IIC Calendar Activities for Academic Year 2024-25

ACTIVITY REPORT

ON

(Value Addition Program on Logic Building for Computer Programming)

Date: 3rd March, 2025 to 7th March, 2025.

ORGANISED BY

Department of Computer Science and Engineering

SKN Sinhgad College of Engineering, Pandharpur
Dist: - Solapur, MS, India.

IIC Calendar Activities for Academic Year 2024-25

ACTIVITY REPORT ON

Value Addition Program on Logic Building for Computer Programming

1. **Preamble (Plan, duration start and end date, start time, end time)**
2. **Way of delivery (Online- Google meet)**
3. **Notice**
4. **VAP Contents and Schedule**
5. **Attendance**
6. **Session Photograph**
7. **Objective**
8. **Outcome and Benefit in terms of learning/skill/Knowledge**
9. **News and media**

IIC Calendar Activities for Academic Year 2024-25

1.Preamble

The Department of Computer Science and Engineering had organized One week **Value Addition Program on Logic Building for Computer Programming** for **"S. Y. B. Tech Students"** from 3rd March 13, 2025 to 7th March 13, 2025. In this, 67 students of Department have participated.

- **Time:** 09.00 am to 5.00pm.
- **Date:** 3rd March 13, 2025 to 7th March 13, 2025
- **Platform:** Offline - 420

IIC Calendar Activities for Academic Year 2024-25

2. Way of Delivery –Online & Offline

Way of Delivery– Offline.
Venue-

Room No:- 420 at Computer Science and Engineering Department

IIC Calendar Activities for Academic Year 2024-25

3.NOTICE

Savitribai Phule Shikshan Prasarak Mandal's
SKN SINHGAD COLLEGE OF ENGINEERING
(Approved by AICTE & Affiliated to Solapur University)
Korti, Pandharpur.
(Accredited By NAAC with "A+" Grade)

Department of Computer Science & Engineering

Date: 01/03/2025

NOTICE

Subject: Value Addition Program on Logic Building for Computer Programming

All **Second-Year Computer Engineering** students are informed that the department is organizing a **5-day Value Addition Program** on **"Logic Building for Computer Programming."**

VAP Details:

Date: 03/03/2025 to 07/03/2025
Time: Morning Session- 9.00 am – 12.00 pm

Afternoon Session- 1.00 pm - 2.50 pm and 3.10 pm – 5.00 pm

Venue: 420

This program aims to strengthen students' logical thinking and problem-solving abilities, which are crucial for programming. Students are encouraged to actively participate to gain valuable insights and practical experience.

Note: Attendance is Mandatory for all the sessions, absent students will be fined with non-refundable amount.

Coordinator

Dept. of Computer Science & Engineering SKNSCOE Korti Pandharpur 413304

HOD
Computer Science & Engineering
SKN Sinhgad College of Engineering
Korti, Pandharpur. 413304

IIC Calendar Activities for Academic Year 2024-25

4. VAP Contents and Schedule

VAP- Contents

Day 1: Introduction to Logical Thinking & Problem-Solving

Session 1: Importance of Logic in Programming

- What is logic in programming?
- Importance of problem-solving skills in software development
- Real-world applications of logical thinking
- Examples of logic-based systems (AI, Automation, etc.)

Session 2: Understanding Problem-Solving Strategies

- Problem decomposition (Breaking a problem into smaller steps)
- Identifying patterns and sequences
- Flowcharts and Pseudocode:
  - Symbols used in flowcharts
  - Writing pseudocode for simple programs

Day 2: Control Structures & Algorithmic Thinking

Session 1: Decision Making in Programming

- Identifiers, variables, data types, operators
- Conditional statements
  - if-else, nested if-else, switch-case
- Logical operators and conditions
- Writing conditional logic for real-world cases

Session 2: Loops and Iterations

- Looping structures:
  - for, while, do-while loops
- When to use which loop?
- Nested loops and their applications
- Breaking and continuing loops

Hands-on Activity:

- Implementing control structures in C/Python
- Writing a program to:
  - Check if a number is prime
  - Generate Fibonacci series up to N terms

IIC Calendar Activities for Academic Year 2024-25

Day 3: Introduction to Data Structures for Problem Solving

Session 1: Arrays and Strings

- Understanding arrays and their applications
- Single-dimensional vs. multi-dimensional arrays
- String manipulation (concatenation, substring, length, etc.)

