

Certificate Course

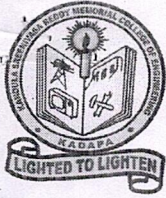
On

Programming in 'C'

24/01/2022 to 24/02/2022

Co-Ordinators: Dr. V. Lokeswara Reddy

Smt. V. Sudha



K.S.R.M. COLLEGE OF ENGINEERING

(UGC - AUTONOMOUS)

Kadapa, Andhra Pradesh, India - 516003

Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

An ISO 14001:2004 & 9001: 2015 Certified Institution

Lr./KSRMCE/ (Department of CSE)/2021-22

Date: 11/01/2022

To
The Principal
KSRM College of Engineering
Kadapa, AP.

Sub: KSRMCE - (Department of CSE) – Permission to conduct certification course on Programming in C –
Requested – reg.


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Respected Sir,

With reference to the cited, the Department of CSE is planning to conduct certificate course on Programming in C for B.Tech III sem Lateral Entry students (all branches) from 24.01.2022 to 24.02.2022. In this I kindly request you to sir, grant me permission to conduct certificate course. This is submitted for your kind perusal.

Thanking you sir,

Yours Faithfully,



Coordinator,
Dr. V. Lokeswara Reddy,
Smt. B. Manorama Devi,
Smt. V. Sudha

*Forwarded to the
principal sir,
Devorji*

Cc:

To The Director for Information

To All Deans/HODs

*Permitted
V. S. S. Murthy*



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K.S.R.M. COLLEGE OF ENGINEERING

(UGC - AUTONOMOUS)

Kadapa, Andhra Pradesh, India - 516003

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Dated: 18/01/2022

Circular

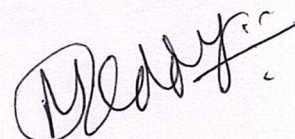
All the B.Tech III Sem Lateral Entry Students (all branches) are here by informed that department of CSE is going to conduct 30 hours certification course on Programming in C from 24/01/2022 to 24/02/2022. Instructed students may register their names with following link on or before 21/01/2022.

Registration Link: <https://forms.gle/aPyas7Akjz7JNVPe6>

For any queries contact,

Coordinators:

Dr. V. Lokeswara Reddy, Professor, CSE Dept.,
Smt. B. Manorama Devi, Assistant Professor, CSE Dept.,
Smt. V. Sudha, Assistant Professor, CSE Dept.,


HOD CSE

Dr. V. LOKESWARA REDDY
M.Tech., Ph.D.,
Professor & HOD CSE
K.S.R.M. College of Engineering (Autonomous),
KADAPA - 516 005..

Cc to:

The Management /Director / All Deans / All HODS/Staff / Students for information

The IQAC Cell for Documentation

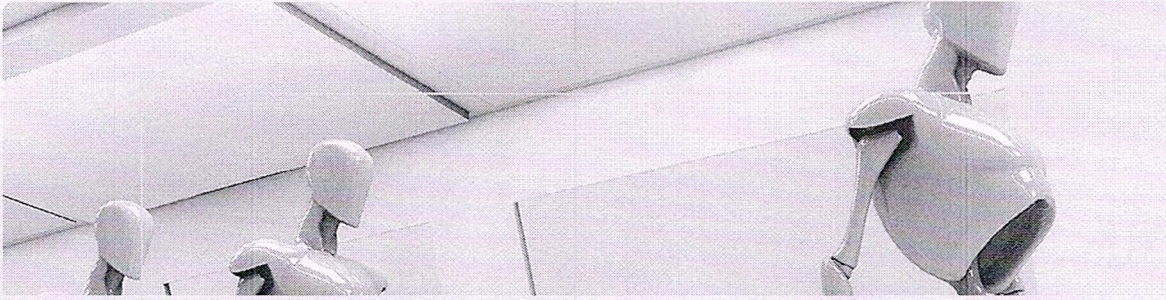


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Certificate Course on Programming in C for Lateral Entry Students (24th Jan - 24th Feb 2022) Organized by Department of CSE, KSRMCE, Kadapa.



manorama@ksrmce.ac.in (not shared) Switch account



* Required

Roll Number *

Your answer

Name of the Student(as per SSC) *

Your answer



Branch *

- ☐ Civil
- ☐ CSE
- ☐ ECE
- ☐ EEE
- ☐ ME

Section *

- ☐ A - Section
- ☐ B - Section
- ☐ C - Section

Mobile number (WhatsApp) *

Your answer

Email ID (KSRMCE mail ID) *

Your answer



Rate your self the knowledge on Programming in C in the scale 1-5 *

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5

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Forms





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Pulivendala Road, Kadapa-516 005
Andhra Pradesh, India



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Department of Computer Science & Engineering

Certificate Course on Programming in C

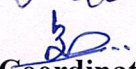
Registered Student List

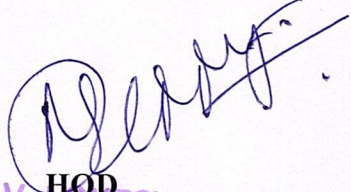
S.No.	Roll Number	Name of the Student	Year & Branch	Email id
1	219Y5A0104	BANDA ANITHA (W)	B.Tech III sem, CE	219Y5A0104@ksrmce.ac.in
2	219Y5A0105	BANDARU ANIL KUMAR	B.Tech III sem, CE	219Y5A0105@ksrmce.ac.in
3	219Y5A0106	B. MUNIVARDHAN	B.Tech III sem, CE	219Y5A0106@ksrmce.ac.in
4	219Y5A0107	BHUKYA SURESH NAIK	B.Tech III sem, CE	219Y5A0107@ksrmce.ac.in
5	219Y5A0108	B. BHARGAV REDDY	B.Tech III sem, CE	219Y5A0108@ksrmce.ac.in
6	219Y5A0111	CHALLA NAVEEN	B.Tech III sem, CE	219Y5A0111@ksrmce.ac.in
	219Y5A0113	CHINTHAKUNTA GURU PRASAD	B.Tech III sem, CE	219Y5A0113@ksrmce.ac.in
8	219Y5A0114	CHINTHAKUNTA NAGENDRA REDDY	B.Tech III sem, CE	219Y5A0114@ksrmce.ac.in
9	219Y5A0116	DERANGUKA HEMANTH KUMAR	B.Tech III sem, CE	219Y5A0116@ksrmce.ac.in
10	219Y5A0118	GALIPOTHULA SAMUEL	B.Tech III sem, CE	219Y5A0118@ksrmce.ac.in
11	219Y5A0119	GADALA RAJESH	B.Tech III sem, CE	219Y5A0119@ksrmce.ac.in
12	219Y5A0121	GOGULA AVINASH	B.Tech III sem, CE	219Y5A0121@ksrmce.ac.in
13	219Y5A0126	KAMIREDDY JAIPAL REDDY	B.Tech III sem, CE	219Y5A0126@ksrmce.ac.in
14	219Y5A0127	KATHURI HEMA (W)	B.Tech III sem, CE	219Y5A0127@ksrmce.ac.in

15	219Y5A0128	KARAMTHOD SAI KUMAR NAIK	B.Tech III sem, CE	219Y5A0128@ksrmce.ac.in
16	219Y5A0129	KATTAMEEDI BHARATH REDDY	B.Tech III sem, CE	219Y5A0129@ksrmce.ac.in
17	219Y5A0130	KETHAVARAM GANGADHAR	B.Tech III sem, CE	219Y5A0130@ksrmce.ac.in
18	219Y5A0131	K. SREE KAVYA (W)	B.Tech III sem, CE	219Y5A0131@ksrmce.ac.in
19	219Y5A0132	KORE SASIREKHA (W)	B.Tech III sem, CE	219Y5A0132@ksrmce.ac.in
20	219Y5A0135	KURUBA LAVANYA (W)	B.Tech III sem, CE	219Y5A0135@ksrmce.ac.in
21	219Y5A0136	K.B. VEERESH	B.Tech III sem, CE	219Y5A0136@ksrmce.ac.in
22	219Y5A0137	L. NAVEEN	B.Tech III sem, CE	219Y5A0137@ksrmce.ac.in
	219Y5A0138	MADHALLAPALLE VISHNU VARDHAN	B.Tech III sem, CE	219Y5A0138@ksrmce.ac.in
24	219Y5A0140	M. MADDILETI	B.Tech III sem, CE	219Y5A0140@ksrmce.ac.in
25	219Y5A0142	MALISHR=ETTY GURU LASHMI (W)	B.Tech III sem, CE	219Y5A0142@ksrmce.ac.in
26	219Y5A0144	MANEE MALLEMKONDAIAH	B.Tech III sem, CE	219Y5A0144@ksrmce.ac.in
27	219Y5A0145	MEKALA CHENNAKESHAVULU	B.Tech III sem, CE	219Y5A0145@ksrmce.ac.in
28	219Y5A0147	NALLABOTHULA SHIVA	B.Tech III sem, CE	219Y5A0147@ksrmce.ac.in
	219Y5A0148	NANNURU SHANKAR	B.Tech III sem, CE	219Y5A0148@ksrmce.ac.in
30	219Y5A0149	N. MALLESWARI DEVI (W)	B.Tech III sem, CE	219Y5A0149@ksrmce.ac.in
31	219Y5A0151	PALLA YOGENDRA	B.Tech III sem, CE	219Y5A0151@ksrmce.ac.in
32	219Y5A0152	P. SAI CHARAN	B.Tech III sem, CE	219Y5A0152@ksrmce.ac.in
33	219Y5A0154	P. JAGAN MOHAN	B.Tech III sem, CE	219Y5A0154@ksrmce.ac.in
34	219Y5A0155	PINJARI LALAPPA	B.Tech III sem, CE	219Y5A0155@ksrmce.ac.in
35	219Y5A0156	POREDDY SUNANDA(W)	B.Tech III sem, CE	219Y5A0156@ksrmce.ac.in
36	219Y5A0157	R. PAVAN KUMAR REDDY	B.Tech III sem, CE	219Y5A0157@ksrmce.ac.in
37	219Y5A0158	RAPUVU NIKITHA (W)	B.Tech III sem, CE	219Y5A0158@ksrmce.ac.in

38	219Y5A0161	SANDRAPALLI VENKATA SUMALATHA (w)	B.Tech III sem, CE	219Y5A0161@ksrmce.ac.in
39	219Y5A0163	SHAIK.MAHABOOB BEE	B.Tech III sem, CE	219Y5A0163@ksrmce.ac.in
40	219Y5A0166	SHAIK. NASAR	B.Tech III sem, CE	219Y5A0166@ksrmce.ac.in
41	219Y5A0167	S.T.YUNUS	B.Tech III sem, CE	219Y5A0167@ksrmce.ac.in
42	219Y5A0170	THATICHERALA HEMANTH KUMAR	B.Tech III sem, CE	219Y5A0170@ksrmce.ac.in
43	219Y5A0171	THUMMALURU SURENDRA KUMAR REDDY	B.Tech III sem, CE	219Y5A0171@ksrmce.ac.in
44	219Y5A0172	U. BHAVYA(W)	B.Tech III sem, CE	219Y5A0172@ksrmce.ac.in
45	219Y5A0173	Y.RANJITH KUMAR	B.Tech III sem, CE	219Y5A0173@ksrmce.ac.in
46	219Y5A0403	BOGGULA PARIMALA (W)	B.Tech III sem, ECE	219Y5A0403@ksrmce.ac.in
47	219Y5A0402	B. PALLAVI(W)	B.Tech III sem, ECE	219Y5A0402@ksrmce.ac.in
48	219Y5A0501	A.KULADEEP SAI	B.Tech III sem, CSE	219Y5A0501@ksrmce.ac.in
49	219Y5A0502	B.TIRUMALESU	B.Tech III sem, CSE	219Y5A0502@ksrmce.ac.in
50	219Y5A0506	G.PAVAN KUMAR	B.Tech III sem, CSE	219Y5A0506@ksrmce.ac.in
51	219Y5A0509	K. SAI KIRAN	B.Tech III sem, CSE	219Y5A0509@ksrmce.ac.in
52	219Y5A0511	M. KALYAN	B.Tech III sem, CSE	219Y5A0511@ksrmce.ac.in
53	219Y5A0512	N.GURU SAI MAHENDRA	B.Tech III sem, CSE	219Y5A0512@ksrmce.ac.in
54	219Y5A0513	S. TIRUMALESH	B.Tech III sem, CSE	219Y5A0513@ksrmce.ac.in
55	219Y5A0514	S.D.KHALIL BASHA	B.Tech III sem, CSE	219Y5A0514@ksrmce.ac.in
56	219Y5A0515	S.HARISH KUMAR REDDY	B.Tech III sem, CSE	219Y5A0515@ksrmce.ac.in

57	219Y5A0516	S. MANOJ KUMAR	B.Tech III sem, CSE	219Y5A0516@ksrmce.ac.in
58	219Y5A0518	Y. GURU LASHMI (W)	B.Tech III sem, CSE	219Y5A0518@ksrmce.ac.in
59	219Y5A0519	Y. SHANTAN	B.Tech III sem, CSE	219Y5A0519@ksrmce.ac.in
60	219Y5A0520	Y. PAVAN KUMAR REDDY	B.Tech III sem, CSE	219Y5A0520@ksrmce.ac.in

V. Sude

Coordinators


HOD
Dr. V. LUKESWARA REDDY
M.Tech., Ph.D.,
Professor & HOD CSE
K.S.R.M. College of Engineering (Autonomous)
KADAPA - 516 005.

