

FOUNDATIOS OF JAVA



MALLAREDDY ENGINEERING COLLEGE

(Autonomous)

Maisammaguda(H),
Gundlapochampally Village, Medchal Mandal, Medchal-
Malkajgiri District, Telangana State – 500100

CIRCULAR

Date: 28/08/2020

All the 2nd/I Year/Sem students are hereby informed that the Malla Reddy Engineering College (Autonomous) is planning to organize Value Added Courses like Autonomous Robotics, Graphic Designing - I & II, Green Matte Studio - Audio Effects & Transitions, Design for Additive Manufacturing (Introduction to 3D Modeling), Data Science With R Programming, Foundations Of JAVA in Centre Of Excellence. In this regard Interested students are hereby directed to register for these Courses in online or before 05/09/2020. For further details, please contact Centre of Excellence, MREC(A)


Principal

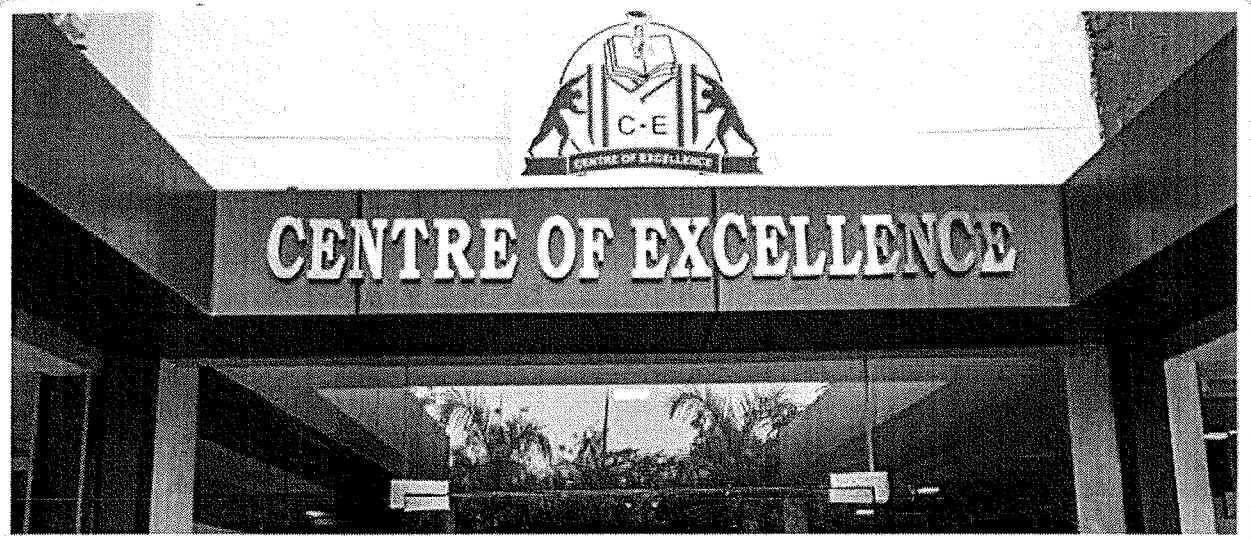
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(Autonomous)
Maisammaguda, Dhulapally,
(Post Via Kompally), Sec'bad-500 100

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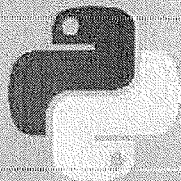
MALLA REDDY ENGINEERING COLLEGE
MAIN CAMPUS, AUTONOMOUS INSTITUTION
Maisammaguda, Dhulapally (Post) via Kompally,
Secunderabad-500100 Medchal - Malkajgiri District Telangana, India



COMPUTER SOFTWARE

**HTML ,PYTHON WITH DJANGO ,JAVA ,
SCRATCH PROGRAMMING**

**LAB VIEW, FOUNDATION OF BLOCK CHAIN,
MATLAB, BLOCK CHAIN REVOLUTION, MATLAB PRO,
ADVANCE JAVA, ADVANCE PYTHON.**



python



Java

Course Duration -: 4 Months

Before Software can be Reusable

it First has to be Usable.



MALLA REDDY ENGINEERING COLLEGE
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CENTRE OF EXCELLENCE

Fundamentals of Java

Course Code: CFEC02

Duration: 32 Hours

Course Objective: This course is designed to provide students the basic skills and knowledge on Java. Learn how to solve programming problems using functions, for loops, conditional statements, recursive algorithms, and learn about the Object-Oriented Paradigm (OPP).

Syllabus

UNIT-I:

6Hours

Module 1- Introduction

Types of Programming language and Paradigms. Java – what, where and why?, Platform independency, Comparison in Java with C and C++, Role of Java Programmer in Industry. Java Evolution and History, Features of Java Language.

The Java Virtual Machine (JVM) – The heart of Java., Java's Magic Byte code, JDK , JRE and JIT, Reserve / Keywords present in Java Lexical Tokens, Identifiers

UNIT-II:

6Hours

Primitive Data types and Block in java Data types -int , char , float , double , Boolean , short , long , byte, UNICODE system, Value type, Reference type.

