000	23478788	4
4	Jennifer	S	wakas	456456789	1990-01-21	74-humde-Houston TX	F	50000	27832323	4
5	Harroh	K	Narayan	787456789	1979-03-12	752-flick-england TX	M	45000	98732323	4
6	Joya	A	English	345456789	2001-04-12	75-Dalma-Houston TX	M	10000	11132323	5
7	Arrhad	V	johar	777456789	2021-01-22	952-fortan-Houston TX	F	25000	22232323	1
8	Jumas	E	Bugs	666456789	1999-01-22	752-soman-Houston TX	M	150000	99832323	1

Department Table

The screenshot shows the phpMyAdmin interface with the 'department' table selected. The table contains 3 rows of data. A message at the top states: 'Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.' The SQL query shown is 'SELECT * FROM `department` WHERE 1;'.

DEPT_id	DNAME	DNUMBER	MGRSSN	MGR_START_DATE
1	Reserach	5	3344555	2022-08-01
2	Administration	4	987654	2022-08-02
3	Headquarters	1	33224455	2022-08-03

Delete from employee

```
DELETE from employee where employee_id=1;
DELETE from employee where fname='Bhawana';
```


Show employee table

The screenshot shows the phpMyAdmin interface for a database named 'company'. The 'employee' table is selected, and its structure is displayed. The table has 11 columns: Employee_id, FNAME, MNIT, LNAME, SSN, BDATE, ADDRESS, SEX, SALARY, SUPERSSN, and DNO. The data is shown in a table with 6 rows. The interface also includes a query box, a warning message, and a sidebar with a database tree.

Employee_id	FNAME	MNIT	LNAME	SSN	BDATE	ADDRESS	SEX	SALARY	SUPERSSN	DNO
3	Aida	J	zamia	122332569	2015-04-23	334-Castell-America TX	M	30000	23478788	4
4	Jennifer	S	wakas	456456789	1990-01-21	74-humde-Houston TX	F	50000	27832323	4
5	Harroh	K	Narayan	787456789	1979-03-12	752-flick-england TX	M	45000	98732323	4
6	Joya	A	English	345456789	2001-04-12	75-Dalma-Houston TX	M	10000	11132323	5
7	Arrhad	V	johar	777456789	2021-01-22	952-fortan-Houston TX	F	25000	22232323	1
8	Jumas	E	Bugs	666456789	1999-01-22	752-soman-Houston TX	M	150000	99832323	1

QUESTION-2

Consider Dept Table

<u>DEPTNO</u>	DNAME	LOC
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Perform the following:

1. Rename the table dept as department
2. Add a new column PINCODE with not null constraints to the existing table DEPT
3. All constraints and views that reference the column are dropped automatically, along with the column.
4. Rename the column DNAME to DEPT_NAME in dept table
5. Change the data type of column loc as CHAR with size 10
6. Delete table

```
1. SELECT * FROM `dept` WHERE 1;
```

```
CREATE TABLE DEPT;
```

The screenshot shows the phpMyAdmin interface in a web browser. The address bar indicates the URL is localhost/phpmyadmin/index.php?route=/table/sql&db=company&table=department. The interface shows the 'Table: dept' selected. A message at the top states: 'MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)'. Below this, the SQL query 'SELECT * FROM `dept` WHERE 1;' is entered in the query box. The 'Query results operations' menu is open, showing options like 'Create view' and 'Bookmark this SQL query'. The 'Bookmark this SQL query' option is selected, and a label field is visible. The left sidebar shows the database structure with 'company' selected. The bottom status bar shows the system clock as 18:35 on 26-08-2022.

