

Notes Sharing App

Project submitted to the
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for the partial fulfillment of the requirements to award the degree of

Bachelor of Technology/Master of Technology

In

**Computer Science and Engineering
School of Engineering and Sciences**

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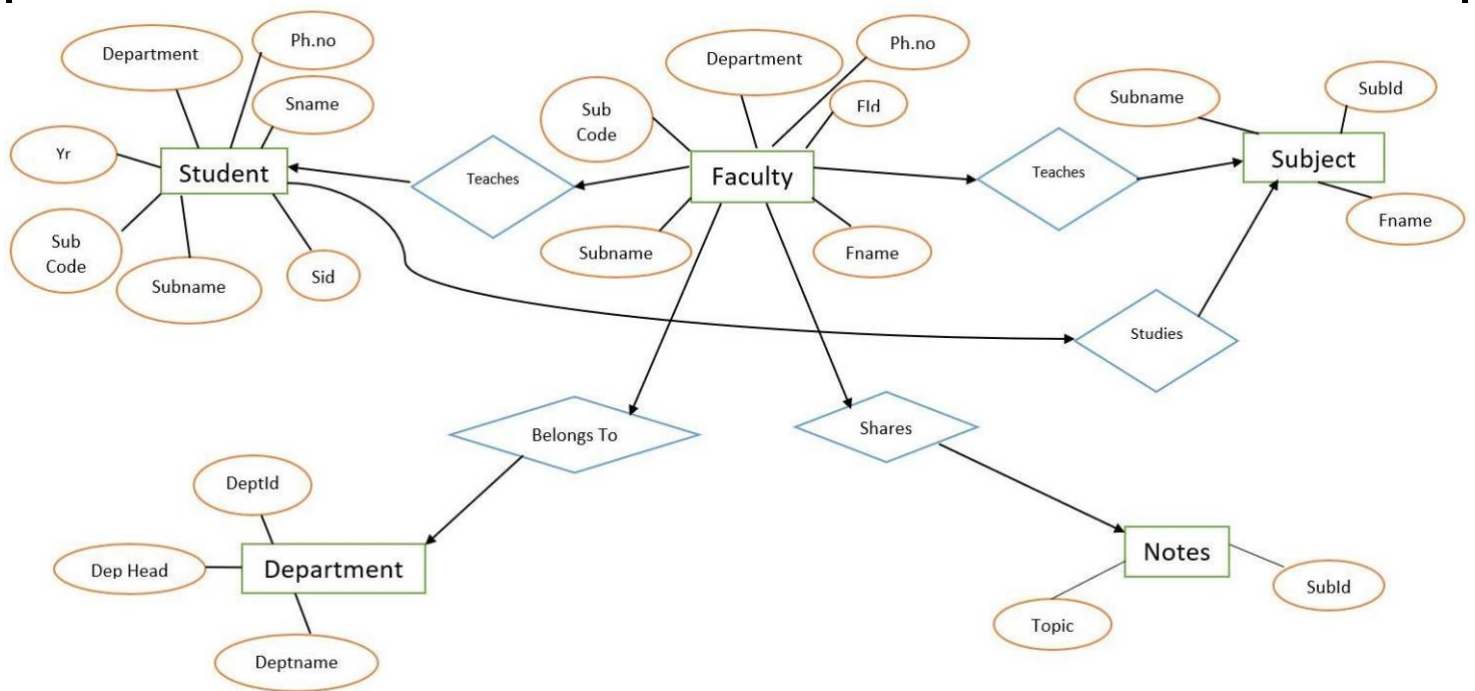
Introduction

The Notes Sharing System facilitates the students to access the Notes available on the basis of Subject and Topic, the teachers share notes on the basis of the students they are teaching. The aim of this project is to design and develop a database maintaining the notes of different subjects, topics, and faculty. It is the computerized system of sharing subject notes on a single app. It can be mainly used by universities. The option of online notes have made the process of sharing notes very much easier than ever before. This project contains an entity relationship model diagram based on Notes sharing App and introduction to relational model . There is also design of the database of the note sharing app based on relation model. Example of some SQL queries to retrieve data from the database.

