

Department of Telecommunication Engineering

**B.M.S COLLEGE OF ENGINEERING**

(Autonomous Institution under Visvesvaraya Technological University, Belgaum)

Bull Temple Road, Basavanagudi, Bangalore-560019



**Value Added Course**  
**on**  
**Data Structures and Algorithms**

**4<sup>th</sup>-9<sup>th</sup> January 2018**

In the semester break between Odd-even semester in the academic year 2017-18, the students of the department of TE from 2nd and 3rd years were offered an optional Value added course on “Data structures using C” which was organized with the cooperation of n ISE department. The faculty in charge were Dr HS Guruprasad and Dr Shambhavi BR. The classes were held from 4th January till 9th January. The classes were highly interactive and energetic, and the students were highly eager to learn the concepts of data structures, which can only be credited to the excellent faculty provided for this course.

The course was conducted in such a way that students learnt to code naturally, by trying out the concepts taught to them practically and learning from the errors. Within 3 days the students were able to apply the concepts learnt to solve a problem statement provided to them, which required students to learn concepts in C programming like file handling etc ,by referring to online sources or textbooks . The students had to present their project at the end of the course on Jan 9th.



## **Day1: 4<sup>th</sup> January 2018**

The course was inaugurated by our Principal Dr.K.Mallikharjuna Babu, who also set the tone for the course by reminding the students that the main goal of such a course should be to apply knowledge in real world scenarios.

On the first day Dr HS Guruprasad taught the students the concept of pointers by drawing an analogy with a Treasure hunt game around the city of Bangalore, testing the class's knowledge about our city at the same time. He also covered the concept of Linked lists and the syntax and technicalities in the concept. After Lunch Dr Shambhavi BR taught the class the various operations on linked list like insertion in the beginning, end, etc.



## **Day2: 5<sup>th</sup> January 2018**

The class applied the concepts learnt the previous day to make a menu based program to allow the user to select any operation to perform on their list. The morning session was dedicated to allow the students to successfully understand and execute their first linked list based program to perform insertion/creation operations. The students were taught deletion operations to be performed on the linked list.

### **Day3: 6<sup>th</sup> January 2018**

The students were taught the concept of doubly linked lists, and the details involved in performing various operations. The students were also divided into groups of 3 and assigned a problem statement, which needed to be solved by Jan 9th. The questions were quite challenging to most of the students, nevertheless achievable.

### **Day4:8<sup>th</sup> January 2018**

The students were taught the concepts of Binary Trees using linked lists. The students were able to implement these concepts into a program which accepted data and entered them into a binary tree. An assignment was provided on [hackerrank.com](https://www.hackerrank.com), to introduce the class to the website which is widely used by several companies to test the coding skills of engineering graduates.



### **Day5: 9<sup>th</sup> January 2018**

On the last day of the course , the students were introduced to advanced concepts in Data structures like AVL trees, Splay trees, Heaps, etc that they could follow up and learn later on.

The students then presented their projects that they'd worked on for the past 3 days to the entire class.

Overall, the students of TCE department were able to become natural programmers by practicing the programs themselves ,along with the help of the excellent teachers like Dr HS Guruprasad and Dr Shambhavi BR from ISE department. The class hoped that there would be similar courses conducted in the future as well. 29 students attended the value added course.



## Sample Certificate format



**BMS COLLEGE OF ENGINEERING, BENGALURU**  
(Autonomous institute, Under VTU, Approved by AICTE, Accredited by NAAC)

Department of Telecommunication Engineering

One Week Value Added Course on  
***“Data Structures and Algorithms”***

**CERTIFICATE**

*This is to certify that Mr. /Ms. \_\_\_\_\_ has participated in one week Value Added Course on “Data Structures and Algorithms” from 4<sup>th</sup> to 9<sup>th</sup> January 2018 organized by the Department of Telecommunication Engineering, BMS College of Engineering, Bengaluru*

**Dr. Rajeshwari M Hegde**  
Head of the Department  
BMS College of Engineering

**Dr. K Mallikharjuna babu**  
Principal  
BMS College of Engineering

# Attendance

BMS College of Engineering

Value Added course on Data Structures - 4th-9th January 2018  
Conducted by Information Science & Engg Dept

Attendance Sheet

Sl No	Name	USN	4th Jan 2018	5th Jan 2018	6th Jan 2018	8th Jan 2018	9th Jan 2018
1	Aditi Jalaj	1BM16TE001					
✓ 2	Akhila R	1BM15TE002	A.R.	A.R.	A.R.	A.R.	
✓ 3	Arun Athreyas G	1BM15TE006	A.G.	A.G.	A.G.	A.G.	
4	Basavaraj	1BM17TE402					
5	C Harshita	1BM16TE062					
6	Chethana Y	1BM15TE008					
✓ 7	Harsha Ramesh	1BM15TE010	Harsha	Harsha	Harsha	Harsha	
✓ 8	Hrushikesh Deshpande	1BM15TE011	H.D.	H.D.	H.D.	H.D.	
✓ 9	Jeevitha I	1BM15TE012	J.I.	J.I.	J.I.	J.I.	
10	Jithin V Jain	1BM16TE014					
✓ 11	K HARISHREE J RAI	1BM15TE013	K.J.R.	K.J.R.	K.J.R.	K.J.R.	
12	Karthik M P	1BM16TE017					
✓ 13	Keertana Kamesh	1BM15TE014	K.K.	K.K.	K.K.	K.K.	
✓ 14	Khoushik S	1BM16TE018	K.S.	K.S.	K.S.	K.S.	
15	Kiran k v	1BM17TE407					
✓ 16	Krishnai Garudkar	1BM15TE015	K.G.	K.G.	K.G.		
17	Madhura A	1BM15TE016					
18	Manisekhar Gajula	1BM16TE013					
19	Muskan kumari	1BM16TE021					
20	Muskan kumari	1BM16TE021					
✓ 21	Navya Shree	1BM15TE022	N.S.	N.S.		N.S.	
22	Nikhil	1BM16TE027					
✓ 23	PRAJWAL S RAO	1BM16TE029	P.S.R.	P.S.R.	P.S.R.	P.S.R.	
✓ 24	Pranav M Bharadwaj	1BM15TE026	P.M.B.	P.M.B.	P.M.B.	P.M.B.	
✓ 25	Rachita Ramesh	1BM15TE028	R.R.	R.R.	R.R.	R.R.	
✓ 26	Radhika Ravikumar	1BM15TE029	R.R.	R.R.	R.R.	R.R.	
✓ 27	RAHUL M K	1BM16TE032	R.M.K.	R.M.K.	R.M.K.	R.M.K.	
✓ 28	Roopa H V	1BM15TE033	R.H.V.	R.H.V.	R.H.V.	R.H.V.	
✓ 29	S Gautham	1BM15TE034	S.G.	S.G.	S.G.	S.G.	