Session 2: Stacks and Queues (Basic Concepts)

- Introduction to Stack (LIFO) and Queue (FIFO)
- Push, Pop operations in Stack
- Enqueue, Dequeue operations in Queue
- Real-world examples of stacks & queues (Browser history, Print Queue)

Hands-on Activity:

- Implement a program to:
  - Reverse a string using a stack
  - Simulate a queue for a ticket booking system

Day 4: Problem Solving with Recursion & Searching/Sorting

Session 1: Introduction to Recursion & Divide and Conquer

- What is recursion?
- Base case and recursive case
- Examples:
  - Factorial of a number
  - Fibonacci series using recursion

Session 2: Searching & Sorting Algorithms

- Searching:
  - Linear search
  - Binary search (concept and implementation)
- Sorting:
  - Bubble Sort, Selection Sort, Insertion Sort
  - Comparison of sorting techniques

Hands-on Activity:

- Implement a recursive function for factorial
- Write a program to search for an element using binary search
- Implement Bubble Sort and Selection Sort

IIC Calendar Activities for Academic Year 2024-25

Day 5: Competitive Programming & Real-world Applications

Session 1: Problem-Solving Techniques in Competitive Programming

- Understanding problem statements
- Choosing the right approach (Brute force vs. optimized)
- Time Complexity basics (Big O notation overview)

Session 2: Debugging & Optimization Strategies

- Identifying logical errors
- Using print/debug statements for tracing execution
- Writing efficient code (avoiding unnecessary computations)

Final Activity: Mini Coding Contest

- Students solve 3-5 logical problems in a given time
- Problems will involve:
  - Conditional statements
  - Loops and iterations
  - Searching & sorting
  - Recursion

MoE's INNOVATION CELL (GOVERNMENT OF INDIA) | INSTITUTION'S INNOVATION COUNCIL (Ministry of Education Initiative) | AICTE

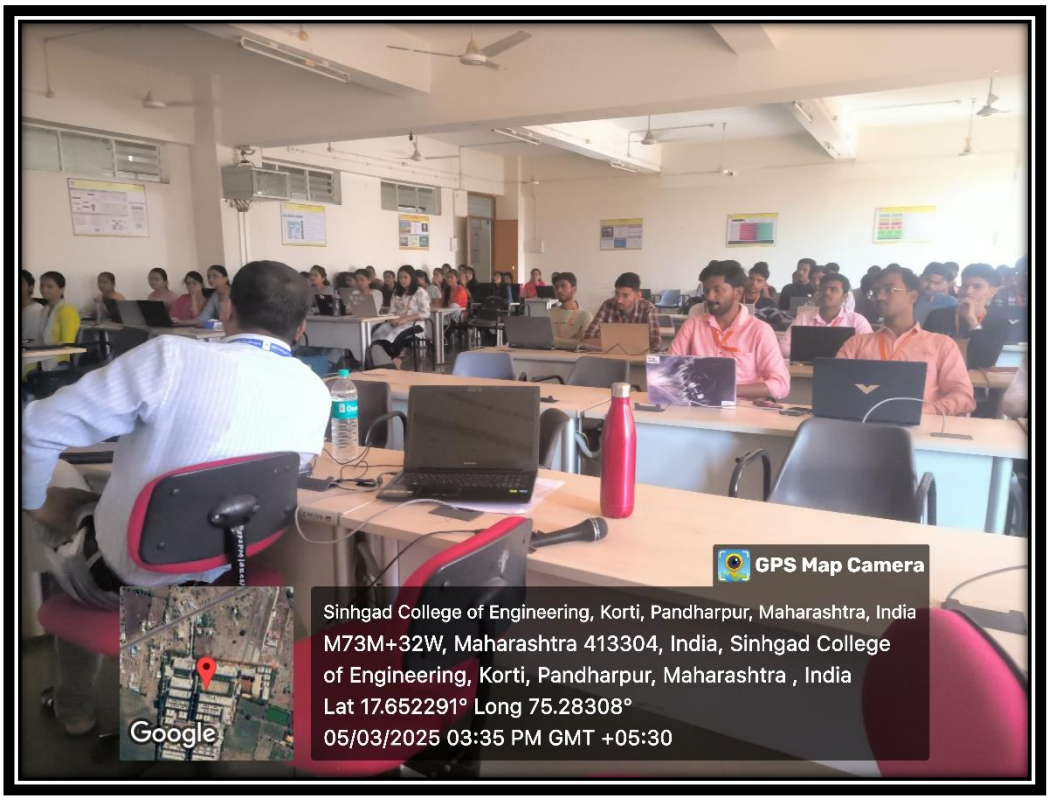
IIC Calendar Activities for Academic Year 2024-25