Programming in C

Module I:- Introduction to computers, computer hardware and software,
Introduction to C programming:- Overview of C, structure of a C program, variables, constants, data types, identifiers, keywords, Input/output statements in C, programming examples.

Operators and Expressions:- Operators, expressions, precedence and associativity, evaluating expressions, type conversion.

Module II:-

Decision making statements: if statement, if-else statement, nested if-else statement, switch statement.

Loops in C: while loop, for loop, do-while loop, nested for loops,

Jumping statements: break, continue and goto statements.

Module III:-

Arrays: Introduction, Declaration and initialization of 1D and 2D arrays.

Strings: - Definition, declaration and initialization of strings, string I/O functions, string handling functions, array of strings (table of strings).

Pointers: Idea of pointers, Defining pointers, Pointers to Arrays and Structures.

Module IV:-

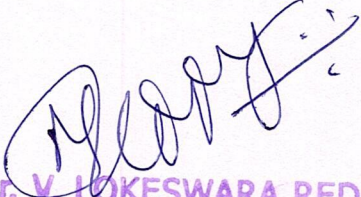
Functions: Designing structured programs, Declaring a function, Types of functions, Parameters and return type of a function, passing parameters to functions, call by value, Call by Reference, Passing arrays to functions.

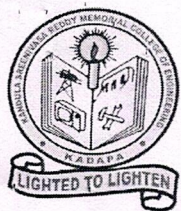
Recursion Problem Solving Techniques: Factoring and Recursion Techniques,

Dynamic memory allocation: Allocating and freeing memory.

Module V:-

Structures and union: Introduction, defining a structure, declaring structure variable, structure initialization, accessing members of structure, copying and comparing structure variables, structures within structures, array of structures, and introduction of union.


Dr. V. LOKESWARA REDDY
M.Tech., Ph.D.,
Professor & HOD CSE
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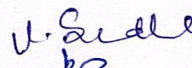
Department of Computer Science & Engineering

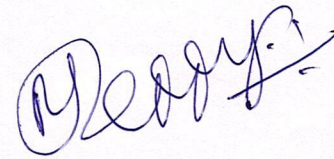
Certificate Course on Programming in C

Schedule

S.No	Date	Time	Faculty	Topic
1	24/01/2022	4 PM to 5PM	Dr. V. Lokeswara Reddy Smt. B. Manorama Devi Smt. V. Sudha	Inauguration
2	25/01/2022	4 PM to 5PM	Smt. V. Sudha	Introduction to computers, computer hardware and software
3	27/01/2022	4 PM to 5PM	Smt. V. Sudha	Overview of C, structure of a C program
4	28/01/2022	4 PM to 5PM	Dr. V. Lokeswara Reddy	Identifiers, variables, constants
5	29/01/2022	4 PM to 5PM	Smt. B. Manorama Devi	keywords, Input/output statements in C
6	31/01/2022	4 PM to 5PM	Smt. B. Manorama Devi	programming examples
7	01/02/2022	4 PM to 5PM	Smt. B. Manorama Devi	Operators, expressions, precedence and associativity,
8	02/02/2022	4 PM to 5PM	Smt. B. Manorama Devi	Evaluating expressions, type conversion
9	03/02/2022	4 PM to 5PM	Smt. B. Manorama Devi	if statement, if-else statement, nested if-else statement,
10	04/02/2022	4 PM to 5PM	Smt. V. Sudha	Switch statement, programming examples
11	05/02/2022	4 PM to 5PM	Smt. V. Sudha	while loop, for loop, do-while loop, programming examples
12	07/02/2022	4 PM to 5PM	Smt. V. Sudha	Nested for loops and programming examples
13	08/02/2022	4 PM to 5PM	Smt. V. Sudha	break, continue and goto statements

14	09/02/2022	4 PM to 5PM	Smt. V. Sudha	Introduction, Declaration and initialization of 1D and 2D arrays.
15	10/02/2022	4 PM to 5PM	Smt. V. Sudha	Programming examples
16	11/02/2022	4 PM to 5PM	Smt. B. Manorama Devi	Strings: Definition, declaration and initialization of strings, string I/O functions
17	12/02/2022	4 PM to 5PM	Dr. V. Lokeswara Reddy	string handling functions, array of strings (table of strings).
18	14/02/2022	4 PM to 5PM	Dr. V. Lokeswara Reddy	Pointers: Idea of pointers, Defining pointers, Pointers to Arrays and Structures.
19	15/02/2022	4 PM to 5PM	Dr. V. Lokeswara Reddy	Functions: Designing structured programs, Declaring a function, Types of functions
20	16/02/2022	4 PM to 5PM	Smt. B. Manorama Devi	Parameters and return type of a function, passing parameters to functions
21	17/02/2022	4 PM to 5PM	Smt. B. Manorama Devi	call by value, Call by Reference, Passing arrays to functions
22	18/02/2022	4 PM to 5PM	Smt. B. Manorama Devi	Factoring and Recursion Techniques
23	19/02/2022	4 PM to 5PM	Smt. V. Sudha	Allocating and freeing memory
24	21/02/2022	4 PM to 5PM	Smt. V. Sudha	Structures and union: Introduction, defining a structure, declaring structure variable, structure initialization, accessing members of structure
25	22/02/2022	4 PM to 5PM	Smt. V. Sudha	Programming examples
26	23/02/2022	3PM to 5PM	Smt. V. Sudha	copying and comparing structure variables, structures within structures, array of structures, and introduction of union
27	24/02/2022	3PM to 5PM	Dr. V. Lokeswara Reddy Smt. B. Manorama Devi Smt. V. Sudha	Exam and certificate distribution


Coordinator


HOD
Dr. V. LOKESWARA REDDY
M.Tech., Ph.D.,
Professor & HOD CSE
K.S.R.M. College of Engineering (Autonomous),
KADAPA - 516 005.

15	219Y5A0128	KARAMTHOD SAI KUMAR NAIK	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P	P	A	P	P	P	P	P	A
16	219Y5A0129	KATTAMEEDI BHARATH REDDY	P	P	A	P	A	P	A	P	P	P	P	P	A	P	P	A	P	P	A	P	P	P	A	P
17	219Y5A0130	KETHAVARAM GANGADHAR	P	P	P	P	A	P	P	A	P	A	P	P	A	P	P	A	P	A	P	P	A	P	P	A
18	219Y5A0131	K. SREE KAVYA (W)	P	A	A	P	P	P	P	P	A	P	A	A	A	P	P	P	A	P	P	P	P	P	P	A
19	219Y5A0132	KORE SASIREKHA (W)	P	A	A	P	P	P	A	P	P	A	P	P	P	A	P	A	A	P	P	P	P	P	P	A
20	219Y5A0135	KURUBA LAVANYA (W)	P	P	A	P	P	P	A	A	P	A	P	A	A	P	P	A	A	P	P	P	P	P	P	P
21	219Y5A0136	K.B. VEERESH	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
22	219Y5A0137	L. NAVEEN	P	P	P	P	P	A	P	P	P	P	P	A	A	P	A	A	P	P	P	P	A	P	P	P
23	219Y5A0138	MADHALLAPALLE VISHNU VARDHAN	P	P	P	P	A	P	P	P	P	P	A	P	A	A	A	A	P	A	P	P	A	P	P	P
24	219Y5A0140	M. MADDILETI	P	P	P	P	A	P	P	A	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P	P
25	219Y5A0142	MALISHR=ETTY GURU LASHMI (W)	P	P	P	P	A	A	P	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P	A	P
26	219Y5A0144	MANEE MALLEMKONDAIAH	P	P	P	P	A	P	A	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	A	P
27	219Y5A0145	MEKALA CHENNAKESHAVULU	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	A
28	219Y5A0147	NALLABOTHULA SHIVA	P	P	P	P	P	P	P	A	P	P	P	P	P	A	P	P	A	A	A	P	A	P	P	P
29	219Y5A0148	NANNURU SHANKAR	P	P	P	A	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	A
30	219Y5A0149	N. MALLESWARI DEVI (W)	P	P	P	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P
31	219Y5A0151	PALLA YOGENDRA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P
32	219Y5A0152	P. SAI CHARAN	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P
33	219Y5A0154	P. JAGAN MOHAN	P	P	P	P	A	P	P	P	A	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P
34	219Y5A0155	PINJARI LALAPPA	P	P	P	A	P	P	A	P	P	A	P	P	P	P	P	A	P	P	P	A	A	P	P	P
35	219Y5A0156	POREDDY SUNANDA(W)	P	A	P	A	P	P	P	A	P	A	P	P	P	P	P	A	P	P	P	P	P	P	P	P
36	219Y5A0157	R. PAVAN KUMAR REDDY	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	A	P	P	P
37	219Y5A0158	RAPUVU NIKITHA (W)	P	P	P	A	P	P	A	A	A	P	P	P	P	A	A	P	A	P	P	P	A	P	P	P
38	219Y5A0161	SANDRAPALLI VENKATA SUMALATHA (w)	P	P	P	P	A	A	P	P	A	P	P	P	A	P	A	P	P	P	P	A	P	P	P	P
39	219Y5A0163	SHAIK.MAHABOOB BEE	P	P	P	P	P	P	A	P	A	P	A	P	P	P	P	A	P	P	P	P	A	P	P	P
40	219Y5A0166	SHAIK. NASAR	P	P	P	P	P	P	A	P	P	A	P	P	A	A	A	A	P	A	P	P	A	P	P	P
41	219Y5A0167	S.T.YUNUS	P	P	P	P	P	P	A	P	A	P	P	A	P	A	P	P	A	P	P	P	A	P	P	P
42	219Y5A0170	THATICHERALA HEMANTH KUMAR	P	P	P	P	P	P	P	P	P	A	A	P	P	P	A	P	P	A	P	P	A	P	P	P
43	219Y5A0171	THUMMALURU SURENDRA KUMAR REDDY	P	P	P	P	P	A	A	P	P	A	P	P	A	P	A	P	P	A	P	P	A	P	P	P
44	219Y5A0172	U. BHAVYA(W)	P	P	P	P	P	P	A	A	P	P	P	A	P	P	P	P	A	P	P	P	P	P	P	P



