



Malla Reddy Engineering College

An UGC Autonomous Institution, Approved by AICTE, New Delhi & Affiliated to JNTUH,
Hyderabad, Accredited by NAAC with 'A++' Grade (3rd Cycle), Maisammaguda (H),
Medchal-Malkajgiri, Secunderabad Telangana-500100 www.mrec.ac.in

DEPARTMENT OF INFORMATION TECHNOLOGY

REQUISITION LETTER

Date: 02.12.2022

To

The Principal,
Malla Reddy Engineering College (Autonomous),
Maisammaguda, Dhulapally,
Secunderabad – 500100.


Sub - Seeking Permission to conduct Value Added Course on “Programming with C++”- Reg.

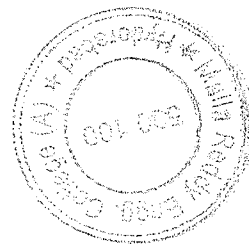
Respected Sir,


In connection with the training programs being organized to get knowledge on recent technologies, department of IT is planning to organize a 30 hours value added program on “Programming with C++” from 05.12.2022 to 10.12.2022 for II Year Students. Hence I requested you to grant permission to organizing the value added Program on “Programming with C++” in the above said dates.

Thank you Sir,

Yours Sincerely,


Malla Reddy Engineering College
Maisammaguda, Dhulapally,
(Post Via Kompally), Sec-bad-500100.




HOD-IT
Dept. of Information Technology
Malla Reddy Engg. College (A)
Maisammaguda-500 100.



Malla Reddy Engineering College (An UGC Autonomous Institution,
Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad). Accredited 3rd time by **NAAC**
with 'A++' Grade, Maisammaguda, Medchal - Malkajgiri District, Secunderabad, Telangana State
- 500100, www.mrec.ac.in

DEPARTMENT OF INFORMATION TECHNOLOGY

Date:02-12-22

CIRCULAR

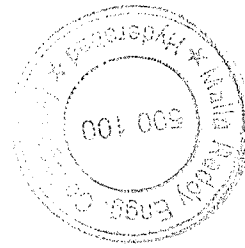
All the Students of II-I are hereby informed that Value Added Course on “**Programming with C++**” from 05.12.2022 to 10.12.2022 is being organized by the Department of Information Technology .The Resource Person for the course is Mr.Vijay Kumar,Trainer in Synxa IT Pvt Ltd. Students are advised to register names to the program coordinator Ms.P.Swapna on or before03-12-22 and utilize this opportunity to enhance the Skills by attending the program.

The detailed schedule of the program will be displayed in the notice board.

Copy to:

- 1) Circulation in Students classroom
- 2) All HOD'S
- 3) Notice Boards
- 4) PA to Principal for filling

HOD-IT
Head
Dept. of Information Technology
Malla Reddy Engg. College (A)
Maisammaguda-500 100.



Principal
Malla Reddy Engineering College
Maisammaguda, Medchal,
(Post Via Kompally), Sec-abad-500100,

About the Institution

Malla Reddy Engineering College (Autonomous) is one of the reputed engineering colleges in Hyderabad, Telangana. **MREC (A)** is part of Malla Reddy Group of Institutions (MRGI), founded by Sri. Ch. Malla Reddy, currently Hon'ble Minister, Labor and Employment, Factories, Women and Child Welfare and Skill Development, Govt. of Telangana State. The college is situated in aserene, lush green environment in Maisammaguda, Gundlapochampally, Medchal (M), Medchal-Malkajgiri District Telangana - 500100.

The college was established in 2002 and is an autonomous institution approved by UGC and affiliated to JNTUH. The college is re-accredited by NAAC with 'A++' Grade (III Cycle) and was conferred autonomous status by JNTUH in 2011 and by UGC in 2014 for a period of 6 years. Our eligible UG and PG programs received NBA accreditation and some of them received reaccreditation too. The college caters to wide ranging aspirations and goals of student communities by offering new courses in UG- Cyber Security, Artificial Intelligence and Machine Learning, Data Science and IOT along with programs in various streams of Engineering & Technology and Management. It boasts of world-class infrastructure and well-equipped laboratories in all departments and is skillfully and smartly guided by Dr. Ramaswami Reddy, Principal, MREC (A) who have a rich teaching and industrial experience.

