SRINIVASAN
COLLEGE OF ARTS AND SCIENCE
(MCA PROGRAMME)

(Approved by AICTE, New Delhi & Affiliated to Bharathidasan University, Tiruchirappalli)
(Recognized under the section 2(f) & 12(B) of the UGC Act,1956)
Perambalur–621212| Tamilnadu – India | www.scas.ac.in | www.scasmca.com

A Report on

Live Certification Program on

"Full Stack Web Development"

(04.02.2025 to 08.02.2025)

Zonal Center Program
In Association with

Makeintern & E-Cell IIT Hyderabad

Organized by

DEPARTMENT OF COMPUTER APPLICATIONS

Zonal Championship

Training Partner with E-Cell IIT Hyderabad

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Special Honour to our Chancellor Ayya

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Esteemed Chancellor's Message

Shri. A. Srinivasan

Esteemed Chancellor

Dhanalakshmi Srinivasan University,

Founder & Chairman

Dhanalakshmi Srinivasan Group of Institutions

Society is long dependent on Education to provide the necessary stepping stone on one's path towards individual growth, which contributes directly to the growth of a society and country as a whole. In view of the ever-increasing demand for professionally qualified youth, it has become imperative to increase the availability of quality higher education in diverse fields.

Srinivasan College of Arts And Science strives to establish itself as a citadel of quality technical education in the global arena. The college actively updates itself with foresight, vision and perspective of committed learning, research and training to meet the global demands for professional talents of international standards.

"Knowledge is Power" is the motto of the institution. The institution provides world class infrastructural facilities comparable with the best of its kind in the field of education, state-of-the-art laboratories, innovative teaching-learning process and personality development programmes in molding and creating students of high technical expertise and managerial capabilities

We, at SCAS emphasize on providing quality education thereby developing our students into strong assets of our nation. I hope this profile provides you with a plethora of courses to choose from and cater to your educational palette.

Principal's Cum Director Message

In the modern world, we are living in a connected world were technology is transforming each and every industry by creating new rules and new opportunities. Coping with the change, getting equipped and an attitude for growing together are the key attributes every individual should possess for success today. Knowledge with vision, skills with competence and attitude with integrity shape the success of every student. We at Srinivasan College of Arts and Science – MCA Programme empower students to become responsible, innovative, productive and employable.

I wish MCA Programme for giving this Full Stack Web Development Course to our Students for imparting their knowledge in theoretically and practically from the recent areas and also it will used for their career.

Dr. N. Vetrivelan, MCA., Ph.D.,
Director–MCA Programme / Principal-SCAS

Dean's Message

It is a heartening note that the Department of Computer Applications (MCA PROGRAMME) of SCAS has organized a certificate course on **"Full Stack Web Development"** in collaboration with IIT Hyderabad. The department has been providing students with high-quality education and generating enlightened and promising students, as well as future decision and policy makers, who will repay society by making the most of their educational resources. It aspires for excellence in all areas and is constantly building and redefining its standards. I wish the Head, Faculty Members, and Students success in accomplishing their assignments.

Prof.V.ChandraChowdry, M.A., M.Phil., (Ph.D).,
Dean Academics - SCAS

HOD'S Message

Department of Department of Computer Applications MCA Programme has started in the year 2007. Department imparts quality higher education, research and innovation in core area of Computer Science with state of the art computing facilities to our students. The Department continually strives to conduct cutting-edge of teaching in all areas across Computer Science, Computer Applications & Information Technology. We aim to equip students with the competence of developing high-quality production-grade software, while also cultivating the skill-set to keep the latest state-of-the-art technologies.

The Department is proud to be part of a 700+strong Alumni network, many of the holding influential positions in the I.T Industries, Entrepreneur and Academia in both National and International levels. We look forward to having talented Students, Academicians and Professionals. I strongly agree that, this Full Stack Web Development course was very useful to our Students community for enriching the knowledge in the field of Computer Science and Information Technology. I wish all the best for the Participants of this great event.

