A Report on Hackathon on Problem-Solving Using C

Organized by

Department of Basic Sciences & Humanities

Narasaraopeta Engineering College

For First-Year Students

In Association With Bytexl Solutions

Venue

Computer Lab I, II, and III

Date-10-4-25 to 12-4-25

Introduction

The Department of Basic Sciences and Humanities, Narasaraopeta Engineering College, successfully organized a Hackathon on **Problem-Solving using C** exclusively for first-year students in association with Bytexl Solutions. The event was meticulously planned and supervised under the leadership of Dr. K. Lakshmi, Head of the Department of Basic Sciences and Humanities.

Hackathons are globally recognized platforms that encourage innovation, logical thinking, and teamwork. By conducting this Hackathon, the department aimed to strengthen the programming foundation of students, particularly in the C programming language, which forms the basis of computer science and engineering. The event was held across Computer Lab I, II, and III to ensure smooth participation and provided an environment for students to challenge themselves in coding.

Objectives of the Hackathon

The Hackathon was organized with the following objectives:

1. Enhancing Programming Skills – To provide hands-on practice in solving computational problems using C.
2. Logical and Analytical Thinking – To encourage students to think critically, analyze problems, and design efficient solutions.
3. Exposure to Competitive Coding – To give students an experience of coding competitions that prepare them for future hackathons and placement drives.
4. Bridging Academia and Industry – With support from Bytexl Solutions, students were introduced to industry-level problem-solving approaches.
5. Encouraging Self-Confidence – To help students overcome coding fear and build confidence in tackling real-world programming tasks.

Event Structure and Rules

The Hackathon was carefully structured to test a wide range of skills.

- Number of Problems: Each student was required to solve 25 coding problems using C.
- Difficulty Levels: Problems were designed with increasing levels of complexity—beginner, intermediate, and advanced.
- Time Frame: Students were given a fixed time to attempt and complete the tasks.
- Venue Arrangement: To accommodate all participants comfortably, the event was conducted simultaneously in Computer Lab I, Computer Lab II, and Computer Lab III.
- Supervision: Faculty members from the Department of Basic Sciences and Humanities, along with mentors from Bytexl Solutions, guided and monitored the event.

Proceedings of the Hackathon

Inaugural Session

The Hackathon began with a formal inauguration in the presence of Dr. K. Lakshmi. In her welcome address, she emphasized the importance of C programming as the foundation for computer science learning. She highlighted that problem-solving is a life skill, and mastering programming at an early stage is crucial for success in engineering education.

Representatives from Bytexl Solutions addressed the students, encouraging them to take the Hackathon as a challenge and not merely as an assessment. They highlighted the industry's need for problem solvers and motivated students to focus on logic rather than rote learning.

Coding Rounds

The Hackathon was divided into multiple phases:

1. Warm-up Phase – Students were first given simple programs involving input/output operations, loops, and conditional statements to ease into the competition.
2. Intermediate Phase – The problems now required deeper logic, involving arrays, strings, and functions. Students had to think creatively to optimize their code.
3. Advanced Phase – This stage tested algorithmic thinking with problems based on recursion, searching, sorting, and mathematical computations.

Throughout the competition, faculty mentors and Bytexl coordinators clarified doubts, ensured fairness, and motivated students to push their limits.

Active Participation

The Hackathon witnessed enthusiastic participation from a large number of first-year students across all branches. Students displayed determination, teamwork, and a problem-solving mindset. Many worked individually, while some collaborated in discussions before implementing solutions.

The atmosphere in all three computer labs was vibrant—screens were filled with code, and the tapping of keyboards reflected the competitive spirit of the participants.

Role of Faculty and Bytexl Solutions

The Hackathon's success was due to the dedicated efforts of the organizing team.

- Dr. K. Lakshmi took the initiative to design, plan, and execute the event. Her vision of preparing students for industry-oriented programming challenges was evident throughout the Hackathon.

- Faculty members from the Department of Basic Sciences and Humanities assisted in setting the question bank, evaluating problem statements, and monitoring the labs.

- Bytexl Solutions extended strong support by providing technical expertise, framing real-world coding problems, and evaluating student performance based on industry standards.

This collaboration created a perfect balance between academic knowledge and industry exposure.

Outcomes of the Hackathon

The Hackathon achieved its intended goals, yielding several positive outcomes for the students and the department:

1. Improved Coding Skills – Students gained practical exposure to problem-solving in C and improved their ability to write efficient code.

2. Logical Development – The problem sets encouraged students to apply logic systematically and develop algorithmic thinking.

3. Increased Confidence – By completing multiple problems within a competitive environment, students gained confidence in their programming abilities.