5. Attendance

Department of Computer Science & Engineering
S.Y.B.Tech 2024-25 Sem-II
Sub - Value Addition Program on Logic Building for Computer Programming Date:-04/03/2025

Roll No.	Name of Students	Sign	Roll No.	Name of Students	Sign
1	AIVALE DIPAK BAPU		38	LAWATE VIKRANT BHARAT	
2	ARADHYE AVADHUT ABHAY		39	LOKARE SUJATA SHARAD	
3	BABAR DNYANESHWARI NAMDEV		40	MALI RAJASHRI SAVATA	
4	BAGAL SHITAL HANUMANT		41	MALI VAISHNAVI SUKHADEV	
5	BAGAL SHITAL MADHUKAR		42	MOHITE ATHARV MAHESH	
6	BANKAR RAJDIP VITTHAL		43	MORE NIRANJAN CHANDRAKANT	
7	BANSODE SANKET BANDU		44	MORE SHIVRAJ VIJAY	
8	BHOSALE SUNIL DADARAO		45	MULANI ARJIYA NAUSHAD	
9	BHOSALE VIKAS PANDURANG		46	MULE SAGAR DATTATRAY	
10	BHOSALE VIKRANT PANDIT		47	MULLA SANIYA MAINUDDIN	
11	BILE PRATIK DATTATRAY		48	MUNDE ANKITA MARUTI	
12	BOLE ISHWARI SANTOSH		49	MUNURREDDY YASH JAGDISH	
13	CHAUGULE PRITI DILIP		50	NAGANE SAYALI KESHAV	
14	CHAVAN RANJIT NETAJI		51	NARSALE RITESH NANASO	
15	CHAVAN RUTUJA UMESH		52	PARCHANDE SANIKA HARSHCHANDRA	
16	DANGE PRIYANKA BALU		53	PARDESHI ADITYA VILAS	
17	DHEKLE PRASHANT SANTOSH		54	PATHAN EKHARA MUSHTAK	
18	DONGRE PAYAL RAJENDRA		55	PATHAN RESHMA MUJOFAR	
19	GAJARE PRAGATI DNYANESHWAR		56	PATIL HARSHVARDHAN SUNIL	
20	GHALAME MAYUARI KISHOR		57	PATIL RANJIT SANDIP	
21	GODASE KULDIP MAHESH		58	PATIL VIKRANT SHANKAR	
22	GOTAVLE SUSHMA SANJAY		59	PATIL VISHVATEJ SIDDHESHWAR	
23	JADHAV KIRAN SANJAY		60	PUJARI PRASHANT DHONDIRAM	
24	JADHAV PRIYANKA RUSHIKESH		61	SADIGALE SHRAVANI SANTOSH	
25	JOSHI SHREYA SUHAS		62	SALUNKHE SAMRUDDHI MAHADEV	
26	KADAM SANGRAM ANNASO		63	SANGAVE SUMIT SUNIL	
27	KADAM SHIVPRASAD SURESH		64	SHENDAGE RUTUJA RAJENDRA	
28	KARALE ATHARVA SATISH		65	SHINDE AKSHATA KUMAR	
29	KARANDE ADITYA VIKAS		66	SHINDE PRATHMESH CHANDRAKANT	
30	KARANDE POOJA SHANKAR		67	SHIRTODE SWATI SATYAWAN	
31	KATE PRANALI KRISHNA		68	SURVASE ABHISHEK RAJESH	
32	KHILARE SAKSHI KALIDAS		69	SURVASE VAIBHAV DIPAK	
33	KULKARNI AADESH MANDAR		70	TAMBOLI SAJID SHUKUR	
34	KULKARNI MAYURI MANOJ		71	TATHE SHRAVANI RAJKUMAR	
35	KULKARNI PRATIK PRASHANT		72	UTPAT AKSHAY ANAND	
36	KULKARNI SARVESH PANDURANG		73	VASEKAR SANKALP SANTOSH	
37	KULKARNI VEENA VISHWANATH		74	WADEKAR GARGI PRASHANT	

6. Session Photograph



IIC Calendar Activities for Academic Year 2024-25

5. VAP Objectives

1. **Enhance Logical Thinking:** Develop students' ability to analyze and break down complex problems into smaller, manageable parts.
2. **Improve Algorithmic Problem-Solving:** Strengthen students' understanding of control structures, recursion, and data structures to solve real-world problems.
3. **Hands-on Coding Experience:** Provide practical exposure to programming concepts through structured exercises and problem-solving activities.
4. **Prepare for Competitive Programming & Placements:** Build a strong foundation in problem-solving techniques required for coding interviews and competitions.

