BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY AND SCIENCE (A) :: BATLAPALEM, Andhra Pradesh, India

MCA Course Structure & Syllabus

(Applicable for batches admitted from 2025-2026)

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MCA II Semester

Course code : 25MC2L04

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OBJECT ORIENTED PROGRAMMING USING JAVA LAB

Course Objectives:

To understand how to design, implement, test, debug, and document programs

• that use basic data types and computation, simple I/O, conditional and control structures, string handling and functions. To understand the importance of Classes & objects along with constructors, Arrays and Vectors. Discuss the principles of inheritance, interface and packages and demonstrate

• through problem analysis assignments how they relate to the design of methods, abstract classes and interfaces and packages. To understand the importance of Multi-threading

• & different exception handling mechanisms. To learn experience of designing, implementing, testing, and debugging

• graphical user interfaces in Java using applet and AWT that respond to different user events. To understand Java Swings for designing GUI applications based on MVCarchitecture

List of Experiments:

The Fibonacci sequence is defined by the following rule. The first values in the sequence are 1, 1. Every subsequent value is the sum of the 2 values preceding it. Write a Java Program that uses both recursive and non recursive functions to print the nth value of the Fibonacci sequence. 2. Write a Java Program that prompts the user for an integer and then prints out all the prime numbers up to that Integer.

Write a Java Program that checks whether a given string is a palindrome or not. Ex. MALAYALAM is a palindrome

Write a Java Program for sorting a given list of names in ascending order.

1. Write a Java Program that illustrates how runtime polymorphism is achieved.
2. Write a Java Program to create and demonstrate packages.
3. Write a Java Program, using StringTokenizer class, which reads a line of integers and then displays each integer and the sum of all integers.
4. Write a Java Program that reads a file name form the user then displays information about whether the file exists, whether the file is readable/ writable, the type of file and the length of the file in bytes and display the contents using File Input Stream class.
5. . Write a Java Program that displays the number of characters, linesand words in a text/text file.
6. Write a Java Program that works as a simple calculator. Use a grid layout to arrange buttons for the digits and for the +-*?% operations. Add a text field to display the result
7. . 11.Write a Java Program for handling mouse events.
8. 12.Write a Java Program demonstrating the life cycle of a thread.
9. 13.Write a Java Program that lets users create Pie charts. Design your own user interface (with Swings & AWT).
10. 14.Write a Java Program to implement a Queue, using user defined Exception Handling (also make use of throw, throws).

University Nominee Dr.Suneetha Eluri		Alumni Member Mr.HariSuresh Polisetti	
SubjectExpert:1 Dr. B Kezia Rani		Chairman Mr. AVS M Ganesh	
SubjectExpert:2 Dr.SuneelKumarDuvvuri		Member Mr. G L N V S Kumar	
Representative From Industry Mr.SaiKrishna Narima		Member	

Web Resources:

1. https://www.iitk.ac.in/esc101/05Aug/tutorial/information/resources.html
2. https://labex.io/skilltrees/java
3. https://docs.oracle.com/javase/tutorial/index.html
4. https://introcs.cs.princeton.edu/java/home/

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