K.S.R.M. COLLEGE OF ENGINEERING

(UGC - Autonomous)

Kadapa, Andhra Pradesh, India- 516 003

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Certification course on " Programming in 'C' "



Department of CSE



24/01/2022 TO
24-02-2022

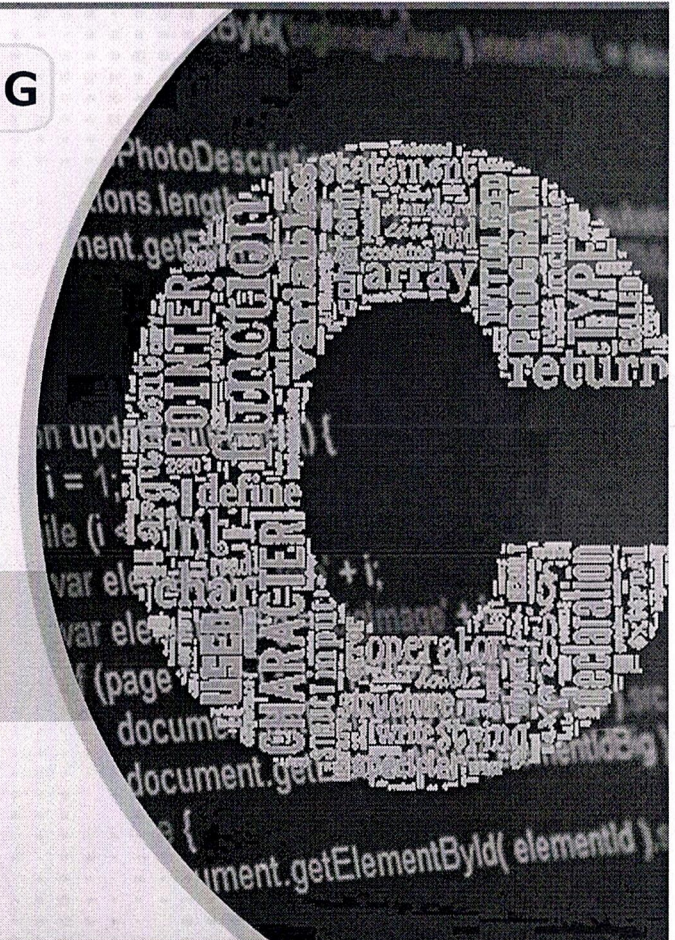


Database Lab
PG- (116)

Coordinators & Resource persons

Dr.V.Lokeswara reddy,

Smt.B.Manorama Devi & Smt.V.Sudha



Dr. V. Lokeswara Reddy
(HOD)

Dr. V.S.S. Murthy
(Principal)

Prof. A. Mohan
(Director)

Dr. Kandula Chandra Obul Reddy
(Managing Director)

Smt. K.Rajeswari
(Correspondent Secretary, Treasurer)

Sri K. Madan Mohan Reddy
(Vice - Chairman)

Sri K. Raja Mohan Reddy
(Chairman)

f i t y ▶ **ksrmceofficial**



www.ksrmce.ac.in



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K.S.R.M. COLLEGE OF ENGINEERING

(AUTONOMOUS)

Pulivendala Road, Kadapa-516 005

Andhra Pradesh, India



Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

An ISO 14001:2004 & 9001: 2015 Certified Institution

ACTIVITY REPORT

Certification Course

On

“PROGRAMMING IN C”

24th JAN, 2022 to 24th FEB, 2022

Target Group : Students

Details of Participants : 60 Students

Co-ordinators : Dr. V. Lokeswara Reddy
Professor & HOD, Dept. of CSE
Smt. B.Manorama Devi
Asst. Prof, Dept. of CSE
Smt. V. Sudha
Asst. Prof, Dept. of CSE

Organizing Department : Department of Computer Science & Engineering

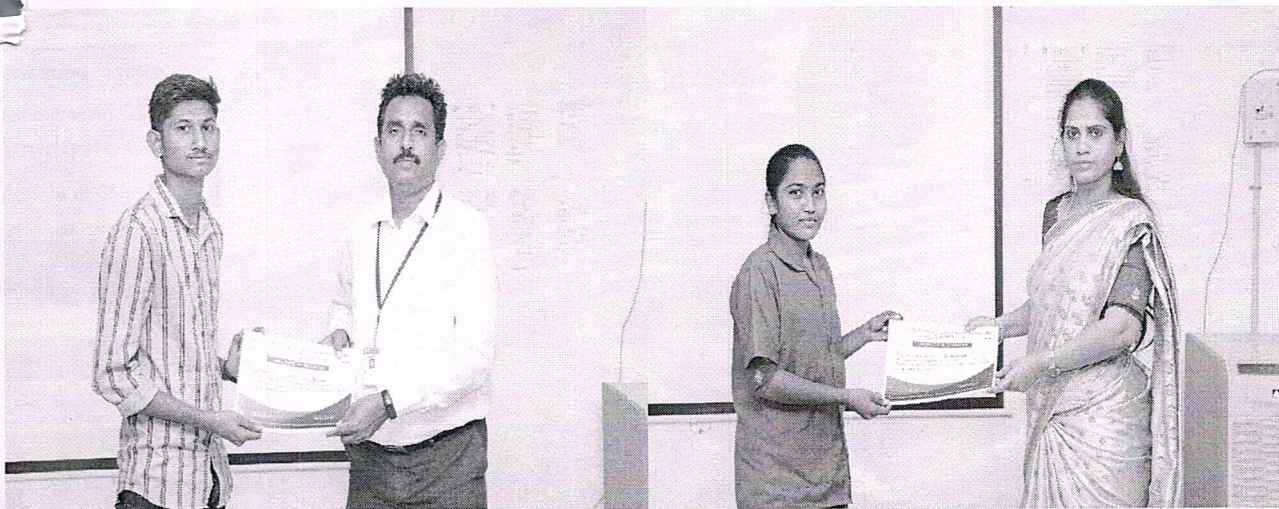
Venue : PG-116(Data Base Lab)

Certification course on “Programming in C” was organized by Dept. of CSE from 24-01-2022 to 24-02-2022. Dr. V. Lokeswara Reddy & Smt. V. Sudha acted as Course instructors. The main aim of the course is to create awareness among students on the Basic Fundamentals of C Language . The second B.Tech (LE) students have attended the classes and gained theory and practical knowledge in C programming. Thirty Hours course was successfully completed and participation certificates were provided to the participants.

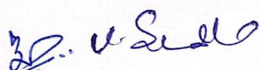
Photos:

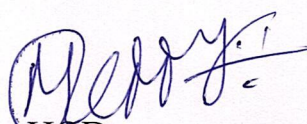


Faculty gives demo for importance of programming in c for LE students



Certificate Distribution


Coordinator


HOD
Dr. V. LOKESWARA REDDY
M.Tech., Ph.D.,
Professor & HOD CSE
K.S.R.M. College of Engineering (Autonomous)
KADAPA - 516 005.



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Kadapa, Andhra Pradesh, India- 516 003



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CERTIFICATE OF COMPLETION

This certificate is awarded to S.T. Yunus
for successfully completing the course Programming in "C"
from 24-Jan-2022 to 24-Feb-2022, organized by Department
of CSE at KSRMCE campus.

Signature of HOD CSE

V.S.S. Murthy

Signature of Principal



K.S.R.M. COLLEGE OF ENGINEERING

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Kadapa, Andhra Pradesh, India- 516 003



CERTIFICATE OF COMPLETION

This certificate is awarded to B. Paximala
for successfully completing the course Programming in "C"
from 24-Jan-2022 to 24-Feb-2022, organized by Department
of CSE at KSRMCE campus.

Signature of HOD CSE

Signature of Principal



K.S.R.M. COLLEGE OF ENGINEERING

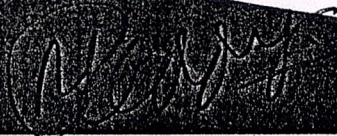
UGC - Autonomous

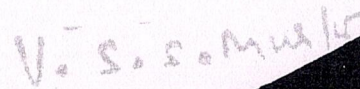
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu,
Kadapa, Andhra Pradesh, India- 516 003



CERTIFICATE OF COMPLETION

This certificate is awarded to S.D. Khalil Basha
for successfully completing the course Programming in "C"
from 24-Jan-2022 to 24-Feb-2022, organized by Department
of CSE at KSRMCE campus.


Signature of HOD CSE


Signature of Principal



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Kadapa, Andhra Pradesh, India- 516 003



CERTIFICATE OF COMPLETION

This certificate is awarded to V. Venkata Lokeswar Reddy
for successfully completing the course Programming in "C"
from 24-Jan-2022 to 24-Feb-2022, organized by Department
of CSE at KSRMCE campus.

Signature of HOD CSE

Signature of Principal

Feedback form on Certificate Course

Programming in C (24/01/2022 to 24/02/2022)

* Required

1. Roll Number *

2. Name of the Student *

3. B.Tech Semester *

Mark only one oval.

☐ I Sem

☐ II Sem

☐ III Sem

☐ IV Sem

☐ V Sem

☐ VI Sem

☐ VII Sem

☐ VIII Sem

4. Brhch *

Mark only one oval.

☐ Civil Engineering

☐ EEE

☐ ME

☐ ECE

☐ CSE

☐ AI&ML

5. Email ID *

6. Is the course content met your expectation. *

Mark only one oval.

☐ Yes

☐ No

7. Is the lecture sequence well planned? *

Mark only one oval.

☐ Yes

☐ No

8. The contents of the course are explained with examples. *

Mark only one oval.

☐ Agree

☐ Moderate

☐ strongly agree

9. Is the level of course high. *

Mark only one oval.

- ☐ Agree
- ☐ Moderate
- ☐ strongly agree

10. Is the course exposed you to the new knowledge and practice. *

Mark only one oval.

- ☐ Agree
- ☐ Moderate
- ☐ strongly agree

11. Is the lecture clear and easy to understand? *

Mark only one oval.

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5

12. Rate the value of the course increasing your skills. *

Mark only one oval.

