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A Unit of Alva's Education Foundation (AEF) (R)
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Shobhavana Campus, Mijar, Moodbidri- 574 225, Mangaluru, D.K., Karnataka State.
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Report on Pre-placement Training-A.Y 2022-23

Technical training was organized for pre-final year students which focused on current industry concepts as well as training for placement. Pre placement training focused on development of candidate in order to prepare for various placement drives. Dr. Perter Fernandes, Principal address the gathering about the importance of placement training in the forth-coming days. Principal also added that, each student should develop their attitude towards the self sustainability to crack the interviews. Dr.Manjunath Kotari, HoD CSE gave the schedule plan of the various Internal/External Training details to the

students. He added that, training includes technical, aptitude and softskills by the both internal as well as external resource persons from the various academia & industry. All the training topics will be

conducted simultaneously for the batch-wise students. Mr.Sushanth Anil Lobo briefed about the forth coming company details for the campus. Dr.Sudheer Shetty, HoD ISE and Mr.Harish Kunder, HoD AIML is also present during the orientation session.

Principal Addressing the Gathering

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Topic: Data Structures and Algorithms

Target Audience: CS, ISE& AIML Pre-Final Year Students

External Resource Persons: Dr.Prasanna Kumar H R, PESITM, Shivamogga

Dr.Roshan Fernandes, NMAMIT, Nitte

Internal Resource Persons: Prof. Venkatesh, Dr.Mohideen Badhusha S, Mrs. Deepika Kamath, Mrs. Deeksha M, Dr.Pradeep V, Mr.Rizawan N. Shaikh, Ms.Soundarya

Dates: 16-03-2023, 17-03-2023, 18-03-2023, 20-03-2023, 21-03-2023, 23-03-2023,

24-03-2023, 30-03-2023, 02-04-2023, 18-04-2023 and 05-04-2023

Structures, Pointers, Strings and Arrays, Pointers to Structures Basics of structures and its application in programming are presented. Pointers and importance of pointers and its

applications are delivered. String functions and Inbuilt and user defined functions are delivered with example programs. The concept of Arrays and its applications in real world application is taught. Pointers to Structures is delivered with illustrations.

Data Structures Training by Dr.Roshan Fernandes

The following exercises have been given to the students in hands-on Sessions

- C program to copy one string to another string using pointer
- C program to find reverse of a string using pointers
- write corresponding user defined functions and write a menu driven program to use them.

1] strcat() 2] strcmp() 3] strrev() 4] strupr() 5] strlwr() 6] strcpy()

● Write a program in C to store n elements in an array and print them

● Write a

program in C to read n number of values in an array and display them in reverse order. ● Write a program in C to find the sum of all elements of an array.

● Write a C program to copy the elements of an array arr1 into another array arr2

● Write a C program to copy the elements of reversed elements of arr1 into another array arr2

Data Structures Training by Dr.Roshan Fernandes

Sorting Techniques, Searching Techniques

Concept of sorting and searching techniques is delivered with illustrative programs

The following exercises have been given to the students in hands-on Sessions

Exercises in Linear and binary search

Compare and calculate the efficiency of searching an element using **Linear search and binary search al** by placing the number to be searched (target) at beginning, middle and end using both sorted and unsorted arrays

let it be like
no of traversals made for finding the target=t
no of elements in the array = n

Efficiency of the Linear search = (n-t)/n * 100

Efficiency of the Binary search = (n-t)/n * 100

Tabulate the following details for both Efficiency of the Linear search and Binary search

Sorted array

Target at beginning

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Target at middle
Target at end

Unsorted array

Target at beginning
Target at middle
Target at end

Exercises in sorting

Function to sort an array using insertion sort
Function to sort an array using selection sort
Function to sort an array using bubble sort
Function to sort an array using merge sort

Algorithms Training by Dr. Prasanna Kumar H R

Data Structures and its types, Stack using Array, Queue using Array, Stack using Linked list

The important data structures in C such as stack, queue, Linked list and arrays are discussed with illustrative programs. The algorithm of these data structures are discussed with illustrative programs

Exercises

Write a C program for adding number 35 in a proper index so that the order is ascending into the following array arr1
arr1[] = [10,20,30,40,50]

Write a C program for adding number 35 in a proper index so that the order is ascending into the following Linked list L
L= 10 | next → 20 | next → 30 | next → 40 | next → 50 | NULL

Compare the above two programs with respect to traversing operations

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Algorithms Training by Dr. Prasanna Kumar H R

Recursion, Dynamic Programming, Graph, Tree in C and linked list Concept of recursion is delivered with respect to dynamic programming and advantages of using dynamic programming is explained. Advantages of Linked Lists over arrays is elucidated with a case study. The concept of tree, Linked list and graphs are explained with illustrative programs

Exercises

To create a new node of the binary tree we will make create a new function that will take the value and return the pointer to the new node that is created with that value.