Advisory Committee:

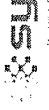
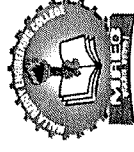
Chief Patrons: Sri. Ch. Malla Reddy, Minister-Telangana State-India.
Founder Chairman
Malla Reddy Group of Institutions
Patrons: Sri. Ch. Mahender Reddy, Secretary, MRGI
Dr. Ch. Bhadra Reddy
President, MRGI
Co-Patrons: **Dr. Ramaswami Reddy**
Principal, MREC(A)
Convener: **Dr. Deena Babu .M**
HOD IT
Coordinator: **Ms. P. Swapna**
Assistant Professor, IT

Organizing Committee:

Ms. M. Sandhyavani, Assistant Professor, IT
Ms. Devi Sravani, Assistant Professor, IT
Mr. N. Satish Kumar, Assistant Professor, IT

About the Department:

The Department of Information Technology was established in 2007 with intake of 60 Students and with specific Vision, Mission and Goals. From the day college was affiliated to Jawaharlal Nehru Technological University, Hyderabad (JNTUH) and recognized by AICTE, New Delhi the Department works under the Rules and Regulations JNTUH and AICTE. The course curriculum proposed by the JNTUH will be implemented strictly. However, if required the Department proposes modifications or inclusions of new courses in the curriculum to the JNTUH for consideration.



A One-Week Training program (Valu Course)

On
"Programming with C++"
(05th to 10th, DEC 2022)
In Association with
SYNXA IT Pvt Ltd

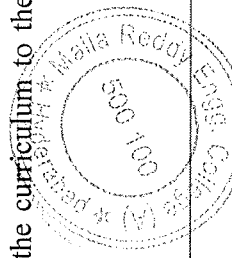


Organized by Department of

Information Technology
MALLA REDDY ENGINEERING COLLEGE
(AUTONOMOUS) MAIN CAMPUS
An UGC Autonomous Institution, Appr
AICTE & Affiliated to JNTUH-Hydr
Reaccredited by NAAC with 'A++' Grade (II
Maisammaguda (H), Gundlapochampally
Medchal (M), Medchal - Malkajgiri Distri
Telangana - 500100, India

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Principal
Malla Reddy Engineering College
Maisammaguda, District
(Post Via Company) Sec-2, 500100.





Malla Reddy Engineering College

An UGC Autonomous Institution, Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad, Accredited by NAAC with 'A++' Grade (3rd Cycle), Maisammaguda (H), Medchal-Malkajgiri, Secunderabad Telangana-500100 www.mrec.ac.in


Department of Information Technology


“Value-Added Course on Programming with C++”

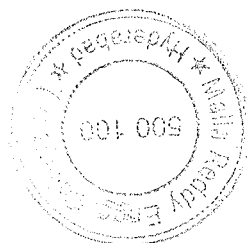
Schedule

Day & Date	10:00-11:10AM	11:10-11:20AM	11:20AM-1:00PM	1:00-2:00PM	2:00-4:00PM
05/12/2022	Introduction	Tea Break	Tokens, Data Types, operators	Lunch Break	Control Structures
06/12/2022	Type Conversion		Virtual Functions		overloading, member functions
07/12/2022	Arrays		Static Data members, returning objects		Constructors, Destructors
08/12/2022	Inheritance and types Multilevel, Hierarchal		Exception Handling		Virtual Base class, Polymorphism
09/12/2022	Virtual Functions, Overriding		Array index out of bounds, class template		New & Delete operators
10/12/2022	questionnaire		Recap		EXAM


Coordinator


HOD
Head
Dept. of Information Technology
Malla Reddy Engg. College (A)
Maisammaguda-500100.