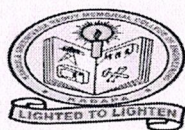
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5

Note: 1. Below average 2. Average 3. Good 4. Very Good 5. Excellent

13. Any Issues

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K.S.R.M. COLLEGE OF ENGINEERING

(UGC - AUTONOMOUS)

Kadapa, Andhra Pradesh, India - 516003

Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.
Department of Computer Science & Engineering
back form of programming in c



S.No.	Email address	Name of the student	Year & Semester	Branch	Roll Num	Is the course content met your expectation	Is the lecture sequence well planned	The contents of the course is explained with examples	Is the level of course high	Is the course exposed you to the new knowledge and practices	Is the lecturer clear and easy to understand	Rate the value of course in increasing your skills	Any issues
1	219Y5A0104@ksrmce.ac.in	BANDA ANITHA (W)	B.Tech IIIser	CSE	219Y5A0104	Yes	Yes	Agree	Agree	Strongly agree	4	5	Nothing
2	219Y5A0105@ksrmce.ac.in	BANDARU ANIL KUMAR	B.Tech IIIser	CSE	219Y5A0105	Yes	Yes	Agree	Agree	Strongly agree	5	5	Nothing
3	219Y5A0106@ksrmce.ac.in	B. MUNIVARDHAN	B.Tech IIIser	CSE	219Y5A0106	Yes	Yes	Agree	Agree	Strongly agree	4	5	Good
4	219Y5A0107@ksrmce.ac.in	BHUKYA SURESH NAIK	B.Tech IIIser	CSE	219Y5A0107	Yes	Yes	Agree	Agree	Strongly agree	5	5	nothing
5	219Y5A0108@ksrmce.ac.in	B. BHARGAV REDDY	B.Tech IIIser	CSE	219Y5A0108	Yes	Yes	Agree	Agree	Strongly agree	5	5	Good
6	219Y5A0111@ksrmce.ac.in	CHALLA NAVEEN	B.Tech IIIser	CSE	219Y5A0111	Yes	Yes	Agree	Agree	Strongly agree	4	5	very good
7	219Y5A0113@ksrmce.ac.in	CHINTHAKUNTA GURU PRASAD	B.Tech IIIser	CSE	219Y5A0113	Yes	Yes	Strongly agree	Agree	Strongly agree	4	3	Nothing
8	219Y5A0114@ksrmce.ac.in	CHINTHAKUNTA NAGENDRA REDDY	B.Tech IIIser	CSE	219Y5A0114	Yes	Yes	agree	Agree	Strongly agree	4	4	no
9	219Y5A0116@ksrmce.ac.in	DERANGUKA HEMANTH KUMAR	B.Tech IIIser	CSE	219Y5A0116	Yes	Yes	Strongly agree	Agree	Strongly agree	5	5	Nothing
10	219Y5A0118@ksrmce.ac.in	GALIPOTHULA SAMUEL	B.Tech IIIser	CSE	219Y5A0118	Yes	Yes	Strongly agree	Agree	Strongly agree	5	5	Good
11	219Y5A0119@ksrmce.ac.in	GADALA RAJESH	B.Tech IIIser	CSE	219Y5A0119	Yes	Yes	Agree	Agree	Strongly agree	5	4	Good
12	219Y5A0121@ksrmce.ac.in	GOGULA AVINASH	B.Tech IIIser	CSE	219Y5A0121	Yes	Yes	agree	Agree	Strongly agree	5	5	Good
13	219Y5A0126@ksrmce.ac.in	KAMIREDDY JAIPAL REDDY	B.Tech IIIser	CSE	219Y5A0126	Yes	Yes	agree	Agree	Strongly agree	3	5	Good
14	219Y5A0127@ksrmce.ac.in	KATHURI HEMA (W)	B.Tech IIIser	CSE	219Y5A0127	Yes	Yes	agree	Agree	Strongly agree	5	4	very good
15	219Y5A0128@ksrmce.ac.in	KARAMTHOD SAI KUMAR NAIK	B.Tech IIIser	CSE	219Y5A0128	Yes	Yes	agree	Agree	Strongly agree	4	4	very good
16	219Y5A0129@ksrmce.ac.in	KATTAMEEDI BHARATH REDDY	B.Tech IIIser	CSE	219Y5A0129	Yes	Yes	agree	Agree	Strongly agree	5	4	very good

17	219Y5A0130@ksrmce.ac.in	KETHAVARAM GANGADHAR	B.Tech IIIser	CSE	219Y5A0130	Yes	Yes	agree	Agree	Strongly agree	3	5	no
18	219Y5A0131@ksrmce.ac.in	K. SREE KAVYA (W)	B.Tech IIIser	CSE	219Y5A0131	Yes	Yes	agree	Agree	Strongly agree	4	5	nothing
19	219Y5A0132@ksrmce.ac.in	KORE SASIREKHA (W)	B.Tech IIIser	CSE	219Y5A0132	Yes	Yes	Strongly agree	Agree	Strongly agree	4	5	Good
20	219Y5A0135@ksrmce.ac.in	KURUBA LAVANYA (W)	B.Tech IIIser	CSE	219Y5A0135	Yes	Yes	Strongly agree	Agree	Strongly agree	4	4	Good
21	219Y5A0136@ksrmce.ac.in	K.B. VEERESH	B.Tech IIIser	CSE	219Y5A0136	Yes	Yes	Strongly agree	Agree	Strongly agree	4	3	Good
22	219Y5A0137@ksrmce.ac.in	L. NAVEEN	B.Tech IIIser	CSE	219Y5A0137	Yes	Yes	agree	Agree	Strongly agree	4	4	Good
23	219Y5A0138@ksrmce.ac.in	MADHALLAPALLE VISHNU VARDHAN	B.Tech IIIser	CSE	219Y5A0138	Yes	Yes	agree	Agree	Strongly agree	5	4	Good
24	219Y5A0140@ksrmce.ac.in	M. MADDILETI	B.Tech IIIser	CSE	219Y5A0140	Yes	Yes	Strongly agree	Agree	Strongly agree	5	4	Good
25	219Y5A0142@ksrmce.ac.in	MALISHR=ETTY GURU LASHMI (W)	B.Tech IIIser	CSE	219Y5A0142	Yes	Yes	agree	Agree	Strongly agree	5	5	Good
26	219Y5A0144@ksrmce.ac.in	MANEE MALLEMKONDAIAH	B.Tech IIIser	CSE	219Y5A0144	Yes	Yes	agree	Agree	Strongly agree	5	5	Nothing
27	219Y5A0145@ksrmce.ac.in	MEKALA CHENNAKESHAVULU	B.Tech IIIser	CSE	219Y5A0145	Yes	Yes	agree	Agree	Strongly agree	5	5	no
28	219Y5A0147@ksrmce.ac.in	NALLABOTHULA SHIVA	B.Tech IIIser	CSE	219Y5A0147	Yes	Yes	agree	Agree	Strongly agree	3	4	no
29	219Y5A0148@ksrmce.ac.in	NANNURU SHANKAR	B.Tech IIIser	CSE	219Y5A0148	Yes	Yes	Strongly agree	Agree	Strongly agree	3	4	no
30	219Y5A0149@ksrmce.ac.in	N. MALLESWARI DEVI (W)	B.Tech IIIser	CSE	219Y5A0149	Yes	Yes	Strongly agree	Agree	Strongly agree		5	no
31	219Y5A0151@ksrmce.ac.in	PALLA YOGENDRA	B.Tech IIIser	CSE	219Y5A0151	Yes	Yes	Strongly agree	Agree	Strongly agree	5	4	nothing
32	219Y5A0152@ksrmce.ac.in	P. SAI CHARAN	B.Tech IIIser	CSE	219Y5A0152	Yes	Yes	agree	Agree	Strongly agree	5	5	Nothing
33	219Y5A0154@ksrmce.ac.in	P. JAGAN MOHAN	B.Tech IIIser	CSE	219Y5A0154	Yes	Yes	agree	Agree	Strongly agree	5	4	no
34	219Y5A0155@ksrmce.ac.in	PINJARI LALAPPA	B.Tech IIIser	CSE	219Y5A0155	Yes	Yes	agree	Agree	Strongly agree	5	4	Nothing
35	219Y5A0156@ksrmce.ac.in	POREDDY SUNANDA(W)	B.Tech IIIser	CSE	219Y5A0156	Yes	Yes	agree	Agree	Strongly agree	5	4	Good
36	219Y5A0157@ksrmce.ac.in	R. PAVAN KUMAR REDDY	B.Tech IIIser	CSE	219Y5A0157	Yes	Yes	agree	Agree	Strongly agree	5	5	Good
37	219Y5A0158@ksrmce.ac.in	RAPUVU NIKITHA (W)	B.Tech IIIser	CSE	219Y5A0158	Yes	Yes	agree	Agree	Strongly agree	5	5	Good
38	219Y5A0161@ksrmce.ac.in	SANDRAPALLI VENKATA SUMALATHA (w)	B.Tech IIIser	CSE	219Y5A0161	Yes	Yes	Strongly agree	Agree	Strongly agree	5	5	Good
39	219Y5A0163@ksrmce.ac.in	SHAIK.MAHABOOB BEE	B.Tech IIIser	CSE	219Y5A0163	Yes	Yes	Strongly agree	Agree	Strongly agree	5	5	Good

40	219Y5A0166@ksrmce.ac.in	SHAIK. NASAR	B.Tech IIIser	CSE	219Y5A0166	Yes	Yes	Strongly agree	Agree	Strongly agree	5	5	Good
41	219Y5A0167@ksrmce.ac.in	S.T.YUNUS	B.Tech IIIser	CSE	219Y5A0167	Yes	Yes	agree	Agree	Strongly agree	4	4	Good
42	219Y5A0170@ksrmce.ac.in	THATICHERALA HEMANTH KUMAR	B.Tech IIIser	CSE	219Y5A0170	Yes	Yes	agree	Agree	Strongly agree	4	5	Good
43	219Y5A0171@ksrmce.ac.in	THUMMALURU SURENDRA KUMAR REDDY	B.Tech IIIser	CSE	219Y5A0171	Yes	Yes	agree	Agree	Strongly agree	4	5	Good
44	219Y5A0172@ksrmce.ac.in	U. BHAVYA(W)	B.Tech IIIser	CSE	219Y5A0172	Yes	Yes	agree	Agree	Strongly agree	3	5	Good
45	219Y5A0173@ksrmce.ac.in	Y.RANJITH KUMAR	B.Tech IIIser	CSE	219Y5A0173	Yes	Yes	agree	Agree	Strongly agree	3	5	Nothing
46	219Y5A0403@ksrmce.ac.in	BOGGULA PARIMALA (W)	B.Tech IIIser	CSE	219Y5A0403	Yes	Yes	Strongly agree	Agree	Strongly agree	2	5	Nothing
47	219Y5A0402@ksrmce.ac.in	B. PALLAVI(W)	B.Tech IIIser	CSE	219Y5A0402	Yes	Yes	agree	Agree	Strongly agree	2	5	very good
48	219Y5A0501@ksrmce.ac.in	A.KULADEEP SAI	B.Tech IIIser	CSE	219Y5A0501	Yes	Yes	agree	Agree	Strongly agree	4	5	very good
49	219Y5A0502@ksrmce.ac.in	B.TIRUMALESU	B.Tech IIIser	CSE	219Y5A0502	Yes	Yes	Strongly agree	Agree	Strongly agree	5	5	very good
50	219Y5A0506@ksrmce.ac.in	G.PAVAN KUMAR	B.Tech IIIser	CSE	219Y5A0506	Yes	Yes	Strongly agree	Agree	Strongly agree	4	5	nothing
51	219Y5A0509@ksrmce.ac.in	K. SAI KIRAN	B.Tech IIIser	CSE	219Y5A0509	Yes	Yes	agree	Agree	Strongly agree	4	5	Good
52	219Y5A0511@ksrmce.ac.in	M. KALYAN	B.Tech IIIser	CSE	219Y5A0511	Yes	Yes	agree	Agree	Strongly agree	4	5	Good
53	219Y5A0512@ksrmce.ac.in	N.GURU SAI MAHENDRA	B.Tech IIIser	CSE	219Y5A0512	Yes	Yes	agree	Agree	Strongly agree	4	5	nothing
54	219Y5A0513@ksrmce.ac.in	S. TIRUMALESH	B.Tech IIIser	CSE	219Y5A0513	Yes	Yes	agree	Agree	Strongly agree	4	5	nothing
55	219Y5A0514@ksrmce.ac.in	S.D.KHALIL BASHA	B.Tech IIIser	CSE	219Y5A0514	Yes	Yes	agree	Agree	Strongly agree	4	5	nothing
56	219Y5A0515@ksrmce.ac.in	S.HARISH KUMAR REDDY	B.Tech IIIser	CSE	219Y5A0515	Yes	Yes	agree	Agree	Strongly agree	4	5	Good
57	219Y5A0516@ksrmce.ac.in	S. MANOJ KUMAR	B.Tech IIIser	CSE	219Y5A0516	Yes	Yes	agree	Agree	Strongly agree	5	5	Good
58	219Y5A0518@ksrmce.ac.in	Y. GURU LASHMI (W)	B.Tech IIIser	CSE	219Y5A0518	Yes	Yes	agree	Agree	Strongly agree	5	5	very good
59	219Y5A0519@ksrmce.ac.in	Y. SHANTAN	B.Tech IIIser	CSE	219Y5A0519	Yes	Yes	Strongly agree	Agree	Strongly agree	5	5	very good
60	219Y5A0520@ksrmce.ac.in	Y. PAVAN KUMAR REDDY	B.Tech IIIser	CSE	219Y5A0520	Yes	Yes	Strongly agree	Agree	Strongly agree	5	5	nothing

V. Sankar, B.D.
Coordinators

Dr. V. Lokeswara Reddy
HOD

Dr. V. LOKESWARA REDDY
M.Tech., Ph.D.,
Professor & HOD CSE
K.S.R.M. College of Engineering (Autonomous)
KADAPA - 516 005.

