

A.S.D.GOV.T. DEGREE COLLEGE FOR WOMEN (A)

(Re-Accredited with 'B' Grade by NAAC)

(Affiliated to Adikavi Nannaya University)

Jagannaickpur, Kakinada.

DEPARTMENT OF COMPUTER SCIENCE



స్త్రీవిద్యాప్రవర్ధతాం

GUEST LECTURE

2021-2022

A.S.D.GOVT. DEGREE COLLEGE FOR WOMEN (A)

JAGANNAICKPUR, KAKINADA



DEPARTMENT OF COMPUTER SCIENCE

2021- 22

GUEST LECTURE

By

P.Jyothi M.Tech.

Lecturer in Computer Applications,
Govt. Degree College, Pathapatnam.

Date : 26-10-2021

Topic : **Relational Data Model**



Conducted by

N.NAGA SUBRAHMANYESWARI, LECTURER IN COMPUTER SCIENCE

G.SATYA SUNEETHA, LECTURER IN COMPUTER APPLICATIONS

A.S.D.GOV.T. DEGREE COLLEGE FOR WOMEN (A), KAKINADA

DEPARTMENT OF COMPUTER SCIENCE Activity Register 2021-2022

Date	26/10/2021
Conducted through (DRC/JKC/ELF/NCC/NSS/ Departments etc.)	Department of Computer Science
Nature of Activity (Seminar/Workshop/Extn. Lecture etc.,)	Guest Lecture
Title of the Activity	Relational Data Model
Name of the Department/Committee	Computer Science
Details of Resource Persons (Name , Designation etc.,)	P. Jyothi Lecturer in Computer Applications, Govt. Degree College,Pathapatnam.
No.of students participated	60
Brief Report on the activity	To enable the students to manage data using relational model.
Name of the Lecturers who Planned & conducted the activity	N.Naga Subrahmanyeswari, Lecturer in Computer Science G.Satya Suneetha, Lecturer in Computer Applications
Signature of the Dept.In-Charge/ Convener of the Committee	
Signature of the Principal	
Remarks	

(* Brief Report of the activity has to be submitted along with evidences(Correspondence , Photographs, Paper Clippings, and Student Feedback etc).A separate record has to be prepared for each Academic year. The College Activity Register shall be with the Principal. All activities have to be recorded and the serial no of the activity has to be mentioned on the report of the activity.)

A.S.D.GOV.T.DEGREE COLLEGE FOR WOMEN (A), KAKINADA

DEPARTMENT OF COMPUTER SCIENCE

GUEST LECTURE



NAME OF THE GUEST : P. Jyothi M.Tech
Lecturer in Computer Applications,
Govt. Degree College, Pathapatnam.

TOPIC : Relational Data Model

DATE : 26-10-2021

VENUE : RB-IV

N. N. S. Eswari

IN-CHARGE OF THE DEPARTMENT

A.S.D.GOV.T.DEGREE COLLEGE FOR WOMEN (A) KAKINADA

DEPARTMENT OF COMPUTER SCIENCE

INVITATION



శ్రీ విద్యా ప్రవర్ధతాం

The Department of Computer Science wishes to arrange A Guest Lecture
on
26-10-2021 at 3.00 P.M. in RB-4

Subject: Database Management System

Topic: Relational Data Model

BY

Ms.P.Jyothi M.Tech.

**Lecturer in Computer Applications,
Govt. Degree College, Pathapatnam.**

N. N. S. Eswari

In-Charge of the Department

V. Anil Kumar

Principal

A.S.D.GOV.T. DEGREE COLLEGE FOR WOMEN(A)
KAKINADA

DEPARTMENT OF COMPUTER SCIENCE

GUEST LECTURE

A Guest Lecture is conducted for the Students of III B.Sc. (M.P.Cs) and III B.Com (C.A.)

Name of the Guest : **Ms.P.Jyothi** M.Tech.,
Lecturer in Computer Applications,
Govt. Degree College,Pathapatnam.