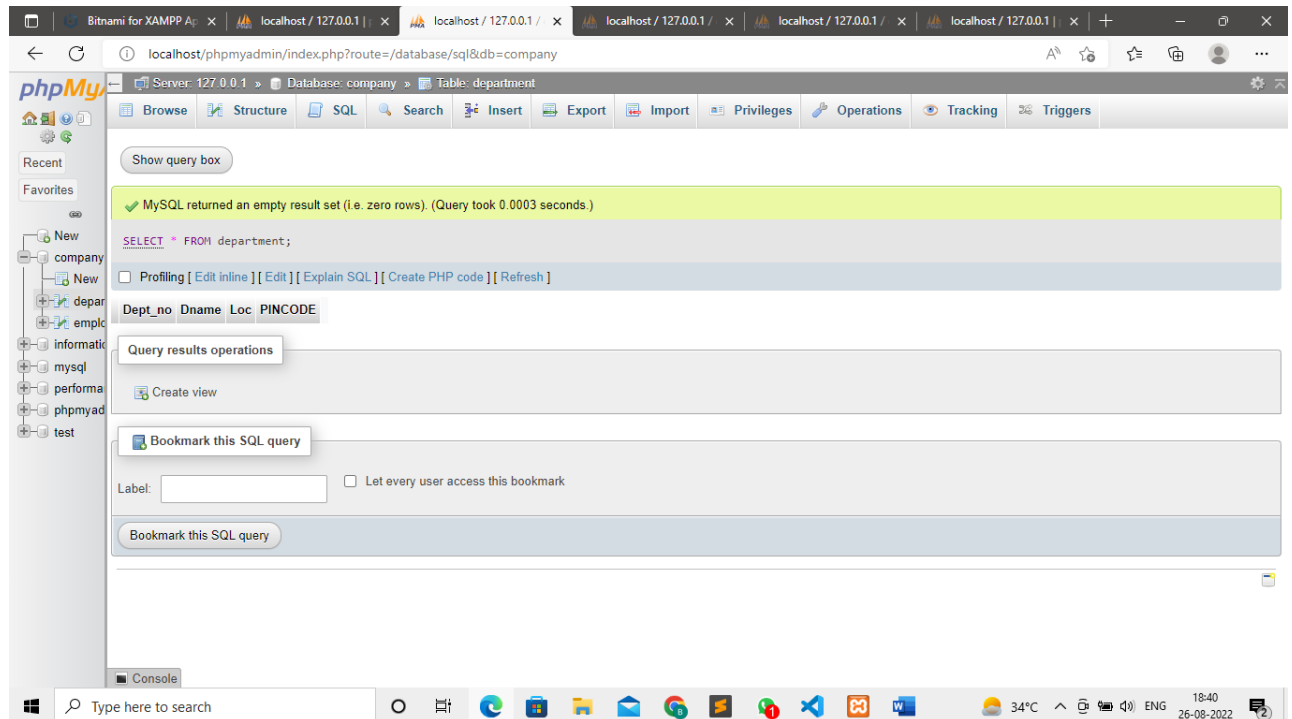
RENAME DEPT AS DEPARTMENT

```
ALTER TABLE DEPT RENAME TO DEPARTMENT;
```

The screenshot shows the phpMyAdmin interface in a web browser. The address bar indicates the URL is localhost/phpmyadmin/index.php?route=/table/sql&db=company&table=dept. The interface shows the 'Table: dept' selected. A message at the top states: 'MySQL returned an empty result set (i.e. zero rows). (Query took 0.0007 seconds.)'. Below this, the SQL query 'ALTER TABLE DEPT RENAME TO DEPARTMENT;' is entered in the query box. The 'Query results operations' menu is open, showing options like 'Create view' and 'Bookmark this SQL query'. The 'Bookmark this SQL query' option is selected, and a label field is visible. The left sidebar shows the database structure with 'company' selected. The bottom status bar shows the system clock as 18:36 on 26-08-2022.