Program for in-order, preorder, post order traversal of binary tree

print n natural no's in descending order using dynamic programming (memorization)

print n print MSB to LSB using dynamic programming (memorization)

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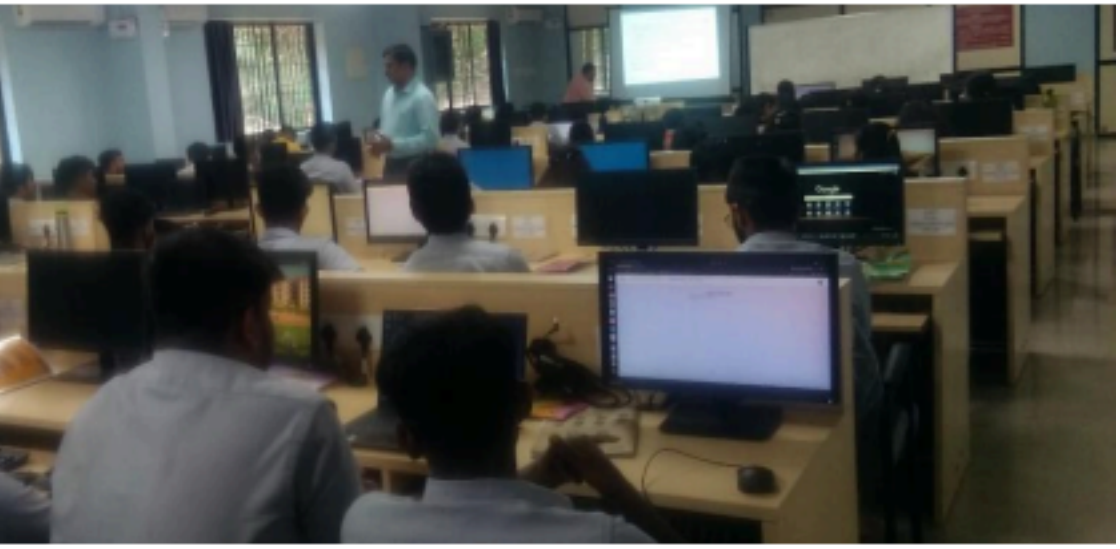
Data Structures Training by Dr.Roshan Fernandes

Students were trained on “Trees, Recursion, Dynamic Programming, Back Tracking” concepts by Resource Persons. Basic Trees concepts, Binary Search Tree concepts like BFS and DFS on trees, Minimum Spanning Tree, Disjoint set union were discussed. Problems on Binary Search Trees, BFS and DFS algorithms were given and solved. Some real world problems on Trees were given and solved. Trees related problems were solved by using the CodeChef Platform.

Technical training was organized for pre-final year students which focused on current industry concepts as well as training for placement. Pre-placement training focused on development of candidate in order to prepare for various placement drives.



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Algorithms Training by Dr. Prasanna Kumar H R

All the training sessions were conducted in Laboratory itself. MCQ was conducted in between the training session. Assessments were given at the end of each session, which was collected and evaluated in the Google form.

Feedback was collected at the end of the day about the training by the department.

Mock interview was conducted based on the topics covered during the pre-placement training conducted.

Aptitude Training from Mr.Karthik 10Seconds

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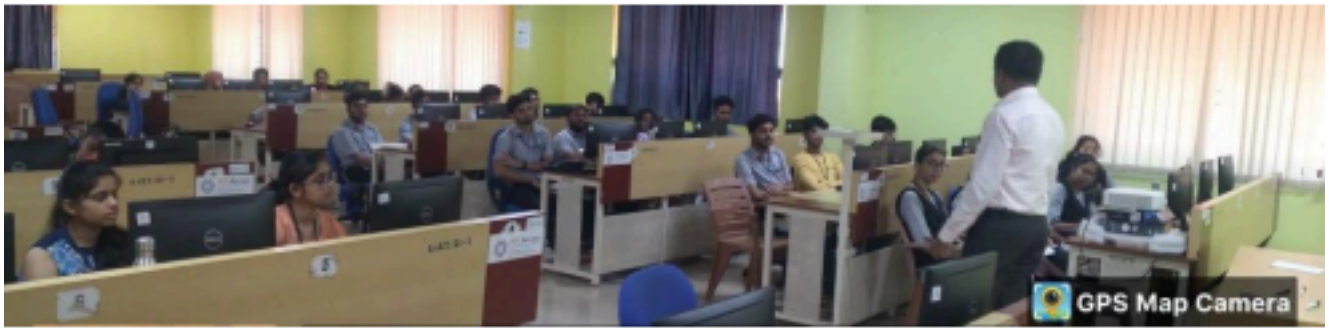
All the training



sessions were conducted in Laboratory itself .MCQ was conducted in between the training session. Assessments were given at the end of each session, which was collected and evaluated in the Google form. Feedback was collected at the end of the day about the training by the department