Principal
Malla Reddy Engineering College
Maisammaguda (H), Secunderabad
(Post Via Kompally, Secunderabad-500100)





MALLA REDDY ENGINEERING COLLEGE

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Maisammaguda (H), Medchal-Malkajiri District, Secunderabad,
Telangana State – 500100, www.mrec.ac.in

Department of Information Technology

Value Added Course Enrolled List

“Programming with C++”

(05.12.2022 to 10.12.2022)

Sl.No	Roll No	Name
1	21J41A1201	ACHE SAIGANESH
2	21J41A1202	ADEPU AMOGH
3	21J41A1203	ANUGU RUCHITHREDDY
4	21J41A1204	BALLEM JEEVAN KUMAR
5	21J41A1205	BANKALA RAJESH
6	21J41A1206	BILLA RAHUL
7	21J41A1207	BINGI ASHRITH
8	21J41A1208	BODDU SINDHU
9	21J41A1209	BUTHALE KAVERI
10	21J41A1210	C SAI CHARAN VARMA
11	21J41A1211	CH ASISH SAI NARSHAMIN
12	21J41A1212	CHOWDARI SHASHANK
13	21J41A1213	DHARA SWAPNA
14	21J41A1214	EAMANI AMULYA PRIYA
15	21J41A1215	EDULA PRUDHVI SAI
16	21J41A1216	GAMPALA KRISHNA VEENA
17	21J41A1217	GAYAM ANIL KUMAR

18	21J41A1218	GOLI SHIVANI
19	21J41A1219	GRANDHI YATHIN SAI
20	21J41A1220	J RUSHINATH
21	21J41A1221	JAVVAJI SRIMAN GOUD
22	21J41A1222	JOGULA AKASH
23	21J41A1223	KALVA GOPAL
24	21J41A1224	KANDAGATLA SAI SRINIVAS
25	21J41A1225	KANTAMANENI HARINATH
26	21J41A1226	KANTAPPAGARI MEGHANA
27	21J41A1227	KHETAWATH TULSI RAM
28	21J41A1228	KOPURI RAMU
29	21J41A1229	KORLA SOUMYA
30	21J41A1230	KOVI VAMSI KRISHNA
31	21J41A1231	M PRANITHA
32	21J41A1232	MADHURANTAKAM PAVANTEJA
33	21J41A1233	MADISHETTY SHARATH
34	21J41A1234	MARALI SHASHANK PATEL
35	21J41A1235	MOHD SOHAILUDDIN
36	21J41A1236	MOHD ZOEIBUDDIN FAROOQUI
37	21J41A1237	MUDDINENI KRISHNA SAI SAKETH
38	21J41A1238	NAGULA TEJASWINI
39	21J41A1239	NAKKA RAJEEV
40	21J41A1240	O RISHIKESH
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42	21J41A1242	PAVITRA VAISHNAVI

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45	21J41A1245	PENDEM NITHIN
46	21J41A1246	PITANI JAYASRI
47	21J41A1247	POLEPALLI SAI KUMAR
48	21J41A1248	RAMAVATH KEERTHI
49	21J41A1249	RANGA AKSHAYA
50	21J41A1250	SERI ABHILASH REDDY
51	21J41A1251	SHAIK KARISHMA
52	21J41A1252	SHAIK SAMEER
53	21J41A1253	SILUMULA SANGEETHA
54	21J41A1254	SINGIREDDY PATAK MADHAV REDDY
55	21J41A1255	SIRIPURAM PRASHANTH
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59	21J41A1259	THIRUNAHARI SHRAVYA
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62	21J41A1262	VALLAPU JANAKI RAM
63	21J41A1263	VINNAKOTA SAHITHI MANISHA
64	21J41A1264	VUMMADI SAI BHAVNA
65	21J41A1265	VUPPALA HASINI

Dept. of Information Technology
HOD-IT
Malla Reddy Engg. College (W)
Maisammaguda-500 100.

[Signature]
Principal
Malla Reddy Engineering College
Maisammaguda, Dist: Nalgonda,
(Post Via Nalgonda), Sec: Bad-500100.





MALLA REDDY ENGINEERING COLLEGE

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Department of Information Technology
Value Added Course Certified Students List
“Programming with C++”
(05.12.2022 to 10.12.2022)

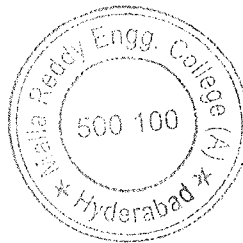
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HOD-IT

Head
Dept. of Information Technology
Malla Reddy Engg. College (A)
Maisammaguda-500 100.



Principal
Malla Reddy Engineering College
Maisammaguda, Uthupet
(Post Via Kompally), Sec-6, Hyderabad-500 100.