List of Entities and Attributes:

ENTITIES	ATTRIBUTES
Faculty	Fid (Faculty id) Fname (Faculty Name) subcode (subject code) Ph.no (Phone number) subname (subject name) Department
Student	sid (student id) sname (student name) Ph.no(Phone number) subcode (subject code) subname (subject name) Department Yr (Year of study)
Department	depid (department id) depname (department name) dephead (department head)
Subject	subid (subject id) subname (subject name)
Notes	subid (subject id) Topic

ER-Diagram



Schema Diagram:

Faculty:

Fid	Fname	Sub Code	Subname	Ph.no	Department
-----	-------	----------	---------	-------	------------

Student:

Sid	Sname	Ph.no	SubName	SubCode	Yr	Department
-----	-------	-------	---------	---------	----	------------

Department:

Deptid	Dep Head	Dept Name
--------	----------	-----------

Notes:

Topic	Subid
-------	-------

Normalization and Final List of Relations:

1NF: removing multivalued attributes

Phone numbers can be multivalued as people can have more than 1 phone number.

In this case we can use multiple columns to represent more than 1 phone number.

Faculty:

Fid	Fname	Sub Code	Subname	Ph.no1	Ph.no2	Department
-----	-------	----------	---------	--------	--------	------------

Student:

Sid	Sname	Ph.no1	Ph.no2	SubName	SubCode	Yr	Department
-----	-------	--------	--------	---------	---------	----	------------

Department:

Deptid	Dep Head	Dept Name
--------	----------	-----------

Notes:

Topic	Subid
-------	-------

2NF: Removal of partial dependencies

Non-prime attribute Sub Name is dependent on subcode a proper subset of the candidate key, which is a partial dependency.

So, we remove this by splitting them into multiple tables.

Faculty:

Fid	Fname	Sub Code	Ph.no1	Ph.no2	Department
-----	-------	----------	--------	--------	------------

Student:

Sid	Sname	Ph.no1	Ph.no2	SubCode	Yr	Department
-----	-------	--------	--------	---------	----	------------

Department:

Deptid	Dep Head	Dept Name
--------	----------	-----------

Notes:

Topic	Subid
-------	-------

Subject:

Subid	SubName
-------	---------

3NF: Removal of Transitive dependencies

Fid-> Fname and Fname -> Ph.no1 and Fname -> Ph.no2 are true. So Ph.no1 and Ph.no2 are transitively dependent on Sid. It violates the third normal form.

Similar in Student table

So, we put them in a different table of phone numbers.

Faculty:

Fid	Fname	Sub Code	Department
-----	-------	----------	------------

Student:

Sid	Sname	SubCode	Yr	Department
-----	-------	---------	----	------------

Department:

Deptid	Dep Head	Dept Name
--------	----------	-----------

Notes:

Topic	Subid
-------	-------

Subject:

Subid	SubName
-------	---------

Faculty Phone Number:

Fname	Ph.no1	Ph.no2
-------	--------	--------

Student Phone Number:

Sname	Ph.no1	Ph.no2
-------	--------	--------

CREATE AND INSERT SQL QUERIES:

use DBMS;