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
VALUE ADDED / CERTIFICATE COURSE ON
PROGRAMMING IN C FROM 24/01/2022 TO 24/02/2022
AWARD LIST

S.No	Roll Number	Name of the Student	Marks Obtained
1	219Y5A0104	Banda Anitha	15
2	219Y5A0105	Bandaru Anil Kumar	12
3	219Y5A0106	B. Munivardhan	14
4	219Y5A0107	Bhukya Suresh Naik	16
5	219Y5A0108	B. Bhargav Reddy	17
6	219Y5A0111	Challa Naveen	15
7	219Y5A0113	Chinthakunta Guru Prasad	13
8	219Y5A0114	Chinthakunta Nagendra Reddy	10
9	219Y5A0116	Deranguka Hemanth Kumar	11
10	219Y5A0118	Galipothula Samuel	12
11	219Y5A0119	Gadala Rajesh	14
12	219Y5A0121	Gogula Avinash	15
13	219Y5A0126	Kamireddy Jaipal Reddy	16
14	219Y5A0127	Kathuri Hema	18
15	219Y5A0128	Karamthod Sai Kumar Naik	19
16	219Y5A0129	Kattameedi Bharath Reddy	17
17	219Y5A0130	Kethavaram Gangadhar	09
18	219Y5A0131	K. Sree Kavya	12
19	219Y5A0132	Kore Sasirekha	15
20	219Y5A0135	Kuruba Lavanya	16
21	219Y5A0136	K.B. Veeresh	16
22	219Y5A0137	L. Naveen	17
23	219Y5A0138	Madhallapalle Vishnu Vardhan	15
24	219Y5A0140	M. Maddileti	17
25	219Y5A0142	Malishr=Etty Guru Lashmi	18
26	219Y5A0144	Manee Mallemkondaiah	19
27	219Y5A0145	Mekala Chennakeshavulu	16
28	219Y5A0147	Nallabothula Shiva	10
29	219Y5A0148	Nannuru Shankar	12
30	219Y5A0149	N. Malleswari Devi	15
31	219Y5A0151	Palla Yogendra	16
32	219Y5A0152	P. Sai Charan	17
33	219Y5A0154	P. Jagan Mohan	18
34	219Y5A0155	Pinjari Lalappa	16
35	219Y5A0156	Poreddy Sunanda	13
36	219Y5A0157	R. Pavan Kumar Reddy	14
37	219Y5A0158	Rapuvu Nikitha	16
38	219Y5A0161	Sandrapalli Venkata Sumalatha	15
39	219Y5A0163	Shaik.Mahaboob Bee	19
40	219Y5A0166	Shaik. Nasar	08
41	219Y5A0167	S.T.Yunus	12
42	219Y5A0170	Thaticherala Hemanth Kumar	15

43	219Y5A0171	Thummaluru Surendra Kumar Reddy	16
44	219Y5A0172	U. Bhavya	17
45	219Y5A0173	Y.Ranjith Kumar	14
46	219Y5A0403	Boggula Parimala	15
47	219Y5A0402	B. Pallavi	16
48	219Y5A0501	A.Kuladeep Sai	15
49	219Y5A0502	B.Tirumalesu	17
50	219Y5A0506	G.Pavan Kumar	15
51	219Y5A0509	K. Sai Kiran	14
52	219Y5A0511	M. Kalyan	13
53	219Y5A0512	N.Guru Sai Mahendra	12
54	219Y5A0513	S. Tirumalesh	15
55	219Y5A0514	S.D.Khalil Basha	14
56	219Y5A0515	S.Harish Kumar Reddy	16
57	219Y5A0516	S. Manoj Kumar	15
58	219Y5A0518	Y. Guru Lashmi	14
59	219Y5A0519	Y. Shantan	16
60	219Y5A0520	Y. Pavan Kumar Reddy	15

V. Sude

Coordinator(s)

Reddy

HoD CSE

Dr. V. LOKESWARA REDDY
M.Tech., Ph.D.,
Professor & HOD CSE
K.S.R.M. College of Engineering (Autonomous),
KADAPA - 516 005.

15/20

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K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
VALUE ADDED /CERTIFICATE COURSE ON
PROGRAMMING IN C FROM 24/01/2022 TO 24/02/2022

ASSESSMENT TEST

Roll Number: 219Y5A0104 Name of the Student B. Anitha

Time: 20 Min

(Objective Questions)

Max.Marks:20

Note: Answer the following Questions and each question carries **one** mark.

1. Which is/are the sign qualifier(s) in C language? [D] ✓
A. signed B. unsigned C. long D. Both A. and B
2. Which is/are the type qualifier(s) in C language? [B] X
A. const B. volatile C. static D. Both A. and B
3. Which is correct with respect to the size of the data types in C? [B] ✓
A. char > int > float B. char < int < float C. int < char < float D. int < chat > float
4. Which operator is used to find the remainder of two numbers in C? [A] X
A. / B. \ C. % D. //
5. Which of the following is not an arithmetic expression? [D] ✓
A. x = 10 B. x /= 10 C. x %= 10 D. x != 10
6. What will be the output of the following C code? [A] ✓

```
#include <stdio.h>
int main()
{ int x = 20;
  x %= 3;
  printf("%d",x);
  return 0; }
```

- A. 2 B. 2.5 C. Error D. Warning

7. What will be the output of the following C code? [C] X

```
#include <stdio.h>
int main()
{ float x = 21.0; x %= 3.0;
  printf("%f",x);
  return 0; }
```

- A. 7 B. 7.00 C. 7.000000 D. Error

8. What will be the output of the following C code? [C] X

```
#include <stdio.h>
int main()
{ float x = 23.456;
  printf("%.2f",x);
  return 0; }
```

- A. 23.45600 B. 23.456 C. 23.45 D. 23.46

9. What will be the output of the following C code? [A] ✓

```
#include <stdio.h>
void main()
{ int x = 10;
  int y = x++ + 20;
  printf("%d,%d",x,y);
  return 0; }
```

- A. 11,30 B. 11,31 C. 10,30 D. 10,31

10. Increment (++) and decrement (--) are the ___ operators in C? [A] ✓

- A. Unary B. Binary C. Ternary D. None of the above

11. What will be the output of the following C code?

[c] ✓

```
#include <stdio.h>
int main()
{ unsigned char c=290;
  printf("%d",c);
  return 0; }
```

A. 290 B. 256 C. 34 D. Garbage

12. What will be the output of the following C code?

[A] ✓

```
#include <stdio.h>
int main()
{ int a=0;
  a=5||2|1;
  printf("%d",a);
  return 0;}
```

A. 1 B. 7 C. 0 D. 8

13. What will be the output of the following C code?

[c] X

```
#include <stdio.h>
int main()
{ int x =-100;
  -100;
  printf("%d",x);
  return 0;}
```

A. 100 B. -100 C. 0 D. Error

14. What will be the output of the following C code?

[B] ✓

```
#include <stdio.h>
int main()
{ int a,b,c;
  a=0x10; b=010;
  c=a+b;
  printf("%d",c);
  return 0;}
```

A. 20 B. 24 C. Garbage D. Error

15. Which C keyword is used to extend the visibility of variables?

[c] ✓

A. extend B. extends C. extern D. auto

16. What is the name of "&" operator in C?

[c] ✓

A. Ampersand B. And C. Address of D. None of the above

17. Which of the following are valid decision-making statements in C?

[D] ✓

A. if B. switch C. nested if D. All of these

18. Decision making in the C programming language is ____.

[B] ✓

A. Repeating the same statement multiple times
B. Executing a set of statements based on some condition
C. Providing a name of the block of code
D. All of these

19. Which of the following is a true value in C programming?

[D] ✓

A. 1 B. "includehelp" C. ! NULL D. All of these

20. Ternary operator in C programming is ____.

[B] ✓

A. if-else-if B. ? : C. ? ; ? D. None of these

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K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
VALUE ADDED /CERTIFICATE COURSE ON
PROGRAMMING IN C FROM 24/01/2022 TO 24/02/2022

ASSESSMENT TEST

Roll Number: 21945A0113 Name of the Student Chintakunta Gurusu prasad

Time: 20 Min

(Objective Questions)

Max.Marks:20

Note: Answer the following Questions and each question carries **one** mark.

1. Which is/are the sign qualifier(s) in C language? [D] ✓
A. signed B. unsigned C. long D. Both A. and B
2. Which is/are the type qualifier(s) in C language? [C] X
A. const B. volatile C. static D. Both A. and B
3. Which is correct with respect to the size of the data types in C? [B] ✓
A. char > int > float B. char < int < float C. int < char < float D. int < chat > float
4. Which operator is used to find the remainder of two numbers in C? [C] ✓
A. / B. \ C. % D. //
5. Which of the following is not an arithmetic expression? [B] X
A. x = 10 B. x /= 10 C. x %= 10 D. x != 10
6. What will be the output of the following C code? [A] ✓

```
#include <stdio.h>
int main()
{ int x = 20;
  x %= 3;
  printf("%d",x);
  return 0; }
```

- A. 2 B. 2.5 C. Error D. Warning

7. What will be the output of the following C code? [D] ✓

```
#include <stdio.h>
int main()
{ float x = 21.0; x %= 3.0;
  printf("%f",x);
  return 0; }
```

- A. 7 B. 7.00 C. 7.000000 D. Error

8. What will be the output of the following C code? [D] ✓

```
#include <stdio.h>
int main()
{ float x = 23.456;
  printf("%.2f",x);
  return 0; }
```

- A. 23.45600 B. 23.456 C. 23.45 D. 23.46

9. What will be the output of the following C code? [A] ✓

```
#include <stdio.h>
void main()
{ int x = 10;
  int y = x++ + 20;
  printf("%d,%d",x,y);
  return 0; }
```

- A. 11,30 B. 11,31 C. 10,30 D. 10,31

10. Increment (++) and decrement (--) are the ____ operators in C? [C] X

- A. Unary B. Binary C. Ternary D. None of the above

11. What will be the output of the following C code?

[C] ✓

```
#include <stdio.h>
int main()
{ unsigned char c=290;
  printf("%d",c);
  return 0; }
```

- A. 290 B. 256 C. 34 D. Garbage

12. What will be the output of the following C code?

[C] ✗

```
#include <stdio.h>
int main()
{ int a=0;
  a=5||2|1;
  printf("%d",a);
  return 0;}
```

- A. 1 B. 7 C. 0 D. 8

13. What will be the output of the following C code?

[B] ✓

```
#include <stdio.h>
int main()
{ int x = -100;
  -100;
  printf("%d",x);
  return 0;}
```

- A. 100 B. -100 C. 0 D. Error

14. What will be the output of the following C code?

[B] ✓

```
#include <stdio.h>
int main()
{ int a,b,c;
  a=0x10; b=010;
  c=a+b;
  printf("%d",c);
  return 0;}
```

- A. 20 B. 24 C. Garbage D. Error

15. Which C keyword is used to extend the visibility of variables?

[B] ✗

- A. extend B. extends C. extern D. auto

16. What is the name of "&" operator in C?

[A] ✗

- A. Ampersand B. And C. Address of D. None of the above

17. Which of the following are valid decision-making statements in C?

[D] ✓

- A. if B. switch C. nested if D. All of these

18. Decision making in the C programming language is ____.

[B] ✓

- A. Repeating the same statement multiple times
B. Executing a set of statements based on some condition
C. Providing a name of the block of code
D. All of these

19. Which of the following is a true value in C programming?

[C] ✗

- A. 1 B. "includehelp" C. ! NULL D. All of these

20. Ternary operator in C programming is ____.

[B] ✓

- A. if-else-if B. ?: C. ;? D. None of these

17/20
V. S. Sai Charan

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VALUE ADDED /CERTIFICATE COURSE ON
PROGRAMMING IN C FROM 24/01/2022 TO 24/02/2022

ASSESSMENT TEST

Roll Number: 21945A0152 Name of the Student P. Sai Charan

Time: 20 Min

(Objective Questions)

Max.Marks:20

Note: Answer the following Questions and each question carries **one** mark.

