REGISTRATION FORM

1. Name: ....

2. Highest Qualification ....

3. Designation: ....

4. Organization: ....

5. Address: ....

    ....

6. Mobile No. ....

7. Email ID: ....

Declaration:

The information furnished in registration form is true to the best of my knowledge. I agree to abide by the rules and regulations governing by the course. If selected, I shall attend the course for entire duration, I also undertake the responsibility to inform the coordinator sufficiently in advance, in case I am unable to attend the course.

Place: **Date:**

Signature of   **Signature of**
Faculty   **Head of the Institution**

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REGISTRATION

Registration Fee: Rs. 600/- per Participant
Name of the Account: MGIT Conferences Seminars and Workshops
Account Number: 438501000066
IFSC Code: ICIC0004385

For participants from MGIT & CBIT has no registration fee.

Registration Link:
https://forms.gle/njCtwy4MTHusjo2P8

Last date for Registration
12th February 2024

One Week National Level Faculty Development Programme

On

Prolog Programming

12th February – 17th February, 2024

Organized by
Department of Emerging Technologies

MAHATMA GANDHI INSTITUTE OF TECHNOLOGY

(Autonomous)
Chaitanya Bharathi (P.O), Gandipet, Hyderabad,
Ranga Reddy District, Telangana-500075,
India

Website: www.mgit.ac.in

About CBES

CBES was established in 1979 by an erudite and eminent group of trail blazers. The primary objective of this Educational Society is to create temples of knowledge. The atmosphere is conducive for imparting essential technical & wide gamut of requisite skills that groom students into responsible global citizens, ready for success. The institution named after the father of the nation lays great emphasis on value-based education. The campus is bustling with activities, assiduously supported by the management.

About Institution

Mahatma Gandhi Institute of Technology is one of the premier Engineering Colleges in the self-financing category in the state of Telangana. MGIT is affiliated to Jawaharlal Nehru Technological University, Hyderabad. The institute has recently received accreditation for 3 years for all eight B. Tech Programs from National Board of Accreditation, New Delhi. The institute is also accredited by NAAC with an 'A++' grade. Mahatma Gandhi Institute of Technology (MGIT) was established by the Chaitanya Bharathi Educational Society (CBES) in a serene and tranquil atmosphere at Gandipet, Hyderabad and has grown rapidly since its inception in 1997. The lush green campus of MGIT is spread over 30 acres of pleasant landscape with a constructed area of 2,50,787 sq. ft. In a recent development, MGIT is honoured to be conferred with the autonomous status by University Grants Commission (UGC), New Delhi. The college offers courses in 11 Undergraduate Programs (Computer Science, Information Technology, Electrical & Electronics, Electronics & Communication, Mechatronics', Metallurgical & Materials Engineering, Civil Engineering and Mechanical Engineering, Computer Science and Business System, Computer Science and Engineering (AI & ML) and Computer Science and Engineering (Data Science)

About ET Department

MGIT's Department of Emerging Technologies is a centre of scholarly excellence housing 18 dedicated faculty members at different stages of their research endeavor, With two focused branches – Computer Science and Engineering in AI & ML, and Computer Science and Engineering in Data Science – we prioritize cutting-edge education. Our commitment to staying at the forefront is evident in our B. Tech programs launched in 2020, each with an intake of 60 students. These programs offer a robust foundation in Computer Science and hands-on experiences, preparing students for real-world challenges in the dynamic fields of AI & ML, and Data Science. Additionally, the department offers a Minor Degree program in Cyber Security, catering to students from circuit and non-circuit branches, thereby fostering interdisciplinary learning and innovation.

About FDP

Prolog programming centers on logical inference and rule-based reasoning, creating a continuous loop wherein developers iteratively establish rules, pose queries, and derive logical conclusions. This iterative cycle highlights the collaborative essence of Prolog, essential for ongoing enhancements in the software development lifecycle. Through this logical loop, solutions can be refined and improved via repeated logical reasoning, rendering Prolog a potent instrument for crafting accurate, dependable, and flexible software solutions.

Resource Persons

Mr. E. Krushnaraj, Team Lead & Technical Trainer
Consensus Academy & Six Phrase
Chennai
Tamil Nadu

Faculty Contact Details

Dr. B. Yadaiah - 903 000 7577
Mr. R. Srinivas - 966 666 0028

Prolog Programming Schedule

Day 1: Basic Prolog Programming
Concepts: Facts, Queries, Arithmetic Operations
• Write a Prolog program that defines the following facts: Ram likes manga, Seema is a girl, Bill likes Cindy, Rose is a toad, and John owns gold. How would you query these facts in Prolog?
• Write a Prolog program that performs simple arithmetic operations. How would you use this program to calculate the sum, difference, product, and quotient of two numbers?
• Write a Prolog program to implement simple facts and queries.

Day 2: Problem Solving with Prolog
Concepts: Problem Solving, State Space Search, Recursion
• Write a Prolog program to solve the Monkey Banana problem. How does your program represent the state of the problem and how does it find the solution?
• Write a Prolog program to solve the Tower of Hanoi problem. How does your program use recursion to find the solution?

Day 3: Advanced Problem Solving with Prolog
Concepts: Heuristics, A* Algorithm, Backtracking, Constraint Satisfaction
• Write a Prolog program to solve the 8 Puzzle problem. How does your program use heuristics and the A* algorithm to find the solution?
• Write a Prolog program to solve the 4-Queens problem. How does your program use backtracking and constraint satisfaction to find all solutions?

Day 4: Optimization Problems with Prolog
Concepts: Graph Theory, Optimization, State Space Search
• Write a Prolog program to solve the Traveling Salesman problem. How does your program represent the problem as a graph and how does it find the optimal solution?
• Write a Prolog program to solve the Water Jug problem. How does your program represent the state of the jugs and how does it find the solution?

Day 5: Advanced Prolog Programming
Concepts: Expert Systems, Knowledge Representation, Binary Search Trees
• Write a Prolog program for medical diagnosis. How does your program represent medical knowledge and how does it use this knowledge to diagnose diseases?
• Assume the Prolog predicate gt(A, B) is true when A is greater than B. Use this predicate to define the predicate addLeaf (Tree, X, NewTree) which is true if New Tree is the Tree produced by adding the item X is a leaf node. Tree and New Tree are binary search trees. The empty tree is represented by the atom nil.

Day 6: Advanced Prolog Programming
Concepts: List Manipulation, Accumulators, Temperature Conversion
• Write a simple Prolog function that takes into account lists which are too short. Remove the Nth item from the list. Insert as the Nth item.
• Define a predicate memCount(AList, Blist, Count) that counts how many times Alist occurs within Blist.
• Write predicates one converts centigrade temperatures to Fahrenheit, the other checks if a temperature is below freezing.