54	21J41A1254	SINGIREDDY PATAK MADHAV REDDY	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur
55	21J41A1255	SIRIPURAM PRASHANTH	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur
56	21J41A1256	SURA VARSHA	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur
57	21J41A1257	TAHA ISHAQ	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur
58	21J41A1258	THATITHOTI VINAY	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur
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60	21J41A1260	THOKA ANIL GOUD	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur
61	21J41A1261	VADLA NIKITHA	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur
62	21J41A1262	VALLAPU JANAKI RAM	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur
63	21J41A1263	VINNAKOTA SAHITHI MANISHA	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur
64	21J41A1264	VUMMADI SAI BHAVNA	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur
65	21J41A1265	VUPPALA HASINI	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur	Maddur


ADD IT
Head
Dept. of Information Technology
Maddur Engineering College (A)



Principal
Maddur Engineering College
Maddur Engineering College
(Post Via Koppal) No. 12-6-500100.

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Lecture 02:	Object Oriented Programming
Lecture 03:	BASIC CONCEPTS OF OBJECTS ORIENTED PROGRAMMING
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Lecture 05:	Basics of C++
Lecture 06:	Tokens
Lecture 07:	Basic Data types in C++
Lecture 08:	Symbolic Constant
Lecture 09:	Operators
Lecture 10:	Control Structures
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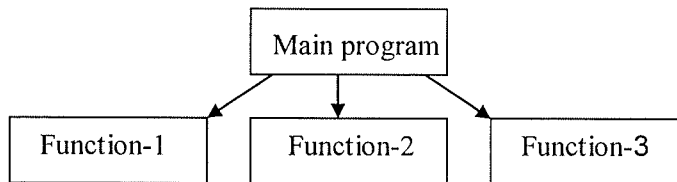

Malla Reddy Engineering College
Malavalli, Nellore District, Andhra Pradesh
(Post Via Kempale), Sec-2, Dist-34/0100.



Procedure Oriented Programming Language

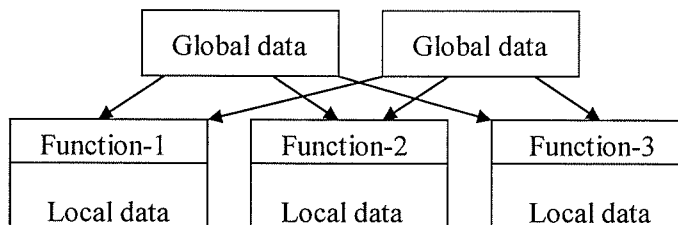
In the procedure oriented approach, the problem is viewed as sequence of things to be done such as reading , calculation and printing.

Procedure oriented programming basically consist of writing a list of instruction or actions for the computer to follow and organizing these instruction into groups known as functions.



The disadvantage of the procedure oriented programming languages is:

1. Global data access
2. It does not model real word problem very well
3. No data hiding



Characteristics of procedure oriented programming:

1. Emphasis is on doing things(algorithm)
2. Large programs are divided into smaller programs known as functions.
3. Most of the functions share global data
4. Data move openly around the system from function to function
5. Function transforms data from one form to another.
6. Employs top-down approach in program design

LECTURE-3

BASIC CONCEPTS OF OBJECTS ORIENTED PROGRAMMING

1. Objects
2. Classes
3. Data abstraction and encapsulation
4. Inheritance
5. Polymorphism
6. Dynamic binding
7. Message passing

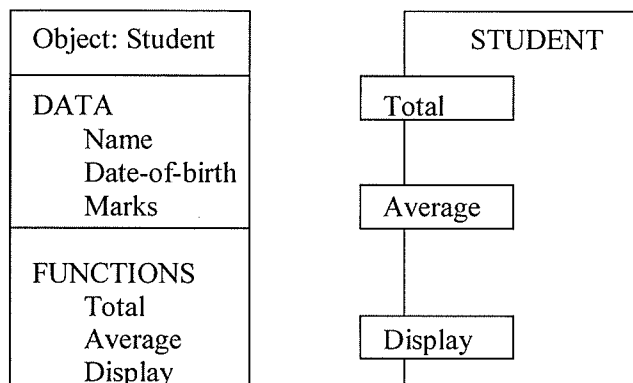
OBJECTS

Objects are the basic run-time entities in an object-oriented system. They may represent a person, a place, a bank account, a table of data or any item that the program must handle.