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Algorithms Training by Dr. Prasanna Kumar H R

Students were trained on “Trees ,Recursion, Dynamic Programming, Back Tracking” concepts by Mrs.Deepika Kamath, Senior Assistant Professor of CSE Department . Basic Trees concepts,Binary Serach Tree concepts like BFS and DFS on trees, Minimum Spanning Tree,Disjoint set union were discussed. Problems on Binary Search Trees,BFS and DFS algorithms were given and solved.Some real world problems on Trees were given and solved.Trees related codechef problems were discussed.

Dynamic programming algorithms, Backtracking algorithms are analysed .Recursive problems are discussed and solved .Basics on asymptotic notaions were discussed and problems.

Many problems based on graphs and trees given on code chef were discussed and solved .

All the training sessions were conducted in Laboratory itself.MCQ was conducted in between the training session. Assessments were given at the end of each session, which was collected and evaluated in the Google form. Feedback was collected at the end of the day about the training by the department.

Agenda of the Daywise/Sessionwise

Day 1:Session 1: Presentation with Quiz

Topics: Tree Traversals (In order, Pre order, Post order, Level order), Binary Search Tree, Graph Traversals (Depth First Search, Breadth First Search), Minimum Cost Spanning Tree

Session 2: Practice Coding *Problems* with *CodeChef*

Shortest Paths in Binary Trees, Most Popular Friend, Largest Family

Session 3: Assessment (Multiple choice through Google Form)

Day 2: Session 1: Presentation with Quiz

Topics: Topological ordering of Graph, Time and Space complexity, Strongly connected components of Graph, Dynamic Programming, Greedy Algorithms **Session 2: Practice Coding *Problems* with *CodeChef***

Delivery Boy, One more weird game, Ada King

Session 3: Assessment (Multiple choice through Google Form)

Day 3: Session 1: Presentation with Quiz

Topics: Huffman codeword, 0/1 Knapsack problem, Fractional Knapsack problem, Optimal coding techniques

Session 2: Practice Coding *Problems* with *CodeChef*

Lavanya Loves DFA, Johnny and the Beanstalk, Home Delivery

Session 3: Assessment (Multiple choice through Google Form)

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Day 4: Session 1: Presentation with Quiz

Topics: Recursion, Backtracking, AVL Trees

Session 2: Practice Coding *Problems* with *CodeChef*

Sums in a Triangle, Bytelandian gold coins, Your Name is Mine

Session 3: Assessment (Multiple choice through Google Form)

Day 5: 30.3.2023

Session 1: Presentation with Quiz

Topics: AVL Trees, Splay Trees, Red Black Trees

Session 2: Practice Coding *Problems* with *CodeChef*

Walk on the Axis, Alternating subarray prefix, Fit to Play

Session 3: Assessment (Multiple choice through Google Form)

Feedback about Resource Persons

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Topic: Relational Database Management Systems

Target Audience: CS, ISE& AIML Pre-Final Year Students
External Resource: Dr.Venugopla P S, NMAMIT, Nitte

Internal Resource Persons**: Mr.Shreekanth N G, Mrs.Reena Lobo**

A hands-on brush-up training programme has been organized by department of CSE for third year CSE/ISE/AIML students for placement readiness on RDBMS.

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In the 3 days of the training programme, major topics in RDBMS were covered. First day topics such as, Database and its types, RDBMS-entity and its types, Attributes and types, ER diagrams, keys, constraints and basic SQL commands like create, alter, drop, truncate.

RDBMS Training by Dr.Venugopla P S

Second day Basics of SQL was covered such as languages DML,DDL,DCL,TCL etc,

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alias and renaming in SQL, group by clause ,having clause, order by clause, aggregate functions, Limit, nested sub query and correlated sub query etc. Also solved company specific questions for executing SQL queries for the given database.

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Topic: Computer Architecture, Networks, Operating Systems and Software Development Life Cycles.

Resource Persons: Dr.Arun Anoop M and Mrs. Vidya

Target Audience: CS, ISE& AIML prefinal Year Students

Date: 27-03-2023, 04-04-2023, 05-04-2023 and 15-04-2023

Technical training was organized for prefinal year students which focused on current industry concepts as well as training for placement. Pre placement training focused on development of candidate in order to prepare for various placement drives.