Prof. M. Rajakumar, MCA., M.Phil., M.Tech., (Ph.D),
HOD - CA.

Faculty Team

Sl.No	Staff Name	Designation
1	Prof. M.Rajakumar, MCA., M.Phil., M.Tech.,(Ph.D)	HOD
2	Mrs. G.Archana,MCA., M.Phil., (Ph.D)	Assistant Professor
3	Ms. S.Lavanya, MCA., M.Phil.,	Assistant Professor
4	Mr. N.AnanthKumar, M.Sc., M.Phil., B.Ed.,	Assistant Professor
5	Mrs. C.Arunthathi, MCA.,	Assistant Professor
6	Mrs. J.Kalpana, MCA.,	Assistant Professor
7	Mrs. M.Senthamilarasi, MCA., B.Ed.,	Assistant Professor
8	Mr.R.Idayathulla, MCA., M.Phil.,	Assistant Professor
9	Mrs.M.Vidhya, M.Sc., M.Phil.,	Assistant Professor
10	Mr.R.Manibalan, MCA.,	Assistant Professor
11	Mr.M.Suriyanarayanan, MCA, M.Phil.,	Assistant Professor
12	Mrs.M.Keerthana, MCA.,	Assistant Professor

About the Course

Srinivasan College of Arts and Science, Department of CA and Zonal Center Program with "Makeintern & E-Cell IIT Hyderabad", conducted Skill Development Training Program on **"Full Stack Web Development".**

The duration of the training is 30 Sessions, 44 of our BCA students have participated and completed all the sessions, the Resource Person **Mr.N.Rajesh**, Java Full Stack Trainer, Freelancer, Chennai. He delivered the information in the area of "**Full Stack Web Development",** his session was very practical, which inspired all the participants. He has covered that how the Introduction to Java, STS, JDK, JRE, JVM Architecture, Inheritance, Packages, Encapsulation, Polymorphism, Collections, Interface, Abstract, Connect Java to Database and React using this spring tool he develop the program for everything. He has also highlighted about the React and also covers how the Program works automatically in Java Platform.

This course also wrapped up the Python Programming, Matlab, Scratch Programming, these technologies plays a major role in the world. These sessions gave insights to participants of **"Full Stack Web Development"** used and evolved in special circumstances and the changes required delivering the best education while keeping quantity and quality at best. End of these session the students got more knowledge and can able to do a mini projects in the area of Full Stack Web Development.

About the Resource Person

The Resource Person **Mr.N.Rajesh**, Java Full Stack Trainer, Freelancer, Chennai. A strong knowledge of AMAZON WEB SERVICES Amazon EC2, Elastic Block Storage(EBS), Simple Storage Service(S3), Cloud front, Route 53, Elastic Beanstalk, Elastic File Storage(EFS), Glacier, Cloud Watch and Strong knowledge in JAVA FULL STACK development. A rich experience & expertise in the field of Technical Skills UI Technologies, JavaScript Stack, Java Technology, Dev Ops Engineering, Testing Framework and Libs, Cloud Platforms etc.,