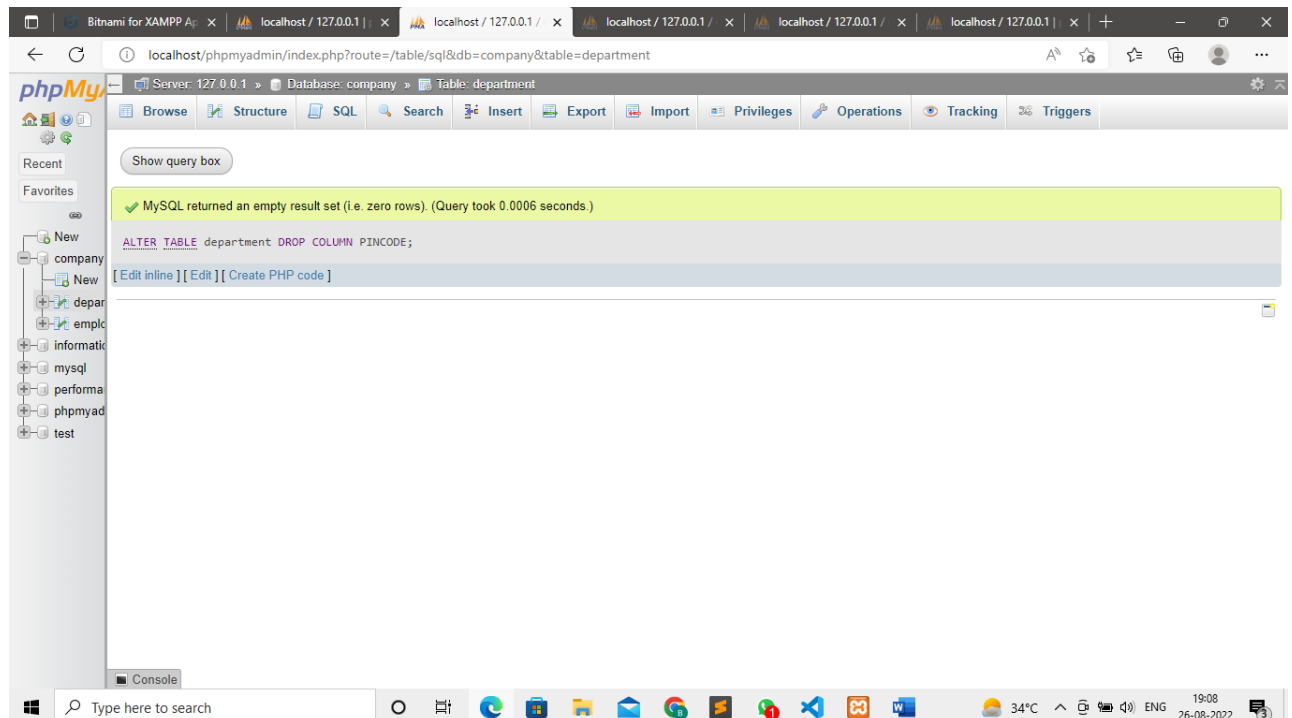
2.ADD COLUMN PINCODE

`ALTER TABLE department ADD PINCODE INT NOT NULL;`



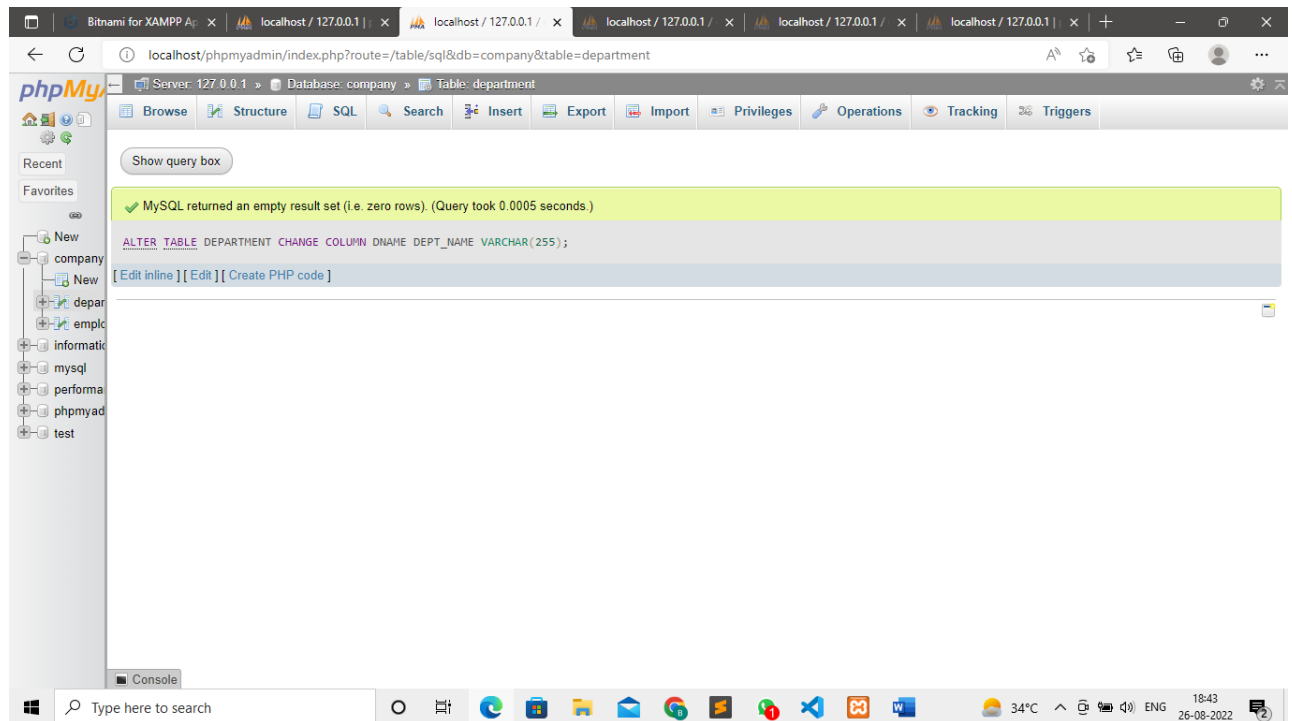
3

ALTER TABLE DEPARTMENT DROP COLUMN PINCODE;



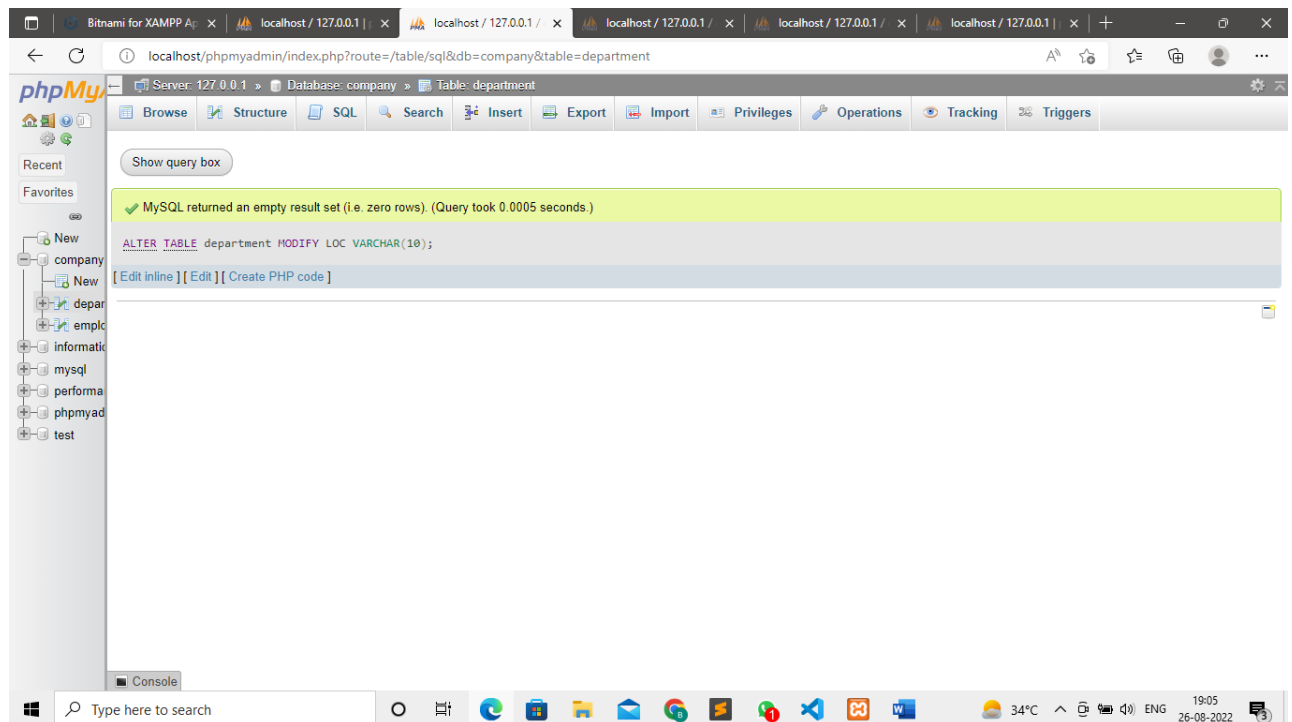
4.RENAME DNAME TO DEPT_NAME

```
ALTER TABLE DEPARTMENT CHANGE COLUMN DNAME DEPT_NAME VARCHAR(255);
```



5. CHANGE THE DATATYPE OF COLUMN LOC AS CHAR WITH SIZE 10.

```
ALTER TABLE department MODIFY LOC VARCHAR(10);
```



6 DELETE TABLE

`DROP TABLE department;`