The fundamental idea behind object oriented approach is to combine both data and function into a single unit and these units are called objects.

The term objects means a combination of data and program that represent some real word entity. For example: consider an example named Amit; Amit is 25 years old and his salary is 2500. The Amit may be represented in a computer program as an object. The data part of the object would be (name: Amit, age: 25, salary: 2500)

The program part of the object may be collection of programs (retrive of data, change age, change of salary). In general even any user –defined type-such as employee may be used. In the Amit object the name, age and salary are called attributes of the object.



CLASS:

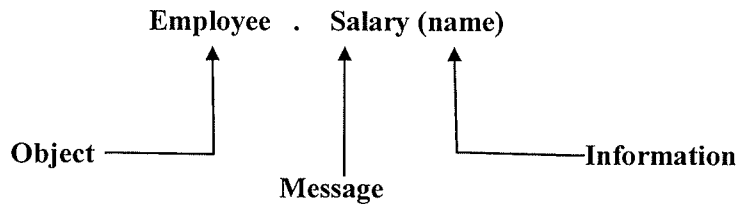
A group of objects that share common properties for data part and some program part are collectively called as class.

In C ++ a class is a new data type that contains member variables and member functions that operate on the variables.

MESSAGE PASSING :

An object oriented program consists of a set of objects that communicate with each other.

A message for an object is a request for execution of a procedure and therefore will invoke a function (procedure) in the receiving object that generates the desired result. Message passing involves specifying the name of the object, the name of the function (message) and information to be sent.



LECTURE-5

Basics of C++

C ++ is an object oriented programming language, C ++ was developed by Jarney Stroustrup at AT & T Bell lab, USA in early eighties. C ++ was developed from c and simula 67 language. C ++ was early called 'C with classes'.

C++ Comments:

C++ introduces a new comment symbol //(double slash). Comments start with a double slash symbol and terminate at the end of line. A comment may start any where in the line and what ever follows till the end of line is ignored. Note that there is no closing symbol.

The double slash comment is basically a single line comment. Multi line comments can be written as follows:

```
// this is an example of  
// c++ program  
// thank you
```

The c comment symbols /**/ are still valid and more suitable for multi line comments.

```
/* this is an example of c++ program */
```

Output Operator:

The statement `cout <<"Hello, world"` displayed the string with in quotes on the screen. The identifier `cout` can be used to display individual characters, strings and even numbers. It is a predefined object that corresponds to the standard output stream. Stream just refers to a flow of data and the standard Output stream normally flows to the screen display. The `cout` object, whose properties are defined in `iostream.h` represents that stream. The insertion operator `<<` also called the 'put to' operator directs the information on its right to the object on its left.

Return Statement:

In C++ `main ()` returns an integer type value to the operating system. Therefore every `main ()` in C++ should end with a `return (0)` statement, otherwise a warning or an error might occur.

Input Operator:

The statement
`cin>> number 1;`

is an input statement and causes. The program to wait for the user to type in a number. The number keyed in is placed in the variable `number1`. The identifier `cin` is a predefined object in C++ that corresponds to the standard input stream. Here this stream represents the key board.

The operator `>>` is known as get from operator. It extracts value from the keyboard and assigns it to the variable on its right.



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Department of Information Technology

Value Added Course On

“Programming with C++”

Date: 10/12/2022

Examination Question Paper

1. Which of the following is not a fundamental data type in C++?

- A) int
- B) float
- C) string
- D) char

2. What does the 'volatile' keyword in C++ signify?

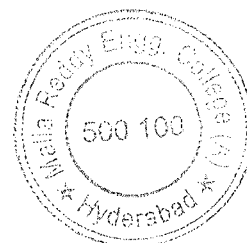
- A) It indicates that a variable is constant and cannot be modified.
- B) It instructs the compiler to avoid optimizations involving the variable.
- C) It specifies the visibility of variables in different scopes.
- D) It denotes a variable that can only be accessed by certain functions.