Types and Scope of variables, Static variables, Instance, variable, Local variables, final variable, transient variable, volatile variable. Static block and Non-static block. Static, non-static, final, abstract, native and synchronized Communicate java application with other language using java native interface.

UNIT-III:

8Hours

Java Operators

Arithmetic operators, Relational operators, Logical operators, Shift operators, Assignment Operators, Unary operator, Bitwise operators, Special operators. Ternary operator

Decision making and branching programming with Java,

If statement, If...Else statement and if...else, ladder. Nested if Multiple if, Switch... case statement, Conditional operator vs. if statement, Break and continue in java

Decision making and looping - While, Do, For, For each

Class Fundamentals,

Object & Object reference, Life time of object & Garbage Collection, Creating with Operating reference and Objects, Constructor & initialization code block, Access Control, Modifiers, methods Nested, Inner Class & Anonymous Classes Abstract Class & Interfaces Defining Methods, Argument Passing Mechanism Method Overloading, Recursion.

Dealing with Static Members, Finalize () Method, Native Method, Use of "this" reference, Use of Modifiers with Classes & Methods, Design of Accessors and Mutator Methods Cloning Objects, shallow and deep cloning Generic Class Types

UNIT-IV:

6Hours

Extending Classes and Inheritance

Types of Inheritance in Java, use of Constructors in inheritance. Polymorphism in OOP, Overriding Super Class Methods,

Use of "super" keyword, Restriction in case of method, overriding, Type Compatibility and Conversion

Implementing interfaces, Dynamic method dispatching by down-casting and up-ca

Package

Organizing Classes and Interfaces, in Packages, Package as Access Protection, Defining Package. Advantage of package, Sub-Package CLASSPATH Setting for Packages. Making JAR Files for Library Packages, Import and Static Import Creating .EXE and jar executable file. Exception Handling The Idea behind Exception, Exceptions & Errors, Types of Exception, Checked and Un-Checked Exceptions, Control Flow in Exceptions, Use of try and catch block, Multiple catch block, Nested try, finally block, throw keyword, Exception Propagation, throws keyword, Exception Handling with Method overriding, In-built and User Defined Exceptions, Exception handling rule in case of method overriding. How to handle unreachable statements using finally.

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Arrays

Defining an Array, Single-Dimensional Array, Initializing & Accessing Array, Multi –Dimensional Array, Jagged Array

Arrays class, Methods in Arrays class, Sorting the elements of Array, Searching, insert, delete, dynamically. Matrix multiplication, addition, transpose, upper triangular, mlower triangular, sparse matrix.

String

what and why Operation on String, Immutable String, String comparison and concatenation, Method of String class, StringBuffer class and its methods. StringBuilder class in java. Creating Immutable class like String. Using Collection Bases Loop for String, Tokenizing a String, Object comparisons using Comparator and comparable interface.


6Hours

UNIT-V:

Input/output Operation in Java (java.io Package) Streams and the new I/O Capabilities Understanding Streams File class and its methods. Creating file and folder using java code. The Classes for Input and Output FileOutputStream & FileInputStream FileWriter & FileReader Input from keyboard by InputStreamReader Input from keyboard by Console Input from keyboard by Scanner PrintStream class PrintWriter class

Course Outcomes: This course builds on the skills gained by students in Java Fundamentals or Java Foundations to help advance Java programming skills.

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	<p style="text-align: center;">MALLA REDDY ENGINEERING COLLEGE (Autonomous) Maisammaguda(H), Gundlapochampally Village, Medchal Mandal, Medchal-Malkajgiri District, Telangana State - 500100</p>	<p>Course: FOUNDATIONS OF JAVA</p> <p>Date:01/09/2020 TO 01/02/2021</p>
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Enrolled Students