4. Preparation for Future Competitions – This Hackathon served as a foundation for future contests such as coding challenges, competitive exams, and placement drives.

5. Awareness of Industry Practices – With guidance from Bytexl Solutions, students became familiar with professional approaches to coding and debugging.

Student Feedback

Feedback was collected from participants at the end of the event. The responses were overwhelmingly positive:

- Many students appreciated the practical, hands-on approach and felt it improved their programming confidence.

- Students expressed that the gradual increase in problem difficulty made the event both challenging and enjoyable.

- Several students remarked that this Hackathon helped them identify their strengths and weaknesses in coding, motivating them to practice more.

A participant shared: "This was the first time I attempted so many coding problems in one sitting. Initially, I was nervous, but as I solved the problems, I gained confidence. I feel more motivated to practice coding regularly now."

Reflections and Significance

The Hackathon highlighted the growing importance of experiential learning in technical education. Unlike traditional classroom teaching, this event enabled students to apply theoretical concepts directly to problem-solving.

By focusing on C programming, the Hackathon ensured that students built a strong foundation in a core language before moving on to advanced programming subjects. The experience also emphasized the role of teamwork, perseverance, and time management—qualities essential for any successful engineer.

The collaboration with Bytexl Solutions enriched the Hackathon further, as it brought in an industry perspective that motivated students to align their learning with professional expectations.

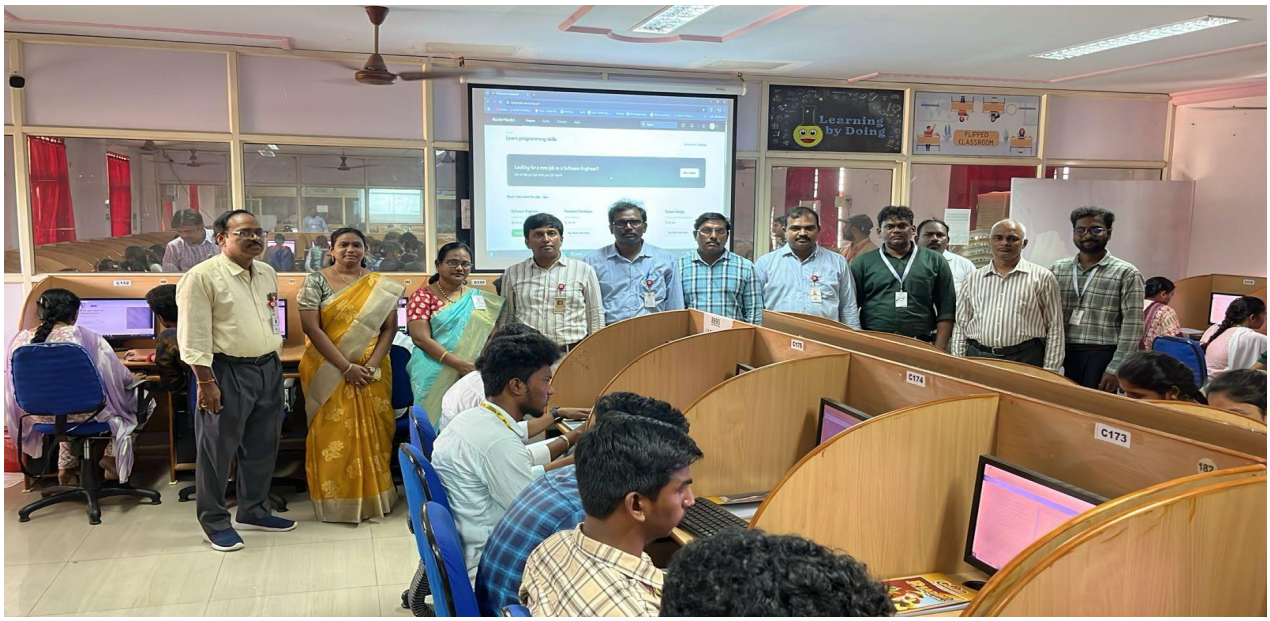
Conclusion

The Hackathon on Problem-Solving using C, organized by the Department of Basic Sciences and Humanities, Narasaraopet Engineering College, in association with Bytexl Solutions, proved to be a resounding success. Under the leadership of Dr. K. Lakshmi, the event not only honed students' coding skills but also instilled confidence, logical reasoning, and an interest in competitive programming.

The Hackathon reinforced the belief that practice-oriented events bridge the gap between academics and industry, preparing students to face real-world challenges with competence and creativity.

The Department envisions organizing more such events in the coming academic sessions to continuously strengthen the technical foundation of first-year students and nurture them into industry-ready professionals.

Gallery

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