



Sandip Foundations
Sandip Institute of Technology and Research Centre,
Nashik
Department of Computer Engineering

Activity Report

On

**“Programming in C, C++
and Data Structure”**

(18th Feb - 22nd Feb 2015)

Organized by

Sandip Foundation’s
Sandip Institute of Technology and Research Centre
Department of Computer Engineering



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Sandip Institute of Technology and Research Centre, Nashik
Department of Computer Engineering

**Activity Report on “Programming in C,
C++ and Data Structure”**

Name of Resource Persons:

- 1) Prof. Samadhan Sonawane, Asst Prof., Computer Engg, SITRC.
- 2) Prof. Tanmoy Goswami, Asst Prof., Computer Engg, SITRC.
- 3) Prof. Nikhil Suryawanshi, Asst Prof., Computer Engg, SITRC.
- 4) Prof. Sandip Walunj, Asst Prof., Computer Engg, SITRC.

Date of Course: 18th Feb - 22nd Feb 2015

Duration: 30 hrs

Venue: Programming Lab, Computer Engineering Department, SITRC.

Class: Second Year Computer.

Name of Coordinator: Prof. Samadhan Sonawane, Asst Prof., Computer Engg, SITRC.

Aim: To develop students programming skills.

Objective:

- 1) Develop programming skills with the understanding of the fundamentals and basics of C and C++ Languages.
- 2) Provide complete understanding of classes and objects, constructors and destructor, and control structures.
- 3) Impart knowledge about data structures including linked lists, stacks & queues, and binary tree.

Outcomes:

1. Student will be able to choose appropriate data structure as applied to specified problem definition.
2. Student will be able to handle operations like searching, insertion, deletion, traversing mechanism etc. on various data structures.
3. Students will be able to apply concepts learned in various domains like DBMS, compiler construction etc.
4. Students will be able to use linear and non-linear data structures like stacks, queues , linked list etc.

Course Structure:

Sr. No.	Topics	Duration
1	Introduction <ul style="list-style-type: none">• A Brief Introduction to Recursion• C++ Classes• C++ Details• Templates• Using Matrices	2 hrs
2	Algorithm Analysis <ul style="list-style-type: none">• Mathematical Background• Model• What to Analyze• Running Time Calculations	3 hrs
3	Lists, Stacks, and Queues	4 hrs

	<ul style="list-style-type: none"> • Abstract Data Types (ADTs) • The List ADT • vector and list in the STL • Implementation of vector • Implementation of list • The Stack ADT • The Queue ADT 	
4	Trees <ul style="list-style-type: none"> • Preliminaries • Binary Trees • The Search Tree ADT–Binary Search Trees • AVL Trees • Splay Trees • Tree Traversals (Revisited) • B-Trees • Sets and Maps in the Standard Library 	3 hrs
5	Introduction of C, C++ <ul style="list-style-type: none"> • What is C++? • Why C++? • C and C++ • Exception Handling • Object Oriented Programming • Standard Template Library 	4 hrs
6	Types and declarations <ul style="list-style-type: none"> • Types • Booleans • Integer Types • Floating-Point Types • Sizes • Void • Enumerations 	3 hrs
7	Pointers, Arrays and Structures <ul style="list-style-type: none"> • Pointers • Arrays • Pointers into Arrays • Constants • References • Pointers to void • Structures 	2 hrs
8	Functions <ul style="list-style-type: none"> • Function Declarations • Argument Passing • Value Return • Overloaded Function Names 	2 hrs

	<ul style="list-style-type: none"> • Default Arguments • Pointer to Function • Macros 	
9	Classes <ul style="list-style-type: none"> • Classes • Access Control • Constructors • Member functions • Static members • Destructors • Memory allocation • Member initialization 	3 hrs
10	Operator overloading <ul style="list-style-type: none"> • Introduction • Operator Functions • A Complete Number Type • Conversion Operators • Friends • Large Objects • Essential Operators • Subscripting • Functions Calls • Dereferencing • Increment and Decrement • A String Class 	2 hrs
11	Derived class <ul style="list-style-type: none"> • Introduction • Derived Classes • Abstract Classes • Design of Class Hierarchies • Class Hierarchies and Abstract Classes 	2 hrs

List of Participants:

Sr. No.	Name of Student
1	SHUBHAM SHIRISH PATIL
2	TEJASWINI SANJAY PATIL
3	ANJALI YAMAJI PAWAR
4	AKASH ANIL PHALAK
5	PRASHANT VITTHAL RAHANE
6	HARSHALA SAHEBRAO SAWANT
7	RAVINA SAGAR KUKKAR
8	POOJA DEEPAK SHAH

9	HEENA NASIR SHAIKH
10	MAJHAR AHMAD SHAIKH
11	APURVA VIKRAM SHEJWAL
12	PRIYANKA DATTATREY SOLANKAR
13	SALONI ATUL SULE
14	ANKITA RAJENDRA SURYAWANSHI
15	HITESH PRAMOD SURYAWANSHI
16	PIYUSHA SUDAM SURYAWANSHI
17	VISHAL AMBADAS THAKARE
18	SURBHI SANJAY UNAVANE
19	MAYUR MAVJIBHAI VAISHNAV
20	RUTUJA SOPAN VIDHATE
21	PRAJAKTA RAMESH YELWANDE
22	SUDIPTA MAITI
23	PRAJAKT VASANT JOSHI
24	AKASH AJAY BORSE
25	MAYANK ATUL MEHTA
26	ANKIT SHYAMSUNDER AGRAWAL
27	NAEEM MAHIUDDIN SHAH
28	DHWANI MUKESH PATEL
29	KAVITA RAJENDRA KHAIRNAR
30	MOHIT VISHNU ADAMANAKE
31	ANKIT UTTAM WAGH
32	RAJNISH BRIJENDRA RAI
33	SHYAMJI ANILKUMAR PANDEY
34	MONIKA DATTATRAYA PAWAR
35	KANCHAN PURUSHOTTAM CHAVHAL
36	SHUBHANGI PANDIT INGALE
37	GAYATRI RAJESH AHER
38	KOMAL DEEPAK GAIKWAD
39	DIVYA RAMESH PATIL
40	PRANAV SADANAND AMLEKAR
41	MANJIREE PRADIP ARVIKAR
42	ASHWINI DAGU AVHAD
43	PRAGATI PRASHANT BACHCHHAV
44	DARSHANA BALASAHEB BACHHAV
45	CHANCHAL SANJAY BAGUL
46	SNEHAL KAILAS BHOJ

47	POOJA SUNIL BIRAR
48	AVINASH BABASAHEB CHAVAN
49	NEHA BHAGWAT CHOPADE
50	VISHNUSINGH VIJAYSINGH CHUNDAWAT
51	GAURAV JITENDRA DEORE
52	SANDESH RAJENDRA DESHMUKH
53	SHREYAS GOPALRAO DESHMUKH
54	APURVA ANIL DHAKE
55	PRIYANKA PRABHAKAR DHATRAK
56	URMILA MOHANRAO DINGORE
57	SHREYA VINAY DONGRE
58	PALASH SANDIP DUSANE
59	ANKIT BALU GAWALI
60	GANESH SANJAY GUJAR
61	DARSHANKUMAR HARESHBHAI HINGU
62	AKSHAY RAMESH JADHAV
63	MADHURA JAYWANT JADHAV
64	PRADNYA DATTATRAY NAGARE
65	PRIYANKA BHIKA NER
66	PRACHI UMESH PACHPATIL
67	ANIKET VIJAY PAGARE
68	SHRIPRAKASH SHRIRAM PANDEY
69	SHUBHAM SEVASINGH PARIHAR
70	CHIRANGI RAMESHBHAI PARMAR
71	DANISHKHAN SAJIDKHAN PATHAN
72	CHAITALI PRADIP PATIL
73	HARSHALI PRASAD PATIL
74	PAVITRA MUKUNDA PATIL
75	POOJA PUNDLIK PATIL
76	VIRESH RAJIV CHIBBER
77	TEJASWINI RAJENDRA PATIL
78	SHRUTI SANJAY GOSAVI
79	ADITI ABA CHAUDHARY
80	NANDU ASHOK SARKATE
81	PARIMAL PANKAJ LOKHANDE
82	YASH SANJEEV KOLTE
83	PURANIMA HARI MULE
84	VARSHA LAXMAN WAJE

85	MAHIMA NANIK AHUJA
86	SONALI MOHAN ADHAV

Photographs:



Prof. Samadhan Sonawane
Coordinator

Prof. A. D. Potgantwar
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