1. Which is/are the sign qualifier(s) in C language? [D] ✓
A. signed B. unsigned C. long D. Both A. and B
2. Which is/are the type qualifier(s) in C language? [D] ✓
A. const B. volatile C. static D. Both A. and B
3. Which is correct with respect to the size of the data types in C? [B] ✓
A. char > int > float B. char < int < float C. int < char < float D. int < char > float
4. Which operator is used to find the remainder of two numbers in C? [C] ✓
A. / B. \ C. % D. //
5. Which of the following is not an arithmetic expression? [C] ✗
A. x = 10 B. x /= 10 C. x %= 10 D. x != 10
6. What will be the output of the following C code? [A] ✓

```
#include <stdio.h>
int main()
{ int x = 20;
  x %= 3;
  printf("%d",x);
  return 0; }
```

- A. 2 B. 2.5 C. Error D. Warning

7. What will be the output of the following C code? [D] ✓

```
#include <stdio.h>
int main()
{ float x = 21.0; x %= 3.0;
  printf("%f",x);
  return 0; }
```

- A. 7 B. 7.00 C. 7.000000 D. Error

8. What will be the output of the following C code? [D] ✓

```
#include <stdio.h>
int main()
{ float x = 23.456;
  printf("%.2f",x);
  return 0; }
```

- A. 23.45600 B. 23.456 C. 23.45 D. 23.46

9. What will be the output of the following C code? [B] ✗

```
#include <stdio.h>
void main()
{ int x = 10;
  int y = x++ + 20;
  printf("%d,%d",x,y);
  return 0; }
```

- A. 11,30 B. 11,31 C. 10,30 D. 10,31

10. Increment (++) and decrement (--) are the ____ operators in C? [B] ✗

- A. Unary B. Binary C. Ternary D. None of the above

11. What will be the output of the following C code?

[C] ✓

```
#include <stdio.h>
int main()
{ unsigned char c=290;
  printf("%d",c);
  return 0; }
```

A. 290 B. 256 C. 34 D. Garbage

12. What will be the output of the following C code?

[A] ✓

```
#include <stdio.h>
int main()
{ int a=0;
  a=5||2|1;
  printf("%d",a);
  return 0;}
```

A. 1 B. 7 C. 0 D. 8

13. What will be the output of the following C code?

[B] ✓

```
#include <stdio.h>
int main()
{ int x =-100;
  -100;
  printf("%d",x);
  return 0;}
```

A. 100 B. -100 C. 0 D. Error

14. What will be the output of the following C code?

[B] ✓

```
#include <stdio.h>
int main()
{ int a,b,c;
  a=0x10; b=010;
  c=a+b;
  printf("%d",c);
  return 0;}
```

A. 20 B. 24 C. Garbage D. Error

15. Which C keyword is used to extend the visibility of variables?

[C] ✓

A. extend B. extends C. extern D. auto

16. What is the name of "&" operator in C?

[C] ✓

A. Ampersand B. And C. Address of D. None of the above

17. Which of the following are valid decision-making statements in C?

[D] ✓

A. if B. switch C. nested if D. All of these

18. Decision making in the C programming language is ____.

[B] ✓

A. Repeating the same statement multiple times
B. Executing a set of statements based on some condition
C. Providing a name of the block of code
D. All of these

19. Which of the following is a true value in C programming?

[D] ✓

A. 1 B. "includehelp" C. ! NULL D. All of these

20. Ternary operator in C programming is ____.

[B] ✓

A. if-else-if B. ?: C. ? ; ? D. None of these

(8/20)
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K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
VALUE ADDED /CERTIFICATE COURSE ON
PROGRAMMING IN C FROM 24/01/2022 TO 24/02/2022

ASSESSMENT TEST

Roll Number: 219Y5A0127 Name of the Student: Rathuribema

Time: 20 Min

(Objective Questions)

Max.Marks:20

Note: Answer the following Questions and each question carries **one** mark.

1. Which is/are the sign qualifier(s) in C language? [D]
A. signed B. unsigned C. long D. Both A. and B
2. Which is/are the type qualifier(s) in C language? [D]
A. const B. volatile C. static D. Both A. and B
3. Which is correct with respect to the size of the data types in C? [B]
A. char > int > float B. char < int < float C. int < char < float D. int < chat > float
4. Which operator is used to find the remainder of two numbers in C? [C]
A. / B. \ C. % D. //
5. Which of the following is not an arithmetic expression? [D]
A. x = 10 B. x /= 10 C. x %= 10 D. x != 10
6. What will be the output of the following C code? [B] X

```
#include <stdio.h>
int main()
{ int x = 20;
  x %= 3;
  printf("%d",x);
  return 0; }
```

- A. 2 B. 2.5 C. Error D. Warning

7. What will be the output of the following C code? [D]

```
#include <stdio.h>
int main()
{ float x = 21.0; x %= 3.0;
  printf("%f",x);
  return 0; }
```

- A. 7 B. 7.00 C. 7.000000 D. Error

8. What will be the output of the following C code? [D]

```
#include <stdio.h>
int main()
{ float x = 23.456;
  printf("%.2f",x);
  return 0; }
```

- A. 23.45600 B. 23.456 C. 23.45 D. 23.46

9. What will be the output of the following C code? [A]

```
#include <stdio.h>
void main()
{ int x = 10;
  int y = x++ + 20;
  printf("%d,%d",x,y);
  return 0; }
```

- A. 11,30 B. 11,31 C. 10,30 D. 10,31

10. Increment (++) and decrement (--) are the ____ operators in C? [A]

- A. Unary B. Binary C. Ternary D. None of the above

11. What will be the output of the following C code?

[C] ✓

```
#include <stdio.h>
int main()
{ unsigned char c=290;
  printf("%d",c);
  return 0; }
```

A. 290 B. 256 C. 34 D. Garbage

12. What will be the output of the following C code?

[C] ✗

```
#include <stdio.h>
int main()
{ int a=0;
  a=5||2|1;
  printf("%d",a);
  return 0;}
```

A. 1 B. 7 C. 0 D. 8

13. What will be the output of the following C code?

[B] ✓

```
#include <stdio.h>
int main()
{ int x =-100;
  -100;
  printf("%d",x);
  return 0;}
```

A. 100 B. -100 C. 0 D. Error

14. What will be the output of the following C code?

[B] ✓

```
#include <stdio.h>
int main()
{ int a,b,c;
  a=0x10; b=010;
  c=a+b;
  printf("%d",c);
  return 0;}
```

A. 20 B. 24 C. Garbage D. Error

15. Which C keyword is used to extend the visibility of variables?

[C] ✓

A. extend B. extends C. extern D. auto

16. What is the name of "&" operator in C?

[C] ✓

A. Ampersand B. And C. Address of D. None of the above

17. Which of the following are valid decision-making statements in C?

[D] ✓

A. if B. switch C. nested if D. All of these

18. Decision making in the C programming language is ____.

[B] ✓

A. Repeating the same statement multiple times
B. Executing a set of statements based on some condition
C. Providing a name of the block of code
D. All of these

19. Which of the following is a true value in C programming?

[D] ✓

A. 1 B. "includehelp" C. ! NULL D. All of these

20. Ternary operator in C programming is ____.

[B] ✓

A. if-else-if B. ?: C. ? ; ? D. None of these

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
VALUE ADDED /CERTIFICATE COURSE ON
PROGRAMMING IN C FROM 24/01/2022 TO 24/02/2022

ASSESSMENT TEST

Roll Number: 219Y5A0137 **Name of the Student:** L. Naveen

Time: 20 Min

(Objective Questions)

Max.Marks:20

Note: Answer the following Questions and each question carries **one** mark.

1. Which is/are the sign qualifier(s) in C language? [B] X
A. signed B. unsigned C. long D. Both A. and B
2. Which is/are the type qualifier(s) in C language? [D] ✓
A. const B. volatile C. static D. Both A. and B
3. Which is correct with respect to the size of the data types in C? [B] ✓
A. char > int > float B. char < int < float C. int < char < float D. int < chat > float
4. Which operator is used to find the remainder of two numbers in C? [C] ✓
A. / B. \ C. % D. //
5. Which of the following is not an arithmetic expression? [D] ✓
A. x = 10 B. x /= 10 C. x %= 10 D. x != 10
6. What will be the output of the following C code? [A] ✓

```
#include <stdio.h>
int main()
{ int x = 20;
  x %= 3;
  printf("%d",x);
  return 0; }
```

- A. 2 B. 2.5 C. Error D. Warning

7. What will be the output of the following C code? [D] ✓

```
#include <stdio.h>
int main()
{ float x = 21.0; x %= 3.0;
  printf("%f",x);
  return 0; }
```

- A. 7 B. 7.00 C. 7.000000 D. Error

8. What will be the output of the following C code? [D] ✓

```
#include <stdio.h>
int main()
{ float x = 23.456;
  printf("%.2f",x);
  return 0; }
```

- A. 23.45600 B. 23.456 C. 23.45 D. 23.46

9. What will be the output of the following C code? [C] X

```
#include <stdio.h>
void main()
{ int x = 10;
  int y = x++ + 20;
  printf("%d,%d",x,y);
  return 0; }
```

- A. 11,30 B. 11,31 C. 10,30 D. 10,31

10. Increment (++) and decrement (--) are the ____ operators in C? [A] ✓

- A. Unary B. Binary C. Ternary D. None of the above

11. What will be the output of the following C code?

[C] ✓

```
#include <stdio.h>
int main()
{ unsigned char c=290;
  printf("%d",c);
  return 0; }
```

- A. 290 B. 256 C. 34 D. Garbage

12. What will be the output of the following C code?

[A] ✓

```
#include <stdio.h>
int main()
{ int a=0;
  a=5||2|1;
  printf("%d",a);
  return 0; }
```

- A. 1 B. 7 C. 0 D. 8

13. What will be the output of the following C code?

[B] ✓

```
#include <stdio.h>
int main()
{ int x =-100;
  -100;
  printf("%d",x);
  return 0; }
```

- A. 100 B. -100 C. 0 D. Error

14. What will be the output of the following C code?

[B] ✓

```
#include <stdio.h>
int main()
{ int a,b,c;
  a=0x10; b=010;
  c=a+b;
  printf("%d",c);
  return 0; }
```

- A. 20 B. 24 C. Garbage D. Error

15. Which C keyword is used to extend the visibility of variables?

[C] ✓

- A. extend B. extends C. extern D. auto

16. What is the name of "&" operator in C?

[C] ✓

- A. Ampersand B. And C. Address of D. None of the above

17. Which of the following are valid decision-making statements in C?

[D] ✓

- A. if B. switch C. nested if D. All of these

18. Decision making in the C programming language is ____.

[B] ✓

- A. Repeating the same statement multiple times
B. Executing a set of statements based on some condition
C. Providing a name of the block of code
D. All of these

19. Which of the following is a true value in C programming?

[D] ✓

- A. 1 B. "includehelp" C. ! NULL D. All of these

20. Ternary operator in C programming is ____.

[A] X

- A. if-else-if B. ? : C. ? ; ? D. None of these

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PROGRAMMING IN C FROM 24/01/2022 TO 24/02/2022

ASSESSMENT TEST

Roll Number: _____ **Name of the Student:** _____

Time: 20 Min

(Objective Questions)

Max.Marks:20

Note: Answer the following Questions and each question carries **one** mark.