6. VAP Outcome

1. **Improved Problem-Solving Skills:** Students were able to apply logical and analytical thinking to solve coding problems efficiently.
2. **Better Understanding of Data Structures & Algorithms:** Participants gained hands-on experience with arrays, stacks, queues, recursion, and sorting techniques.
3. **Increased Confidence in Writing Optimized Code:** Students learned to implement optimized solutions and compare different approaches based on efficiency.
4. **Readiness for Competitive Coding & Placements:** The program equipped students with fundamental programming skills required for hackathons, coding contests, and technical interviews.

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IIC Calendar Activities for Academic Year 2024-25

News-

e :4 Thursday, 13 March 2025

पंढरपूर सिंहगडमध्ये संगणक विज्ञान आणि अभियांत्रिकी विभागात लॉजिक बिल्डिंग आणि समस्या सोडवण्याचे कौशल्य यावर पाच दिवसीय कार्यशाळेचे आयोजन

दै.तुफान क्रांती:

संगणक विज्ञान आणि अभियांत्रिकी विभागाच्या वतीने दिनांक ३ मार्च ते ७ मार्च या कालावधीत द्वितीय वर्षाच्या संगणक अभियांत्रिकीच्या विद्यार्थ्यांसाठी 'लॉजिक बिल्डिंग आणि समस्या सोडवण्याचे कौशल्य' या विषयावर पाच दिवसीय व्हॅल्यू ॲडिशन प्रोग्रामचे आयोजन करण्यात आले असल्याची माहिती महाविद्यालयाचे प्राचार्य डॉ. कैलाश करांडे यांनी दिली.

या कार्यशाळेचे मार्गदर्शन प्रा. सोमनाथ झांबरे आणि प्रा. बाळकृष्ण भारत जगदाळे यांनी केले.

या कार्यशाळेचा उद्देश विद्यार्थ्यांमध्ये लॉजिक बिल्डिंग, प्रोग्रॅमिंग कौशल्ये सुधारणे आणि जटिल समस्यांचे प्रभावी समाधान शोधण्याची क्षमता विकसित करणे हा होता. कार्यशाळे दरम्यान विद्यार्थ्यांना विविध संकल्पनांची सखोल माहिती देण्यात आली, ज्यामध्ये

*अल्गोरिदमिक विचारसरणी आणि तर्कशक्ती वाढवणारे सराव उपक्रम

*नमुना आधारित प्रोग्रॅमिंग

*रीकर्शन व बॅकट्रॅकिंग यासारख्या प्रगत संकल्पना

*डायनॅमिक प्रोग्रॅमिंगचे मूलतत्त्व

*स्पर्धात्मक प्रोग्रॅमिंगच्या आव्हानांवर आधारित समस्या सोडवण्याचा सराव

कार्यशाळेच्या शेवटी विद्यार्थ्यांनी आपले अनुभव शेअर करताना या उपक्रमातून आम्हाला नवीन समस्या सोडवण्याच्या पद्धती शिकण्याची संधी मिळाली आणि त्यांनी प्रोग्रॅमिंगमधील आत्मविश्वास वाढल्याची भावना व्यक्त केली.

कार्यक्रमाच्या यशस्वी आयोजनाबद्दल महाविद्यालयाचे मा. प्राचार्य डॉ. कैलाश करांडे आणि संगणक अभियांत्रिकी विभागाचे विभागप्रमुख डॉ. सुभाष पिंगळे यांनी मार्गदर्शक प्राध्यापकांचे आणि संपूर्ण टीमचे कौतुक केले. तसेच भविष्यात अशा प्रकारच्या उपक्रमांचे आयोजन करून विद्यार्थ्यांना नव्या तंत्रज्ञानाची ओळख करून देण्याचे आश्वासन दिले.

Media Link- https://www.facebook.com/share/p/1BkP2jy5Pa/

IIC Calendar Activities for Academic Year 2024-25

Remark:

The Value Addition Program on 'Logic Building for Computer Programming' was a well-structured initiative that effectively enhanced the analytical and critical thinking abilities of second-year Computer Engineering students. The program engaged participants through practical exercises and thought-provoking challenges, fostering a deeper understanding of problem-solving strategies and logical thinking.