Create table faculty(fid INT,fname varchar(100),subcode
varchar(100),subname varchar(100),department varchar(100));

```
Create table student(sid int,sname varchar(100),subcode  
varchar(100),subname varchar(100),department varchar(100),yr INT);
```

```
Create table dep(depид varchar(100),depname varchar(100),dephead  
varchar(100));
```

```
Create table sub(subid varchar(100) ,sname varchar(100),fname  
varchar(100)); create table notes(sub varchar(100),topic  
varchar(100));
```

```
INSERT INTO `dbms`.`dep` (`depид`, `depname`, `dephead`) VALUES  
('CSE', 'Computer Science', 'Suresh');
```

```
INSERT INTO `dbms`.`dep` (`depид`, `depname`, `dephead`) VALUES  
('ECE', 'Electrical and communications', 'Ramesh');
```

```
INSERT INTO `dbms`.`dep` (`depид`, `depname`, `dephead`) VALUES  
('EEE', 'Electrical and electrical ', 'Nilesh');
```

```
INSERT INTO `dbms`.`dep` (`depид`, `depname`, `dephead`) VALUES  
('MECH', 'Mechanical', 'Mukesh');
```

```
INSERT INTO `dbms`.`dep` (`depид`, `depname`, `dephead`) VALUES  
('SLASS', 'Arts and sciene', 'Smriti');
```

```
INSERT INTO `dbms`.`dep` (`depид`, `depname`, `dephead`) VALUES  
('SEAMS', 'Management', 'Swati');
```

```
ALTER TABLE `dbms`.`faculty`
```

```
CHANGE COLUMN `fid` `fid` INT NOT NULL ;
```

```
INSERT INTO `dbms`.`faculty` (`fid`, `fname`, `subcode`, `subname`,  
`department`) VALUES ('1033', 'Suresh', 'CSE132', 'OOPS', 'CSE'); INSERT  
INTO `dbms`.`faculty` (`fid`, `fname`, `subcode`, `subname`,  
`department`) VALUES ('1022', 'Mahesh', 'CSE451', 'Advance Data  
structures', 'CSE');
```

```
INSERT INTO `dbms`.`faculty` (`fid`, `fname`, `subcode`, `subname`,  
`department`) VALUES ('1011', 'Mukesh', 'CSE143', 'Python', 'CSE');
```

```

INSERT INTO `dbms`.`faculty` (`fid`, `fname`, `subcode`, `subname`,
`department`) VALUES ('2011', 'Smriti', 'ART143', 'Russian', 'SLASS');
INSERT INTO `dbms`.`faculty` (`fid`, `fname`, `subcode`, `subname`,
`department`) VALUES ('2022', 'Swati', 'MAN143', 'economics', 'SEAMS');
INSERT INTO `dbms`.`faculty` (`fid`, `fname`, `subcode`, `subname`,
`department`) VALUES ('2033', 'Kriti', 'ART123', 'History', 'SLASS');
INSERT INTO `dbms`.`faculty` (`fid`, `fname`, `subcode`, `subname`,
`department`) VALUES ('3044', 'Jayesh', 'CSE000', 'Intro to computer',
'CSE');
INSERT INTO `dbms`.`faculty` (`fid`, `fname`, `subcode`, `subname`,
`department`) VALUES ('3033', 'Piyush', 'CSE101', 'Intro to c++', 'CSE');

```

```

ALTER TABLE `dbms`.`sub`
ADD PRIMARY KEY (`subid`);

```

```

;
INSERT INTO `dbms`.`sub` (`subcode`, `subname`) VALUES ('CSE000',
'Intro to Computer');
INSERT INTO `dbms`.`sub` (`subcode`, `subname`) VALUES ('ART123',
'History');
INSERT INTO `dbms`.`sub` (`subcode`, `subname`) VALUES ('CSE451',
'Advance Data Structures');
INSERT INTO `dbms`.`sub` (`subcode`, `subname`) VALUES ('CSE143',
'Python');
INSERT INTO `dbms`.`sub` (`subcode`, `subname`) VALUES ('CSE101',
'Intro to c++');
INSERT INTO `dbms`.`sub` (`subcode`, `subname`) VALUES ('ART143',
'Russian');
INSERT INTO `dbms`.`sub` (`subcode`, `subname`) VALUES ('CSE132',
'OOPS');

```

```
INSERT INTO `dbms`.`sub` (`subcode`, `subname`) VALUES ('MAN143',  
'Economics');
```

```
INSERT INTO `dbms`.`student` (`sid`, `sname`, `subcode`, `subname`,  
`department`, `yr`) VALUES ('10011', 'Kundesh', 'CSE000', 'Intro to  
Computer', 'CSE', '2');
```

```
INSERT INTO `dbms`.`student` (`sid`, `sname`, `subcode`, `subname`,  
`department`, `yr`) VALUES ('10012', 'Eswar', 'CSE143', 'Python', 'CSE', '3');
```

```
INSERT INTO `dbms`.`student` (`sid`, `sname`, `subcode`, `subname`,  
`department`, `yr`) VALUES ('10013', 'Barik', 'ART143', 'Russian', 'SLASS',  
'2');
```

```
INSERT INTO `dbms`.`student` (`sid`, `sname`, `subcode`, `subname`,  
`department`, `yr`) VALUES ('10043', 'Patro', 'ART123', 'History', 'SLASS',  
'4');
```

```
INSERT INTO `dbms`.`student` (`sid`, `sname`, `subcode`, `subname`,  
`department`, `yr`) VALUES ('10556', 'Patra', 'MAN143', 'Economics',  
'SEAMS', '2');
```

```
INSERT IN...
```

```
ALTER TABLE `dbms`.`notes`
```

```
ADD COLUMN `fid` VARCHAR(45) NOT NULL AFTER `topic`,
```

```
ADD PRIMARY KEY (`fid`);
```

```
;
```

```
INSERT INTO `dbms`.`notes` (`subcode`, `topic`, `fid`) VALUES ('CSE000',  
'INtroduction', '3044');
```

```
INSERT INTO `dbms`.`notes` (`subcode`, `topic`, `fid`) VALUES  
('ART143', 'Nouns and verbs', '2033');
```

```
INSERT INTO `dbms`.`notes` (`subcode`, `topic`, `fid`) VALUES  
('MAN143', 'Elasticity', '2022');
```

```
INSERT INTO `dbms`.`notes` (`subcode`, `topic`, `fid`) VALUES ('CSE101',  
'Classes', '3033');
```

```
INSERT INTO `dbms`.`notes` (`subcode`, `topic`, `fid`) VALUES ('CSE451',  
'Trees', '1022');
```

```
INSERT INTO `dbms`.`notes` (`subcode`, `topic`, `fid`) VALUES ('CSE451',  
'Graphs', '1022');
```