SL.No	Roll No	NAME	BRANCH
1.	19J41A0142	PATLAVATH SRAVAN KUMAR	CE
2.	19J41A0143	PEDIMALLA PRANITH KUMAR	CE
3.	19J41A0144	PENGARLA SHAM SUNDER	CE
4.	19J41A0145	RAJAMPET PREETHAM KUMAR	CE
5.	19J41A0146	RAVULA JYOTHSNA	CE
6.	19J41A0147	RAYAPALLY SATHWIK REDDY	CE
7.	19J41A0148	SAIDU SRAVYA	CE
8.	19J41A0149	SALIPURAM SAI GANESH	CE
9.	19J41A1241	MERUGU SHRUTHI	IT
10.	19J41A1242	MIRZA MASROOR BAIG	IT
11.	19J41A1243	MOHAMMED BILAL	IT
12.	19J41A1244	MOHD ANSARUDDIN	IT
13.	19J41A1245	PALLAKONDA PRIYANKA	IT
14.	19J41A1246	PARIMKAYALA SOWMYA SRI	IT
15.	19J41A1247	PODDUTURI AKANKSHA	IT
16.	19J41A1248	POTTA GANESH	IT
17.	19J41A0244	PULLURI HARSHITH	EEE
18.	19J41A0245	RAMALLA PAWAN	EEE
19.	19J41A0246	S SUMANTH	EEE
20.	19J41A0247	SANGARAJU KRISHNA SAI	EEE
21.	19J41A0248	SHAIK BAJI BABA	EEE
22.	19J41A0249	SHREEYA MISHRA	EEE
23.	19J41A0250	SIRIPURAM SANDEEP	EEE
24.	19J41A0251	S.ADITHYA	EEE
25.	19J41A0252	SUMAYYA THOUFIYA	EEE
26.	19J41A0334	MADAPATHI VIDHYADHER	ME
27.	19J41A0335	MAHENDRAN MOHAN	ME
28.	19J41A0335	MANDA HARIVARDHAN REDDY	ME
29.	19J41A0336	NEERUDI GOUTHAM	ME
30.	19J41A0337	NYALAKANTI VINOD	ME
31.	19J41A0338	PAGADALA MANISAI DEEP	ME
32.	19J41A0339	PISATI SHASHANK REDDY	ME
33.	19J41A0340	PULI NARESH	ME
34.	19J41A0447	PEDDIRAJU RAJASHEKHAR REDDY	ECE
35.	19J41A0448	PINNAKA SAI SURYA	ECE
36.	19J41A0449	RAYARAO SHREYA	ECE
37.	19J41A0450	RUDRU GANGA MOHAN REDDY	ECE
38.	19J41A0451	SARIKONDA ABHINAVAN	ECE
39.	19J41A0452	SHABEER MOHAMMED	ECE
40.	19J41A0453	SHAIK SADHIK	ECE
41.	19J41A0454	SHIKA SAHANA JYOTHI	ECE
42.	19J41A0455	SOUDARAPU NITHIN CHARY	ECE
43.	19J41A2524	MACHARLA PRASHANTH	MINING
44.	19J41A2525	MOHAMMAD SOHAIL ZAHEER	MINING
45.	19J41A2526	MORLA SRIDHAR BABA	MINING
46.	19J41A2527	MOTE MANISH	MINING
47.	19J41A2528	PAUNIKAR ARPIT RAMESH	MINING
48.	19J41A2529	PERUKA THARUN	MINING
49.	19J41A2530	DASARI NEHANTH NIKHIL	MINING
50.	19J41A2531	PURANDLA VINAY KUMAR	MINING
51.	19J41A0552	SOTHUKU VEDA RUTHVIK	CSE
52.	19J41A0553	TALLAPUREDDY ROHITH REDDY	CSE

53.	19J41A0555	TEJASWINI REDDY	CSE
54.	19J41A0556	V RAM NIVAS	CSE
55.	19J41A0557	VAIBHAV PATIL	CSE
56.	19J41A0558	VANKUDOTHU SINDHU	CSE
57.	19J41A0559	VODNALA RAJKAMAL	CSE
58.	19J41A0560	VUPPALA SREEANUSHA	CSE
59.	19J41A0561	ADDALA SRIVATSA GAURAV	CSE
60.	19J41A0562	ADUPALLY THIRUMAL REDDY	CSE

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CERTIFICATE

OF COURSE COMPLETION

This is to Certify that

PATLAVATH SRAVAN KUMAR

*has Successfully Completed Foundations of Java Course
offered by Centre of Excellence, MREC(A) on 01/02/2021
bearing with Roll No. 19J41A0142 and Branch CE.*

**N. RISHIKANTH
DEAN (COE)**

**Dr.A.Ravendra
Principal**

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(Post Via Kompally), Sec'bad-500 100**



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CERTIFICATE OF COURSE COMPLETION

This is to Certify that

SHAIK BAJI BABA

*has Successfully Completed Foundations of Java Course
offered by Centre of Excellence, MREC(A) on 01/02/2021
bearing with Roll No. 19J41A0248 and Branch EEE.*

**N. RISHIKANTH
DEAN (COE)**

**Dr. A. Ravendra
Principal**

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CERTIFICATE OF COURSE COMPLETION

This is to Certify that

PISATI SHASHANK REDDY

*has Successfully Completed Foundations of Java Course
offered by Centre of Excellence, MREC(A) on 01/02/2021
bearing with Roll No. 19J41A0339 and Branch ME.*

**N. RISHIKANTH
DEAN (COE)**

**Dr. A. Ravendra
Principal**

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CERTIFICATE

OF COURSE COMPLETION

This is to Certify that

SOUDARAPU NITHIN CHARY

has Successfully Completed Foundations of Java Course
offered by Centre of Excellence, MREC(A) on 01/02/2021
bearing with Roll No. 19J41A0455 and Branch ECE.

N. RISHIKANTH
DEAN (COE)

Dr. A. Ravendra
Principal

Ravend
PRINCIPAL
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CERTIFICATE

OF COURSE COMPLETION

This is to Certify that

ADUPALLY THIRUMAL REDDY

*has Successfully Completed Foundations of Java Course
offered by Centre of Excellence, MREC(A) on 01/02/2021
bearing with Roll No. 19J41A0562 and Branch CSE.*

**N. RISHIKANTH
DEAN (COE)**

**Dr. A. Ravendra
Principal**

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