TOPIC	VENUE	DATE	TIME	MODE OF DELIVERY
Applications of Photoshop	RB-IV	26-10-2021	3 PM TO 4.45 PM	Online through Virtual Classroom

Signatures of the Lecturers Attended:

1. *N.N.S. Eswari*

2. *Suneetha*

V. Anil

Signature of the Principal

REPORT ON THE ACTIVITY

Ms P.Jyothi, Lecturer in Computer Applications, Government Degree College Pathapatnam, has delivered a Guest Lecture on “Relational Model” in online mode through Google Meet to the students of III B.Sc. (M.P.Cs) and III B.Com. (C.A) on 26-10-2021 from 3P.M to 4.45P.M. Students attended the Guest Lecture through Virtual Classroom in RB-4. She expressed her views on the following topics

Relational Model: Relational Model represents the database as a collection of relations. A relation is nothing but a table of values. Every row in the table represents a collection of related data values. These rows in the table denote a real-world entity or relationship. The table name and column names are helpful to interpret the meaning of values in each row. The data are represented as a set of relations. In the relational model, data are stored as tables. However, the physical storage of the data is independent of the way the data are logically organized.

Tuple – A single row of a table, which contains a single record for that relation is called a tuple.

Relation instance – A finite set of tuples in the relational database system represents relation instance. Relation instances do not have duplicate tuples.

Relation schema – A relation schema describes the relation name (table name), attributes, and their names.

Relation key – Each row has one or more attributes, known as relation key, which can identify the row in the relation (table) uniquely.

Attribute domain – Every attribute has some pre-defined value scope, known as attribute domain.

Constraints: Every relation has some conditions that must hold for it to be a valid relation. These conditions are called Relational Integrity Constraints. There are three main integrity constraints –

- Key constraints
- Domain constraints
- Referential integrity constraints

Key Constraints: There must be at least one minimal subset of attributes in the relation, which can identify a tuple uniquely. This minimal subset of attributes is called key for that relation. If there are more than one such minimal subsets, these are called candidate keys.

Domain Constraints: Attributes have specific values in real-world scenario. For example, age can only be a positive integer. The same constraints have been tried to employ on the attributes of a relation. Every attribute is bound to have a specific range of values. For example, age cannot be less than zero and telephone numbers cannot contain a digit outside 0-9.

Referential integrity Constraints: Referential integrity constraints work on the concept of Foreign Keys. A foreign key is a key attribute of a relation that can be referred in other relation. Referential integrity constraint states that if a relation refers to a key attribute of a different or same relation, then that key element must exist.

Data Definition Language (DDL)

DDL changes the structure of the table like creating a table, deleting a table, altering a table, etc., All the commands of DDL are auto-committed that means it permanently saves all the changes in the database. Here are some commands that come under DDL

- CREATE
- ALTER
- DROP
- TRUNCATE

CREATE is used to create a new table in the database. DROP command is used to delete both the structure and record stored in the table. ALTER Command is used to alter the structure of the database. This change could be either to modify the characteristics of an existing attribute or probably to add a new attribute. TRUNCATE command is used to delete all the rows from the table and free the space containing the table.

Data Manipulation Language(DML)

DML commands are used to modify the database. It is responsible for all form of changes in the database.

The command of DML is not auto-committed that means it can't permanently save all the changes in the database. They can be rollback. Here are some commands that come under DML

- INSERT
- UPDATE
- DELETE

The INSERT statement is used to insert data into the row of a table. UPDATE command is used to update or modify the value of a column in the table. DELETE command is used to remove one or more row from a table.

Data Control Language (DCL)

Data Control Language (or DCL) consists of statements that control security and concurrent access to table data.

COMMIT: Instructs the XDB Server to make permanent all data changes resulting from DML statements executed by a transaction.

CONNECT : Connects the application process (or user) to a designated XDB Server or DB2 location. This location becomes the current location for the application process or user.

GRANT (Database Privileges): Assigns access privileges to XDB Server users or applications.