3. What is the output of the following code snippet?

```
#include <iostream>
```

```
using namespace std;
```

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```
int main()
{
    int x = 10;

    int&y = x;

    y = 20;

    cout<< x <<endl;

    return 0;
}
```

A) 10

B) 20

C) Compilation Error

D) Undefined Behavior

4. What is the result of the following code snippet?

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    intarr[5] = {1, 2, 3, 4, 5};
```

```
    int *ptr = arr;
```

```
cout<< *(ptr + 2) <<endl;  
  
return 0;  
  
}
```

A) 1

B) 2

C) 3

D) 4

5. Which operator is used for dynamic memory allocation in C++?

A) new

B) malloc

C) alloc

D) alloc_mem

6. What is the output of the following code snippet?

```
#include <iostream>
```

```
using namespace std;
```

```
class Base
```

```
{
```

```
public:
```

```
    virtual void display()
```

```
{  
  
    cout<< "Base Display" <<endl;  
  
}  
  
};  
  
class Derived : public Base  
  
{  
  
public:  
  
    void display() override  
  
{  
  
    cout<< "Derived Display" <<endl;  
  
}  
  
};  
  
int main() {  
  
    Base *ptr = new Derived();  
  
    ptr->display();  
  
    return 0;  
  
}
```

A) Base Display

B) Derived Display

C) Compilation Error

D) Undefined Behavior

7. What will be the output of the following code?

```
#include <iostream>

using namespace std;

void swap(int&a, int&b)

{

    int temp = a;

    a = b;

    b = temp;

}

int main()

{

    int x = 5, y = 10;

    swap(x, y);

    cout<< "x: " << x << ", y: " << y << endl;

    return 0;

}
```

A) x: 5, y: 10

B) x: 10, y: 5

C) x: 0, y: 0

D) Compilation Error

8. Which statement is true about C++ references?

A) References cannot be null.

B) References can be re-assigned to refer to different variables after initialization.

C) References occupy additional memory space compared to pointers.

D) References are used for dynamic memory allocation.

9. What does the 'constexpr' keyword signify in C++?

A) It specifies a function to be executed at compile time.

B) It is used to declare constants.

C) It denotes a function that can be overridden in derived classes.

D) It is used to allocate memory dynamically.

10. What is the output of the code snippet below?

```
#include <iostream>
```

```
using namespace std;
```

```
class A {
```

```
public:
```

```
virtual void show() {  
    cout<< "Class A" <<endl;  
}  
};  
  
class B : public A {  
public:  
    void show() {  
        cout<< "Class B" <<endl;  
    }  
};  
  
int main() {  
    A *ptr = new B();  
    ptr->show();  
    return 0;  
}
```

- A) Class A
- B) Class B
- C) Compilation Error
- D) Undefined Behavior

11. Which among the following statements is correct regarding 'iostream' and 'cstdio' in C++?

- A) 'iostream' and 'cstdio' both provide functions for console input and output.
- B) 'iostream' and 'cstdio' are interchangeable and can be used interchangeably in any C++ program.
- C) 'iostream' is used for console input and output, while 'cstdio' is used for file input and output.
- D) 'cstdio' is used for console input and output, while 'iostream' is used for file input and output.

12. What does the following code snippet output?

```
#include <iostream>

using namespace std;

int main()

{

    int x = 5;

    int *ptr = &x;

    cout<< *ptr<<endl;

    *ptr = 10;

    cout<< x <<endl;

    return 0;

}
```

- A) 5, 10

B) 10, 10

C) 5, 5

D) 10, 5

13. What is the purpose of the 'friend' keyword in C++?

A) It signifies a function or class that can access private and protected members of another class.

B) It is used to declare a function or class inside another class.

C) It denotes a function or class that is inherited from a base class.

D) It specifies a function or class that cannot be overridden.

14. What is a pure virtual function in C++?

A) A function that has no definition in the class declaration.

B) A function that cannot be overridden by derived classes.

C) A function that is defined in a base class and overridden in derived classes.

D) A function that can be called only by the base class.

15. What is the output of the following code snippet?

```
#include <iostream>
```

```
using namespace std;
```

```
int main() {
```

```
    int i = 0;
```

```
    for (; i < 5; ++i) {
```

```
    if (i == 3)
        break;
}

cout<< i <<endl;

return 0;
}
```

A) 3

B) 4

C) 5

D) Compilation Error

16. Which operator is used to access the member functions and variables of a class through a pointer in C++?

A) . (dot operator)

B) -> (arrow operator)

C) :: (scope resolution operator)

D) : (colon operator)

17. What is the purpose of the 'const' keyword in C++?

A) It declares a constant variable that cannot be modified after initialization.