Zonal Center Program in Association with Makeintern & E-Cell, IIT, Hyderabad

Live Certification Programme on

FULL STACK WEB DEVELOPMENT

Organized by Srinivasan College of Arts and Science-MCA Programme

TIMING SCHEDULE

DATE	TIMING	DESCRIPTION	REMARKS
04.02.2025 (TUESDAY)	10:00 am – 11:00 am 11.00 am – 11.30 am 11.30 am – 12.30 am 12:30 pm – 1:30 pm 01.30 pm – 2.00 pm 2:00 pm – 3:00 pm 3:00 pm – 4:00 pm 4.00 pm – 5.00 pm	Inauguration of Course TEA BREAK Session – 1 Session – 2 LUNCH Session – 3 Session – 4 Session – 5	5+1-Sessions
05.02.2025 (WEDNESDAY)	9:30 am – 10:30 am 10:30 am – 11:30 am 11:30 am – 12:00 Noon 12:00 pm – 1:00 pm 1:00 pm – 2:00 pm 2:00 pm – 3:00 pm 3:00 pm – 4:00 pm 4.00 pm – 5.00 pm	Session – 6 Session – 7 TEA BREAK Session – 8 LUNCH BREAK Session – 9 Session – 10 Session – 11	6-Sessions
06.02.2025 (THURSDAY)	9:30 am – 10:30 am 10:30 am – 11:30 am 11:30 am – 12:00 Noon 12:00 pm – 1:00 pm 1:00 pm – 2:00 pm 2:00 pm – 3:00 pm 3:00 pm – 4:00 pm 4.00 pm – 5.00 pm	Session – 12 Session – 13 TEA BREAK Session – 14 LUNCH BREAK Session – 15 Session – 16 Session – 17	6-Sessions
07.02.2025 (FRIDAY)	9:30 am – 10:30 am 10:30 am – 11:30 am 11:30 am – 12:00 Noon 12:00 pm – 1:00 pm 1:00 pm – 2:00 pm 2:00 pm – 3:00 pm 3:00 pm – 4:00 pm 4.00 pm – 5.00 pm	Session – 18 Session – 19 TEA BREAK Session – 20 LUNCH BREAK Session – 21 Session – 22 Session – 23	6-Sessions
08.02.2025 (SATURDAY)	9:30 am – 10:30 am 10:30 am – 11:30 am 11:30 am – 12:00 Noon 12:00 pm – 1:00 pm 1:00 pm – 2:00 pm 2:00 pm – 3:00 pm 3:00 pm – 4:00 pm ***4.00 pm – 5.00 pm***	Session – 24 Session – 25 TEA BREAK Session – 26 LUNCH BREAK Session – 27 Session – 28 ***Valedictory Function & Certificate Distribution***	5+1-Sessions
		TOTAL HOURS	**30 Sessions**

Program schedule

Day	Date	Session	Topics
1	04.02.2025	FN	Introduction to Java and STS
		AN	Introduction to JDK and JRE
2	05.02.2025	FN	Introduction to JVM Architecture
		AN	Introduction to Inheritance
3	06.02.2025	FN	Packages and Encapsulation
		AN	Polymorphism and Collections
4	07.02.2025	FN	Interface and Abstract
		AN	Connect Java to Database
5	08.02.2025	FN	What are Client Server and Web server?
		AN	React JS

Session Report

Date : 04.02.2025 - FN

Topic : Introduction to Java and STS

In this session, the trainer gave brief Intorduction about Java. Java is a high-level, object-oriented programming language developed by Sun Microsystems (now owned by Oracle). It is platform-independent due to its "Write Once, Run Anywhere" (WORA) capability, enabled by the Java Virtual Machine (JVM). Java is widely used in enterprise applications, mobile development (Android), web applications, and more. He has delineated about how the Key Features of Java: Object-Oriented – Based on concepts like classes, objects, inheritance, and polymorphism.
This session was useful to know more about Spring Tool Suite (STS) is an integrated development environment (IDE) built on Eclipse, designed specifically for developing Spring-based Java applications. Discuss about Key Features of STS. STS is widely used in enterprise Java development, especially for Spring Boot applications, which simplify Java-based web and micro service development.

Date : 04.02.2025 - AN

Topic : Introduction to JDK and JRE

In this session, the trainer taught about JDK and JRE.