1. Which is/are the sign qualifier(s) in C language? []
A. signed B. unsigned C. long D. Both A. and B
2. Which is/are the type qualifier(s) in C language? []
A. const B. volatile C. static D. Both A. and B
3. Which is correct with respect to the size of the data types in C? []
A. char > int > float B. char < int < float C. int < char < float D. int < char > float
4. Which operator is used to find the remainder of two numbers in C? []
A. / B. \ C. % D. //
5. Which of the following is not an arithmetic expression? []
A. x = 10 B. x /= 10 C. x %= 10 D. x != 10
6. What will be the output of the following C code? []

```
#include <stdio.h>
int main()
{ int x = 20;
  x %= 3;
  printf("%d",x);
  return 0; }
```

- A. 2 B. 2.5 C. Error D. Warning

7. What will be the output of the following C code? []

```
#include <stdio.h>
int main()
{ float x = 21.0; x %= 3.0;
  printf("%f",x);
  return 0; }
```

- A. 7 B. 7.00 C. 7.000000 D. Error

8. What will be the output of the following C code? []

```
#include <stdio.h>
int main()
{ float x = 23.456;
  printf("%.2f",x);
  return 0; }
```

- A. 23.45600 B. 23.456 C. 23.45 D. 23.46

9. What will be the output of the following C code? []

```
#include <stdio.h>
void main()
{ int x = 10;
  int y = x++ + 20;
  printf("%d,%d",x,y);
  return 0; }
```

- A. 11,30 B. 11,31 C. 10,30 D. 10,31

10. Increment (++) and decrement (--) are the ____ operators in C? []

- A. Unary B. Binary C. Ternary D. None of the above

11. What will be the output of the following C code?

[]

```
#include <stdio.h>
int main()
{ unsigned char c=290;
  printf("%d",c);
  return 0; }
```

A. 290 B. 256 C. 34 D. Garbage

12. What will be the output of the following C code?

[]

```
#include <stdio.h>
int main()
{ int a=0;
  a=5||2|1;
  printf("%d",a);
  return 0;}
```

A. 1 B. 7 C. 0 D. 8

13. What will be the output of the following C code?

[]

```
#include <stdio.h>
int main()
{ int x =-100;
  -100;
  printf("%d",x);
  return 0;}
```

A. 100 B. -100 C. 0 D. Error

14. What will be the output of the following C code?

[]

```
#include <stdio.h>
int main()
{ int a,b,c;
  a=0x10; b=010;
  c=a+b;
  printf("%d",c);
  return 0;}
```

A. 20 B. 24 C. Garbage D. Error

15. Which C keyword is used to extend the visibility of variables?

[]

A. extend B. extends C. extern D. auto

16. What is the name of "&" operator in C?

[]

A. Ampersand B. And C. Address of D. None of the above

17. Which of the following are valid decision-making statements in C?

[]

A. if B. switch C. nested if D. All of these

18. Decision making in the C programming language is ____.

[]

A. Repeating the same statement multiple times
B. Executing a set of statements based on some condition
C. Providing a name of the block of code
D. All of these

19. Which of the following is a true value in C programming?

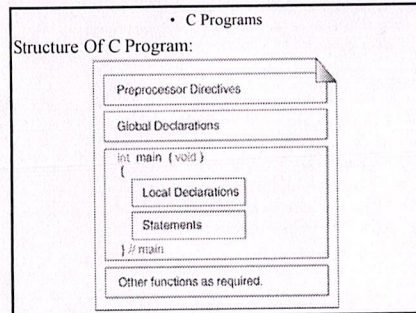
[]

A. 1 B. "includehelp" C. ! NULL D. All of these

20. Ternary operator in C programming is ____.

[]

A. if-else-if B. ? : C. ? ; ? D. None of these



Preprocessor directives:

- Every C program is made of one or more Preprocessor directives or commands.
- They are special instructions to the preprocessor that tell it how to prepare the program for compilation.
- The preprocessor directives are commands that give instructions to the C preprocessor.
- A preprocessor directive begins with a number symbol (#) as its first non-blank character.
- A common preprocessor command is `#include`. The `#include` command tells the preprocessor that information is needed from selected libraries known as `header files`.

- Preprocessor commands can start in any column, but they traditionally start in column 1.
Ex: `#include <stdio.h>`
- This command tells the preprocessor that definitions from the library file in the brackets `<>` is included in the program. The name of the header file is `stdio.h`. This is an abbreviation for `standard input / output headerfile`.
- C requires that certain standard libraries be provided in every ANSI C implementation.

Global Declaration Section :

- Contains declarations that are visible to all parts of the program

Declaration section :

- It is at the beginning of the function. It describes the data that will be used in the function. Declarations in a function are known as local declarations as they are visible only to the function that contains them.

Statements:

- Statements follows the declaration section. It contains the instructions to the computer.
- Every statement ends with a semi colon.

Comments:

- Comment about the program should be enclosed within `/* */`.
- Any number of comments can be written at any place in the program.
- Comments in the code helps to understand the code
- Comments cannot be nested.
 - For example, `/* Cal of SI /* Author sam date 01/01/2002 */` is invalid.

- A comment can be split over more than one line, as

```

/* This is
a jazzy
comment */
  
```

main():

- The executable part of the program begins with the function `_main`. All statements that belong to `main` are enclosed in a pair of braces { }.

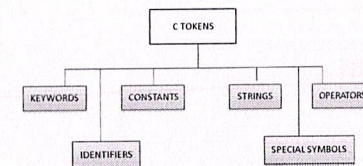
First C Program

```

#include <stdio.h>
void main ()
{
    printf("Hello World!\n");
}
  
```

- The main function contains single statement to print the message.
- The print statement use a library function to do the printing.

C TOKENS



KEYWORDS

- Keywords are predefined, reserved words used in programming that have special meaning. Keywords are part of the syntax and they cannot be used as an identifier. For example: `int money;`
- Here, `int` is a keyword that indicates 'money' is a variable of type integer.

Identifiers

- Identifiers are names given to program elements such as variables, arrays and functions.
- Each identified object in the computer is stored at a unique address.
- If we didn't have identifiers that we could use to symbolically represent data locations, we would have to know and use object's addresses. Instead, we simply give data identifiers and let the compiler keep track of where they are physically located.

Rules for Identifiers:

1. First character must be alphabetic character or underscore.
2. Must consist only of alphabetic characters, digits, or underscores.
3. First 63 characters of an identifier are significant.
4. Cannot duplicate a keyword.

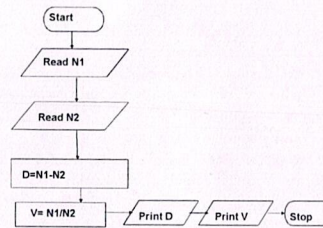
Examples of Valid and Invalid Names:

Valid Names		Invalid Name	
<code>a</code>	// Valid but poor style	<code>\$sum</code>	// \$ is illegal
<code>student_name</code>		<code>2names</code>	// First char digit
<code>_oSystemName</code>		<code>sum-salary</code>	// Contains hyphen
<code>_Bool</code>	// Boolean System Id	<code>stint Nmb</code>	// Contains spaces
<code>INT_MIN</code>	// System Defined Value	<code>int</code>	// Keyword

- **Example 2:** Find the difference and the division of two numbers and display the results.
- – Variables:
 - N1: First number
 - N2: Second number
 - D : Difference
 - V : Division
- Algorithm:
 - * Step 1: Start
 - * Step 2: Input N1
 - * Step 3: Input N2
 - * Step 4: $D=N1-N2$
 - * Step 5: $V=N1/N2$
 - * Step 6: Output D
 - * Step 7: Output V
 - * Step 8: Stop

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Flow Chart



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Example 3:

Work on the algorithm and the flow chart of the problem of calculating the roots of the equation $Ax^2 + Bx + C = 0$

Variables:

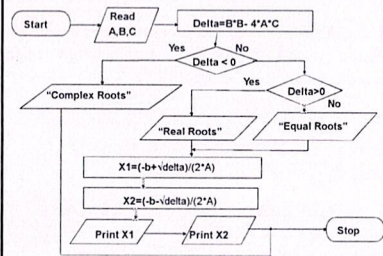
- A: Coefficient of X^2
- B: Coefficient of X
- C: Constant term
- delta: Discriminant of the equation
- X1: First root of the equation
- X2: Second root of the equation

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- Algorithm:
 - Step 1: Start
 - Step 2: Input A, B and C
 - Step 3: Calculate $\Delta = B^2 - 4AC$
 - Step 4: If $\Delta < 0$ go to step 6, otherwise go to 5
 - Step 5: If $\Delta = 0$ go to step 7, otherwise go to 8
 - Step 6: Output —complex roots. Go to step 13
 - Step 7: Output —real roots. Go to step 9
 - Step 8: Output —equal roots. Go to step 9
 - Step 9: Calculate $X1 = (-b + \sqrt{\Delta}) / (2A)$
 - Step 10: Calculate $X2 = (-b - \sqrt{\Delta}) / (2A)$
 - Step 11: Output X1
 - Step 12: Output X2
 - Step 13: Stop

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Flowcharts:



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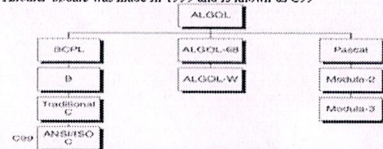
UNIT-1

PART TWO

Introduction to C programming

Introduction to C :

- A high-level programming language developed in 1972 by Dennis Ritchie at AT&T Bell Labs.
- C is a structured Language
- It was designed as a language to develop UNIX operating system
- American National Standards Institute (ANSI) approved first version of C in 1989 which called C89
- Major changes were made in 1995 and is known as C95
- Another update was made in 1999 and is known as C99

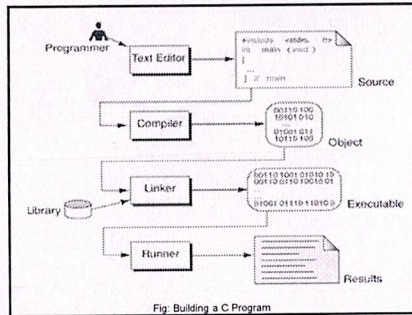


Characteristics of C

- A high level programming language .
- Small size. C has only 32 keywords. This makes it relatively easy to learn.
- Makes extensive use of function calls.
- C is a structured programming.
- It supports loose typing (as a character can be treated as an integer and vice versa).
- Facilitates low level (bitwise) programming
- Supports pointers to refer computer memory, array, structures and functions.
- C is a Portable language.
- C is a core language
- C is an extensible language

Uses of C Language:

- C language is primarily used for system programming. The portability, efficiency, the ability to access specific hardware addresses and low runtime demand on system resources makes it a good choice for implementing operating systems and embedded system applications.
- C has been so widely accepted by professionals that compilers, libraries, and interpreters of other programming languages are often implemented in C.
- For portability and convenience reasons, C is sometimes used as an intermediate language by implementations of other languages. Example of compilers which use C this way are BiC, Gambit, the Glasgow Haskell Compiler, Squeak, and Vala.
- C is widely used to implement end-user applications



Algorithm

- Precise step-by-step plan for a computational procedure that begins with an input value and yields an output value in a finite number of steps.
- It is an effective method which uses a list of well-defined instructions to complete a task, starting from a given initial state to achieve the desired end state.
- An algorithm is written in simple English and is not a formal document.
- An algorithm must:
 - Be lucid, precise and unambiguous
 - Give the correct solution in all cases
 - Eventually end

- it is important to use indentation when writing solution in algorithm because it helps to differentiate between the different control structures.