B) It specifies a function that doesn't change the state of an object.

- C) It denotes a class that cannot be inherited.
- D) It creates a copy of an object for use in a function.

18. What will be the output of the following code snippet?

```
#include <iostream>

using namespace std;

int main() {

    intarr[] = {1, 2, 3, 4, 5};

    int *ptr = arr;

    cout<<ptr[3] <<endl;

    return 0;

}
```

- A) 1
- B) 2
- C) 3
- D) 4

19. Which statement regarding C++ namespaces is true?

- A) Namespaces provide a way to define global variables in C++.
- B) Namespaces prevent variable names from being used multiple times in a program.
- C) Namespaces avoid naming conflicts by encapsulating code into a named scope.

D) Namespaces restrict access to functions within a program.

20. What is the function of the 'typeid' operator in C++?

A) It determines the type of a variable or an expression.

B) It checks the memory address of a variable.

C) It converts a variable from one data type to another.

D) It allocates memory dynamically.

21. What will be the output of the following code snippet?

```
#include <iostream>

using namespace std;

class Base {

public:

    Base() {

        cout<< "Base Constructor" <<endl;

    }

    ~Base() {

        cout<< "Base Destructor" <<endl;

    }

};

int main() {
```

```
Base* ptr = new Base();  
  
delete ptr;  
  
return 0;  
  
}
```

- A) Base Constructor
- B) Base Destructor
- C) Base Constructor, Base Destructor
- D) Base Destructor, Base Constructor

22. Which of the following statements about function overloading in C++ is true?

- A) Function overloading allows multiple functions with the same name but different return types.
- B) Overloaded functions must have different names but can have the same number and types of parameters.
- C) Function overloading is not allowed in C++.
- D) Overloaded functions must have the same number of parameters but can have different types.

23. What does the 'static' keyword signify in C++?

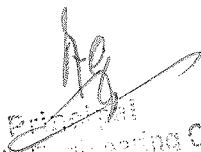
- A) It specifies a function that is shared among all objects of a class.
- B) It declares a variable that cannot be modified after initialization.
- C) It defines a variable that retains its value across function calls.
- D) It indicates a function or variable accessible only within the same source file.

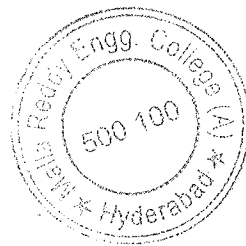
24. What is the purpose of the 'new' operator in C++?

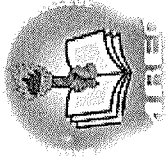
- A) To deallocate memory dynamically.
- B) To allocate memory for an object or variable dynamically.
- C) To initialize a variable with a default value.
- D) To declare a constant variable.

25. Which of the following is true about inheritance in C++?

- A) Inheritance allows a derived class to inherit all private members of the base class.
- B) Multiple inheritance is not supported in C++.
- C) Inheritance allows a derived class to inherit the constructors of the base class.
- D) Inheritance restricts access to the protected members of the base class.


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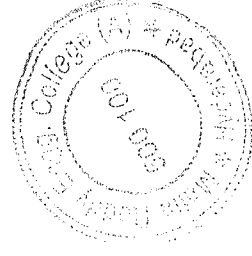
Certificate

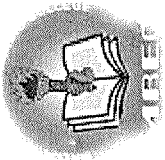
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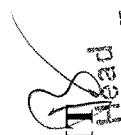
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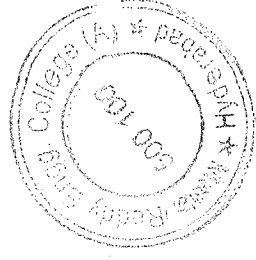
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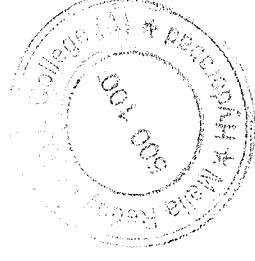
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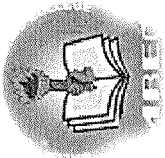
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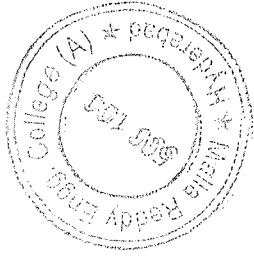
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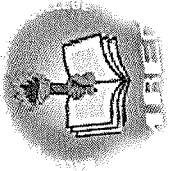
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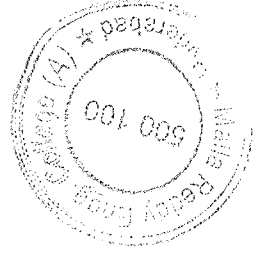
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DEPARTMENT OF INFORMATION TECHNOLOGY