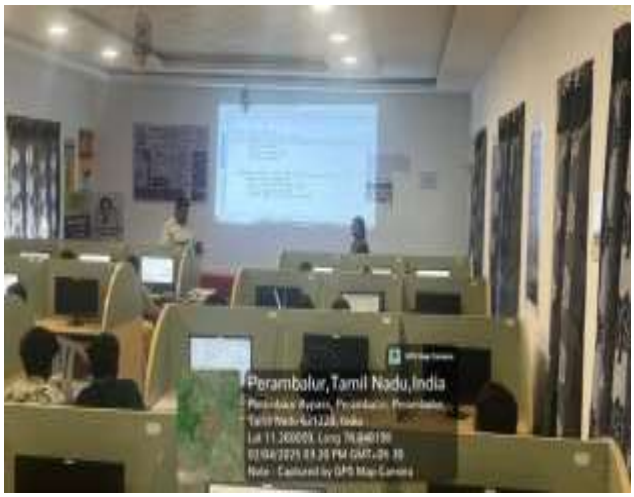
1. Java Development Kit (JDK)

The JDK (Java Development Kit) is a software package that provides everything needed for Java development. It includes tools to compile, debug, and run Java applications.

2. Java Runtime Environment (JRE)

The JRE (Java Runtime Environment) is a subset of the JDK used for running Java applications but does not include development tools like the compiler.

Student got more knowledge about Key Components of JRE: Java Virtual Machine (JVM) – Executes Java bytecode. Core Libraries – Provides essential Java functionalities (collections, I/O, networking, etc.). Runtime Libraries – Supports Java execution and garbage collection.



Date : 05.02.2025 - FN

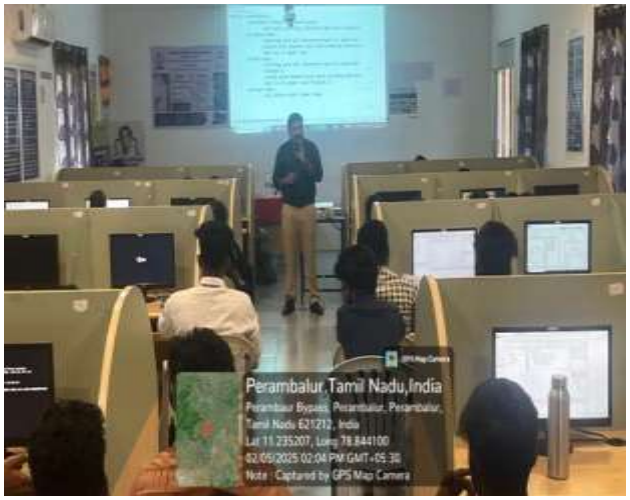
Topic : Introduction to JVM Architecture

In Day 2, the trainer explains the JVM Architecture Components The JVM consists of three major components:
1. Class Loader (Loads Byte code) Responsible for loading Java classes (class files) into memory when required. Uses three types of class loaders: Bootstrap ClassLoader – Loads core Java classes (e.g., java.lang, java.util). Extension ClassLoader – Loads classes from the lib/ext directory. Application ClassLoader – Loads user-defined classes from the classpath.
2. Runtime Data Areas (Memory Management) Method Area – Stores class metadata, static variables, and method byte code. Heap Area – Stores objects and instance variables. Stack Area – Stores method calls, local variables, and thread information. PC (Program Counter) Register – Holds the memory address of the current executing instruction.
3. Execution Engine (Runs Byte code) Interpreter – Converts byte code to machine code line by line (slow but helps during startup). JIT (Just-In-Time) Compiler – Converts frequently executed byte code into machine code all at once, improving performance and its uses with practical implementation.

