Alva's Institute of Engineering & Technology

Shobhavana Campus, Mijar, Moodbidri, D.K – 574225

Phone: 08258-262725, Fax: 08258-262726

(Accredited by NBA New Delhi, 2019 – 2025)

Department of Artificial Intelligence & Machine Learning

CIRCULAR dated 03/04/2023

All the **3rd year** students of **Artificial Intelligence and Machine Learning** department are informed to attend the following **Hands on training session** on **09th Apr, 2023** from **9:00 am** to **5:00 pm**. The following resource person will be delivering you the eminent skill on the below mentioned topic.

Resource Person: **Dr. Venugopal P S.**

Topic: **RDBMS training.**

Everyone's presence & co-operation in this regard is highly expected.

03/04/2023.

HOD Sign. & Date

Head of the Department
Dept. of Artificial Intelligence & Machine Learning
Alva's Institute of Engineering & Technology
Shobhavana Campus, Mijar
Moodubidire 574 225, D.K. Karnataka, India

(Dept. of AIML)

Cc to:

All Class Rooms

Notice Board

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY
(Unit of Alva's Education Foundation (R), Moodbidri)
Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE, New Delhi.
Recognized by Government of Karnataka.
A+, Accredited by NAAC & NBA (ECE & CSE)
Shobhavana Campus, MIJAR-574225, Moodbidri, D.K., Karnataka
Ph: 08258-262725; Mob:722262724,7026262725,mail:principalaiet08@gmail.com

Department of Artificial Intelligence and Machine Learning

Resource Person - :Dr. Venugopal P S

Topic: RDBMS

Objective:

The objective of conducting RDBMS training is to provide students with a comprehensive understanding of relational database management systems, including fundamental concepts, database design and implementation, data manipulation and querying. The training aims to equip the students with the skills and knowledge necessary to effectively work with relational databases, enabling them to design efficient database structures, manipulate data using SQL, integrate databases with applications, analyze data for insights, and ensure the smooth functioning and performance of database systems which would help them in the further placements.

Topics covered:

1)Introduction to Databases: Introduction, Characteristics of database approach. Overview of Database Languages and Architectures: Data Models, Schemas, and Instances. Three schema architecture and data independence, database languages, and interfaces, The Database System environment. Conceptual Data Modelling using Entities and Relationships: Entity types, Entity sets, attributes, roles, and structural constraints, Weak entity types, ER diagrams, examples, Specialization and Generalization.

2)SQL : Advances Queries: More complex SQL retrieval queries, Specifying constraints as assertions and action triggers, Views in SQL, Schema change statements in SQL.

3)Normalization: Database Design Theory – Introduction to Normalization using Functional and Multivalued Dependencies: Informal design guidelines for relation schema, Functional Dependencies, Normal Forms based on Primary Keys, Second and Third Normal Forms, Boyce-Codd Normal Form, Multivalued Dependency and Fourth Normal Form, Join Dependencies and Fifth Normal Form. Normalization Algorithms: Inference Rules, Equivalence, and Minimal Cover, Properties of Relational Decompositions, Algorithms for Relational Database Schema Design, Nulls, Dangling tuples, and alternate Relational Designs, Further discussion of Multivalued dependencies and 4NF, Other dependencies and Normal Forms, problems related to Normalization.

Conclusion:

This training has significantly helped students understanding of relational database management systems. Through comprehensive instruction and hands-on exercises, students gain a solid foundation in fundamental concepts, including data modeling, normalization, and relational algebra. They acquire practical skills in designing and implementing efficient databases, writing SQL queries, and performing data manipulation tasks. Moreover, students have tried writing quires on there own. Overall, students have gone through the concepts required for there placements.

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY
(Unit of Alva's Education Foundation (R), Moodbidri)
Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE, New Delhi.
Recognized by Government of Karnataka.
A+, Accredited by NAAC & NBA (ECE & CSE)
Shobhavana Campus, MIJAR-574225, Moodbidri, D.K., Karnataka
Ph: 08258-262725; Mob:722262724,7026262725,mail:principalaiet08@gmail.com

11/04/2023.

Head of the Department
Dept. of Artificial Intelligence & Machine Learning
Alva's Institute of Engineering and Technology