Date: 12.12.2022


Report of Value Added Course on Programming with C++

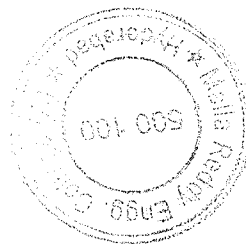
A six days program on **Programming with C++** was organized by the department of Information Technology for II years. The resource person of the program is Mr. Vijay Kumar. The course involves the basic concepts of c++, Programming using oops. The event was coordinated by Ms. P. Swapna, Asst. Professor, IT Department from 05.12.2022 to 10.12.2022 and 65 students.

After the training programme, the students learned the following,

- The importance of studying this course and the features supported by c++.
- The Programming techniques using c++.
- Acquired practical knowledge of the course.


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DEPARTMENT OF INFORMATION TECHNOLOGY

Title of the Session: *Programming with C++*

Department & Designation: *IT & student*

Date of the Session: *10/12/22*

S.No		Excellent	Very Good	Good	Average
1	The Session Objective were stated clearly and met	✓			
2.	The Workshop was well Organized		✓		
3.	The information and / or skills presented were relevant and useful for Career	✓			
4	The presenter responded to questions effectively?		✓		
5	The overall assessment of the Session	✓			
6	The session content met your Expectations	✓			

Excellent:4 Very Good:3 Good:2 Average:1

Suggestions If any:

Good, Expecting such session's in future.



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DEPARTMENT OF INFORMATION TECHNOLOGY

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Date of the Session: *10/12/22*

S.No		Excellent	Very Good	Good	Average
1	The Session Objective were stated clearly and met	✓			
2.	The Workshop was well Organized	✓			
3.	The information and / or skills presented were relevant and useful for Career	✓			
4	The presenter responded to questions effectively?		✓		
5	The overall assessment of the Session	✓			
6	The session content met your Expectations	✓			

Excellent:4 Very Good:3 Good:2 Average:1

Suggestions If any:

Good, need more session's.



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Department & Designation: *IT & student*

Date of the Session: *10/12/22*

S.No		Excellent	Very Good	Good	Average
1	The Session Objective were stated clearly and met	✓			
2.	The Workshop was well Organized		✓		
3.	The information and / or skills presented were relevant and useful for Career	✓			
4	The presenter responded to questions effectively?	✓	✓		
5	The overall assessment of the Session	✓			
6	The session content met your Expectations	✓			

Excellent:4 Very Good:3 Good:2 Average:1

Suggestions If any:

Need to extend for one more week to help us.



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Title of the Session: *Programming with C++*

Department & Designation: *IT & Student*

Date of the Session: *10/12/2022*

S.No		Excellent	Very Good	Good	Average
1	The Session Objective were stated clearly and met	✓			
2.	The Workshop was well Organized		✓		
3.	The information and / or skills presented were relevant and useful for Career		✓		
4	The presenter responded to questions effectively?	✓			
5	The overall assessment of the Session	✓			
6	The session content met your Expectations		✓		

Excellent:4 Very Good:3 Good:2 Average:1

Suggestions If any:

Session was very good.



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DEPARTMENT OF INFORMATION TECHNOLOGY

Title of the Session: *Programming with c++*

Department & Designation: *IT Student*

Date of the Session: *10/12/22*

S.No		Excellent	Very Good	Good	Average
1	The Session Objective were stated clearly and met	✓			
2.	The Workshop was well Organized		✓		
3.	The information and / or skills presented were relevant and useful for Career	✓			
4	The presenter responded to questions effectively?	✓			
5	The overall assessment of the Session		✓		
6	The session content met your Expectations	✓			

Excellent:4 Very Good:3 Good:2 Average:1

Suggestions If any:

Session was Good

expecting such type of sessions.