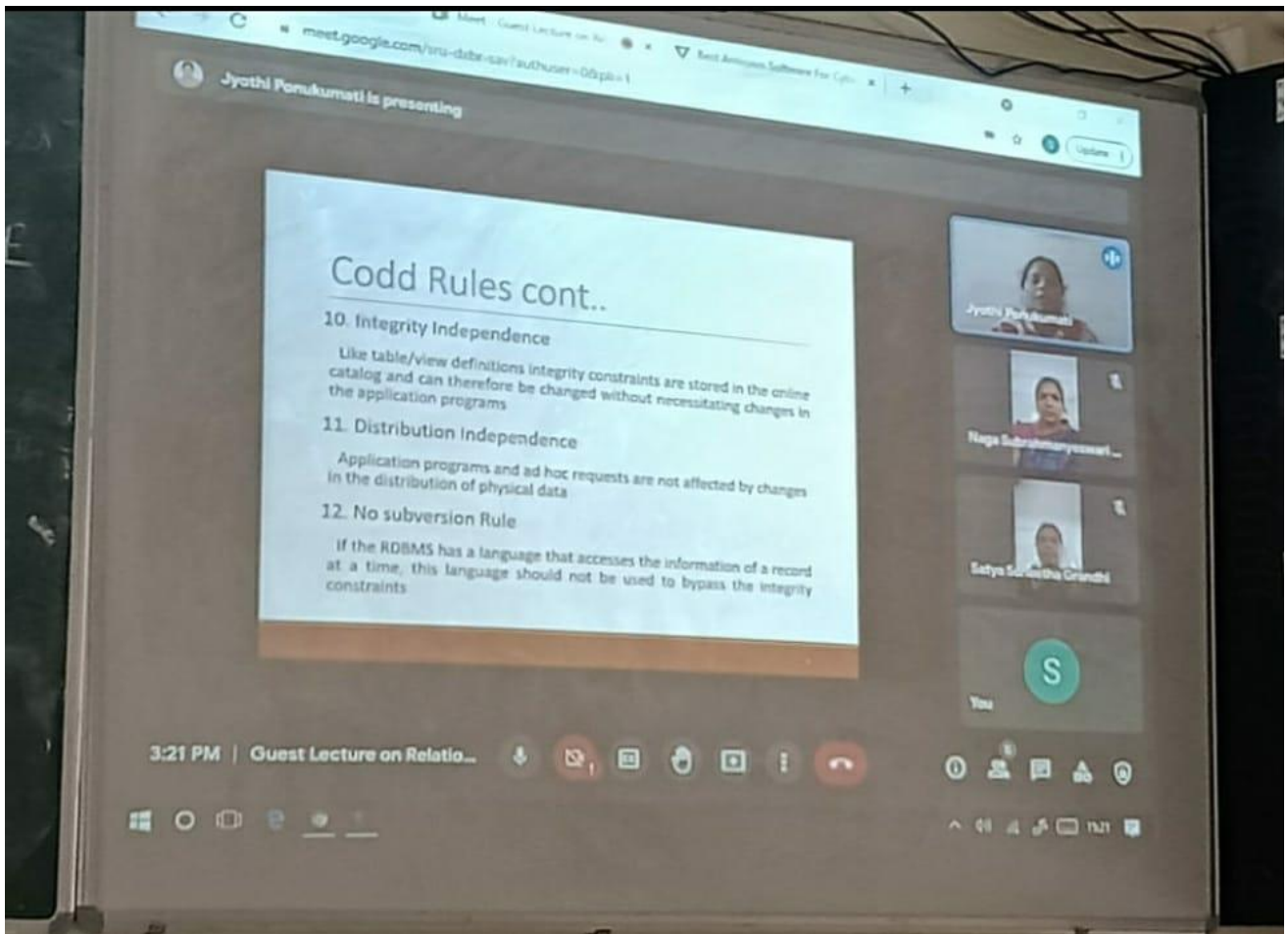
GRANT (Sequence Privileges): Grants privileges on a user-defined sequence.

LOCK TABLE: Extends XDB Server's automatic record and table level locking functions (in a multi-user system) by acquiring explicit locks on a particular table.

REVOKE (Database Privileges): Cancels access privileges for XDB Server users or applications.

REVOKE (Sequence Privileges): Revokes the privileges on a user-defined sequence.