Instead of

Read n; for i=1 to n add all values of A[i] in sum; Print sum/n;

Write

Read n;

For i=1 to n add all values of A[i] in sum;

Print sum/n;

is more readable and easy to understand.

Properties of algorithms

- 1) Finiteness:
 - an algorithm terminates after a finite numbers of steps.
- 2) Definiteness:
 - each step in an algorithm is unambiguous. This means that the action specified by the step cannot be interpreted in multiple ways & can be performed without any confusion.
- 3) Input:
 - An algorithm accepts zero or more inputs.
- 4) Output:
 - It produces at least one output.
- 5) Effectiveness:
 - It consists of basic instructions that are realizable. This means that the instructions can be performed by using the given inputs in a finite amount of time.

Flowcharts

- A flowchart is a type of diagram, that represents an algorithm or process, showing the steps as boxes of various kinds, and their order by connecting these with arrows. This diagrammatic representation can give a step-by-step solution to a problem.
- Data is represented in the boxes, and arrows connecting them represent direction of flow of data.
- Flowcharts are used in analyzing, designing, documenting or managing a process or program in various fields.

Common Flowchart Symbols:

- Terminator: Shows the starting and ending points of a program
- Data Input or output: Allows the user to input data or to display the results.
- Processing: Indicates an operation performed by the computer, such as a variable Assignment or mathematical operation
- Decision: A diamond has two flow lines going out. One is labeled as „Yes“ Branch and the other as „no“ branch.

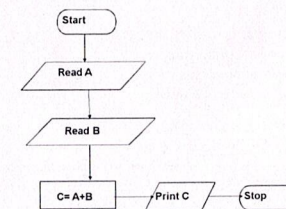
Common Flowchart Symbols:

- Predefined Process. Denotes a group of previously defined statements. Ex: —Calculate $m!$! Program executes the necessary Commands to compute m factorial
- Connector. Connectors avoid crossing flowlines. Connectors come in pairs, one with a flowline in and the other with a flowline out.
- Off Page Connector: Come in Pairs, Extends Flow charts to more than a page
- Flowline. Flowlines connect the flowchart symbols and show the sequence of operations during the program execution.

Examples

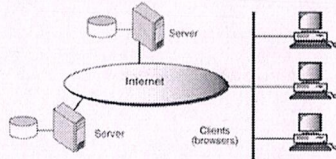
- Example 1: Finding the sum of two numbers.
- Variables:
 - A: First Number
 - B: Second Number
 - C: Sum (A+B)
- Algorithm:
 - Step 1 – Start
 - Step 2 – Input A
 - Step 3 – Input B
 - Step 4 – Calculate $C = A + B$
 - Step 5 – Output C
 - Step 6 – Stop

Flowcharts:



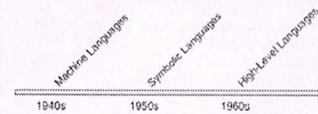
Distributed Computing

- A distributed computing environment provides integration of computing functions between different clients and servers.
- Distributed computing utilizes a network of many computers, each accomplishing a portion of an overall task, to achieve a computational result much more quickly than with a single computer.



Computer Languages

- To write a program for a computer, we must use a computer language.
- There are three types of Computer Languages:
 - 1) Machine Languages
 - 2) Symbolic Languages
 - 3) High-Level Languages



Machine Languages

- Each Computer has its own machine language which is made up of 0's and 1's.
- The instructions in machine language must be in streams of 0's and 1's because internal circuits of a computer are made of devices that can be in one of two states: on or off.
- Machine language is highly difficult to program as it needs the complete knowledge of the computer's instructions
- Difficult and Rarely used
- NOTE:
The only language understood by computer hardware is machine language.

Symbolic Languages

- The computer operations are represented in symbols or mnemonics to represent various machine language instructions.
Ex: Add instead of 0001
- These languages are also called Assembly Languages.
- Each assembly language instruction translates to one machine language instruction
- Programming is easier in Assembly language compared to developing programs in machine language
- Symbolic languages are machine dependent
- Assemblers convert the assembly language instructions to machine language instructions

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High-level Languages

- The need to improve programmer efficiency and to change the focus from the computer to the problem being solved led to the development of high-level languages
- High level languages are portable to many different computers, allowing the programmers to concentrate on the application problem rather than on the computer
- Compilers are used to convert high-level language programs to machine language programs
- The process of converting high-level language into machine language is called compilation.
- One high-level language statement can get converted to one or more machine language statements

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Example

A Statement $A=B$ in Different Languages

Machine Language	Assembly Language	High Level Language
0000 0000	CLA	$A=B$
0001 0101	ADD A	
0001 0110	ADD B	
0011 0101	STA A	

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Creating and Running Programs

- The steps involved in Creating and Running Programs are:
 - 1) Writing and Editing Programs
 - 2) Compiling Programs
 - 3) Linking Programs
 - 4) Executing Programs

Writing and Editing Programs:

- To solve a particular problem a Program has to be created as a file using text editor / word processor. This is called source file.
- The program has to be written as per the structure and rules defined by the high-level language that is used for writing the program (C, JAVA, etc.)

Compiling Programs:

- The compiler corresponding to the high-level language will scan the source file, checks the program for the correct grammar (syntax) rules of the language.
- If the program is syntactically correct, the compiler generates an output file called 'Object File' which will be in a binary format and consists of machine language instructions corresponding to the computer on which the program gets executed.
- If the source program contains syntax errors, the compiler lists these errors and will not generate the object file. The program is to be corrected for the errors and recompiled.
- The object file contains references to other programs which will be needed for the execution of the program. These programs are called library functions. These programs are to be combined with the Object File.

Linking Programs:

- Linker program combines the Object File with the required library functions to produce another file called 'executable file'. Object file will be the input to the linker program.
 - The executable file is created on disk. This file has to be put into (loaded) the memory.
- #### Executing Programs:
- Loader program loads the executable file from disk into the memory and directs the CPU to start execution.
 - The CPU will start execution of the program that is loaded into the memory.
 - During Program Execution, the program reads data for processing, either from the user (key-board) or from a file. After the program processes the data, it prepares the output. Output can be to the user's monitor or to a file.
 - When the program has finished its job, it informs the Operating System. OS then removes the program from memory.

Components of a Computer System:

- The Primary Components of a Computer System are
 - 1) Input devices.
 - 2) Central Processing Unit
 - 3) Memory.
 - 4) Output devices.

- Input Devices:** Input devices are Hardware Components that accept the input from the User.

Ex: Keyboard, Mouse, Scanner, Microphone etc



- CPU: (CU+ALU):**

- The central processing unit (CPU) is the —brain of the computer.
- It performs a large number of operations at a high speed.
- Control Unit interprets instructions to the computer.
- ALU Performs the Arithmetic and logic

Ex: Intel Pentium, Motorola, IBM RISC.



- Memory:** The function of Memory is Storing the data and instructions.

- Memory is Divided into two types :

- 1) Primary Memory (RAM)
- 2) Secondary Memory (ROM)

- Primary Memory is a Volatile Memory that is when the power is lost the data stored in the Memory is lost.

Ex: RAM (Random Access Memory).

- Secondary Memory is a Non-Volatile Memory that is Even if the power is lost it holds the data.

Ex: Harddisk, CD-ROM, DVD-ROM, Floppy, Flash Memory etc.

Memory Data Representation :

- Data in memory is stored as binary digits (BITS) e.g.
011100101010
- 1 BYTE = 8 bits
- 1 byte usually stores 1 text character.
- The size of memory is measured in terms of how many bytes it can hold.
 - 1 kilobyte = 2^{10} bytes = 1024 bytes
 - 1 megabyte = 2^{20} bytes = ~1 million bytes
 - 1 gigabyte = 2^{30} bytes = ~1 billion bytes
 - 1 terabyte = 2^{40} bytes = ~1 trillion bytes
- One megabyte can hold approximately 500 pages of text information.

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Output devices

- Output devices make the information resulting from the processing available for usage.

- printer - produces a hard copy of your output
- screen - produces a visual display of your output for browsing
- speakers, etc.



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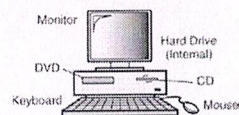
Computing Environments

There are four computing environments:

- 1) Personal Computing Environment
- 2) Time-Sharing Environment
- 3) Client/Server Environment
- 4) Distributed Computing

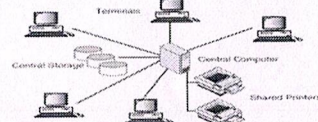
Personal Computing Environment

- All of the computer hardware components are tied together in the personal computer. The whole computer is available to the user.



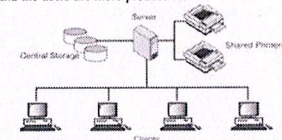
Time-Sharing Environment

- Many users are connected to a computer system. The terminals used are often non-programmable.
- The output devices and auxiliary storage devices are shared by all of the users.
- In the time-sharing environment, all computing is done by the central computer.
- Central computer controls the shared resources, manages the



Client/Server Environment

- A client/server computing environment splits the computing function between a central computer and users' computers.
- Some of the computational responsibility is moved from the central computer and assigned to the client computers.
- The central computer called server that manages the shared data and does some part of the computing
- Because of the work sharing, the response time and monitor display are faster and the users are more productive.



UNIT-1 (Part one) INTRODUCTION TO COMPUTERS

Introduction to Computers

Objectives:

- To review basic computer systems concepts
- To be able to understand the different computing environments and their components
- To review the history of computer languages
- To be able to list and describe the classifications of computer languages
- To understand the steps in the development of a computer program
- To review the system development life cycle

What is a Computer?

A **COMPUTER** is an electronic device that can:

Receive information, Perform processes, Produce output and Store information for future use.

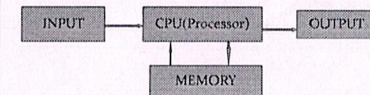
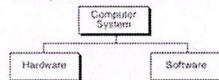


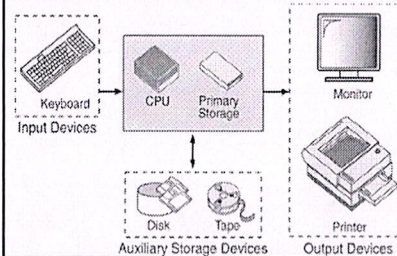
Fig: Information Processing Cycle

- A computer system made of two major components: hardware and software.



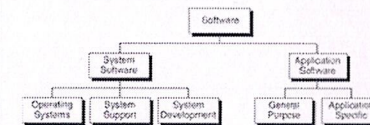
- **Hardware** - the physical parts that make up the computer.
Eg: CPU, memory, disks, CD-ROM drives, printer.
- **Software** - computer programs and applications.
Eg: Operating system, word processor, games, etc.

Basic Hardware Components



Software:

Types of Software:

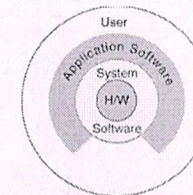


System Software

- Operating system is a Software component that provides an interface between user and system hardware.
Ex: Windows, Linux, Unix, Solaris etc.
- System support Software provides system utilities and other operating services.
Eg: Sort programs, Formatting programs, Linkers, Loaders
- System Development software includes the language translators (Compilers, Assemblers etc.) that convert programs into machine language for execution, debugging tools to ensure that the programs are error-free and CASE tools for software engineering processes
Eg: C Compiler, Java Compiler

Application Software

- Application specific software can be used for a specific intended purpose
Ex: Pay roll, Inventory Management, Library management etc.
- General Purpose software is intended for use in more than one application
Ex: Word Processors, Database Management systems and Computer-aided Design Systems.



Relation Ship Between System and Application Software