SQL Queries regarding report Generation:

```
select topic,f.subcode,fname,subname from notes n, faculty f where  
n.fid=f.fid;
```

	topic	subcode	fname	subname
►	INTroduction	CSE000	Jayesh	Intro to computer
	Nouns and verbs	ART123	Kriti	History
	Trees	CSE451	Mahesh	Advance Data structures
	Graphs	CSE451	Mahesh	Advance Data structures
	Classes	CSE101	Piyush	Intro to c++
	Elasticity	MAN143	Swati	economics

select * from student n, faculty f where n.subcode=f.subcode;

	sid	sname	subcode	subname	department	yr	fid	fname	subcode	subname	department
►	10011	Kundesh	CSE000	Intro to Computer	CSE	2	3044	Jayesh	CSE000	Intro to computer	CSE
	10043	Patro	ART123	History	SLASS	4	2033	Kriti	ART123	History	SLASS
	10012	Eswar	CSE143	Python	CSE	3	1011	Mukesh	CSE143	Python	CSE
	62555	Patto	CSE101	Intro to C++	CSE	3	3033	Piyush	CSE101	Intro to c++	CSE
	10013	Barik	ART143	Russian	SLASS	2	2011	Smriti	ART143	Russian	SLASS
	10556	Patra	MAN143	Economics	SEAMS	2	2022	Swati	MAN143	economics	SEAMS

select * from notes n where n.subcode="CSE000";

select topic,f.subcode,fname,subname from notes n, faculty f where
n.fid=f.fid;

	topic	subcode	fname	subname
►	INTroduction	CSE000	Jayesh	Intro to computer
	Nouns and verbs	ART123	Kriti	History
	Trees	CSE451	Mahesh	Advance Data structures
	Graphs	CSE451	Mahesh	Advance Data structures
	Classes	CSE101	Piyush	Intro to c++
	Elasticity	MAN143	Swati	economics

select * from student n, faculty f where
n.subcode = f.subcode;

	sid	sname	subcode	subname	department	yr	fid	fname	subcode	subname	department
▶	10011	Kundesh	CSE000	Intro to Computer	CSE	2	3044	Jayesh	CSE000	Intro to computer	CSE
	10043	Patro	ART123	History	SLASS	4	2033	Kriti	ART123	History	SLASS
	10012	Eswar	CSE143	Python	CSE	3	1011	Mukesh	CSE143	Python	CSE
	62555	Patto	CSE101	Intro to C++	CSE	3	3033	Piyush	CSE101	Intro to c++	CSE
	10013	Bark	ART143	Russian	SLASS	2	2011	Smriti	ART143	Russian	SLASS
	10556	Patra	MAN143	Economics	SEAMS	2	2022	Swati	MAN143	economics	SEAMS

select * from notes n where
n.subcode="CSE000";

	subcode	topic	fid
▶	CSE000	INTroduction	3044

select * from notes n where
n.subcode="ART143";

	subcode	topic	fid
▶	ART143	Nouns and verbs	2033

CONCLUSION:

In our project Notes Sharing system we have stored all the information about the notes shared and the users i.e., the students and teachers. This database is helpful for the app which facilitates students to access the notes and check the details of the notes of each subject remotely and avoids the inconvenience of physically taking notes for every subject they have. We had considered the most important requirements only; many more features and details can be added to our project inorder to obtain even more user-friendly apps. This app is already in progress and in future it can be upgraded and may become part of amazing technology.