Students were trained on “Computer Architecture , OS and CN concepts by Mrs.Vidya, Senior Assistant Professor of CSE Department .Operating System concepts like operating system structure, services and operations, system calls, schedulers, different scheduling algorithms, threads, process synchronization, deadlock, page replacement algorithms, memory management were discussed. Problems on scheduling algorithms, deadlock and page replacement algorithms were given and solved.

Computer Architecture concepts like functional units of computer, basic performance equation, memory location and addresses, byte addressability, Addressing modes, Number representation ,Single and multiple Bus organization, pipelining ,Classification of Processors were trained.

Only few concepts about computer networks topics like topologies , network topologies and types like

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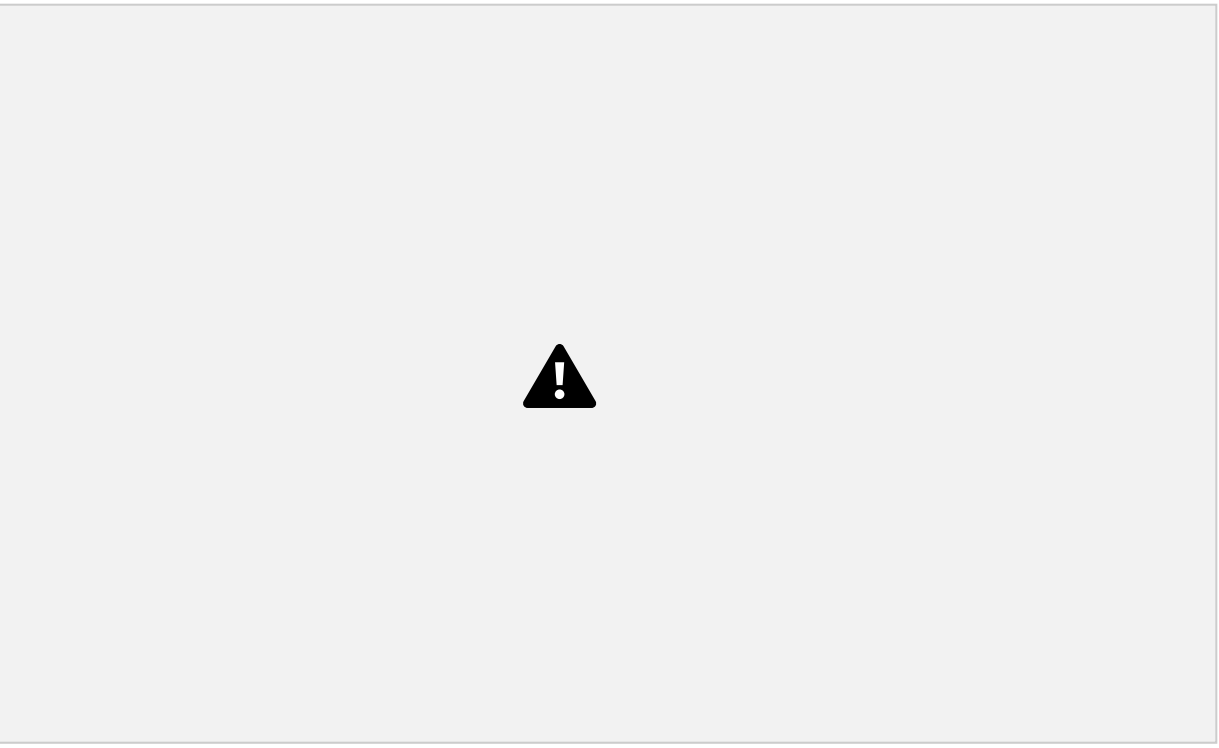

were explained because of shortage of time.

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Topic: C Programming.

Target Audience: Pre-Final year students of Electronics and Communication

Engineering

Date: 21st to 26th March,2023

Resource Persons: Mr. Prashanth Kumar, Mr. Pradeep Nayak

Technical training was organized for prefinal year students which focused on current industry concepts as well as training for placement. Pre placement training focused on development of candidate in order to prepare for various placement drives.

Students were trained on “Basics of C Programming” by Mr. Prashanth Kumar, Assistant Professor of CSE Department. The Session 1 on 25th of April commenced with the evolution of C programming and its needs. The students were made aware of how important C programming can play a vital role in their career in future days. The topics covered included features of C Programming Language, Datatypes, Structure of C Programming, Flow charts, Algorithms were explained. The afternoon session included practical implementation of few Example programs with various inputs and changes. Few assignment programs were also given.

The various Decision making, branching statements and Loops were explained. The topics were explained along with the practical implementation of each and every concept and its working. Few example programs were given to the students to solve.

All the training sessions were conducted in Computer Laboratory, Dept of ECE, AIET,Mijar. Assessments were given at the end of each session. Feedback was collected at the end of the day about the training by the department.