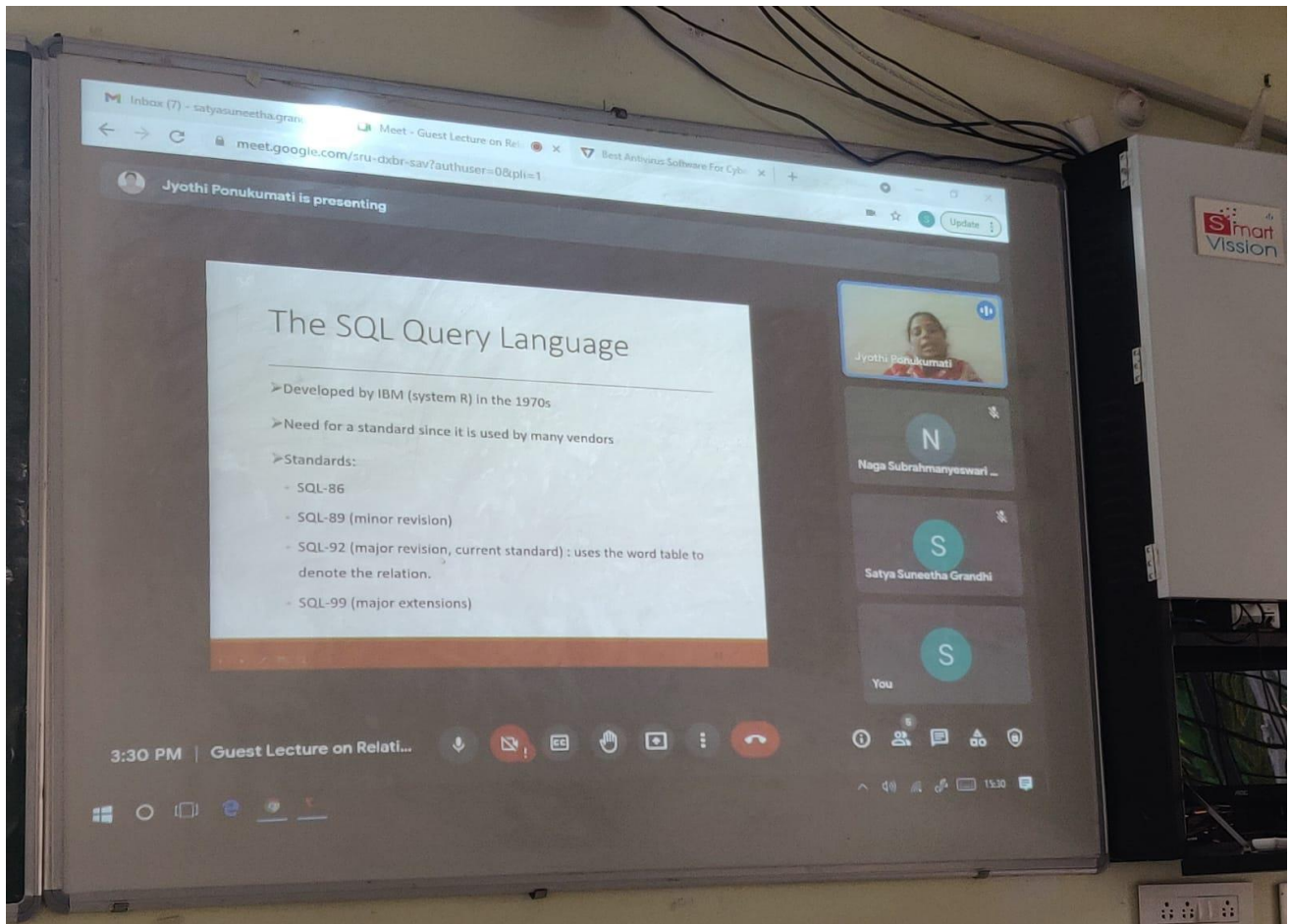
ROLLBACK : Instructs the XDB Server to reverse the effect of any DML commands executed on a database by a transaction. Information recorded in a *backward log* is used to restore the database to a state existing before the transaction.



Resource Person **Smt. P.Jyothi** explaining CODD's Rules Virtually through Google Meet



Students attended the Guest Lecture on “Relational Model” in RB-4



Resource Person **Smt. P.Jyothi** explaining SQL Query Language Virtually through Google Meet



Students enthusiastically listening to the Guest Lecture