Date : 05.02.2025 - AN

Topic : Introduction to Inheritance

In this session focused about Introduction to Inheritance is one of the key principles of Object-Oriented Programming (OOP). It allows one class (called a subclass or child class) to inherit the properties (fields) and behaviors (methods) of another class (called a super class or parent class). Key Concepts of Inheritance
1. Superclass (Parent Class):
The class whose properties and methods are inherited by another class.
Example: A class Animal could be a superclass with common attributes like name and age.
2. Subclass (Child Class):
The class that inherits properties and behaviors from the superclass.
Example: A class Dog can inherit from Animal and add its own attributes like breed.
3. extends Keyword:
In Java, the extends keyword is used to define inheritance.
Example: class Dog extends Animal { ... } 4.
Types of Inheritance in Java
1. Single Inheritance
2. Multilevel Inheritance
3. Hierarchical Inheritance
4. Multiple Inheritance



Date : 06.02.2025 - FN

Topic : Packages and Encapsulation

In this session he covered about to Package and Encapsulation in Java

1. Packages in Java:

A package is a collection of related classes and interfaces grouped together under a common name. It helps in organizing code, avoiding name conflicts, and improving maintainability.

Advantages of Packages:

✔ Helps in modular programming by grouping related classes together.

✔ Avoids class name conflicts in large projects.

✔ Provides controlled access to classes using access modifiers.

✔ Supports better code reusability and maintenance.

2. Encapsulation in Java:

Encapsulation is an object-oriented programming principle that restricts direct access to data and ensures controlled access through well-defined methods. It is achieved by declaring variables as private and providing public getter and setter methods for controlled access.

Date : 06.02.2025 - AN

Topic : Polymorphism and Collections

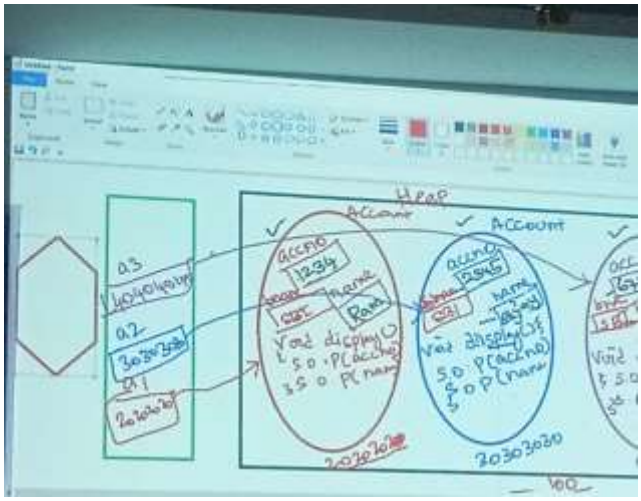
In this session the trainer taught how works with Polymorphism and Collections in Java

1. Polymorphism is one of the four pillars of Object-Oriented Programming (OOP). It allows objects to take multiple forms, enabling code flexibility, reusability, and maintainability.

2. Runtime Polymorphism (Method Overriding) Occurs when a subclass provides a specific implementation of a method that is already defined in its superclass. The method that gets executed is determined at runtime using dynamic method dispatch

2. Collections in Java

A collection in Java is a framework that provides an architecture to store and manipulate a group of objects efficiently.



Date : 07.02.2025 - FN

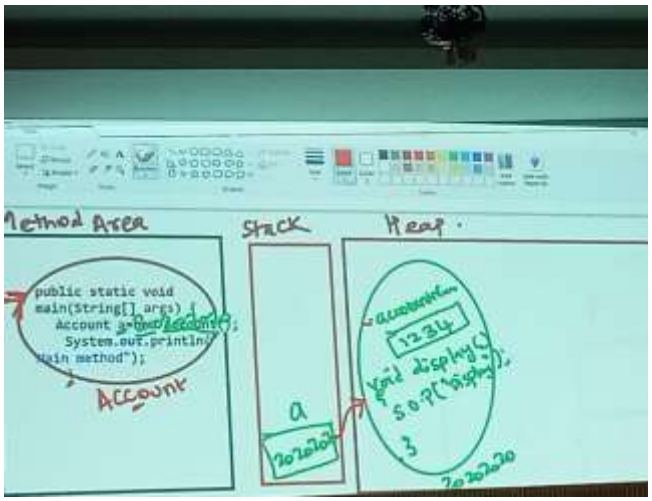
Topic : Interface and Abstract

In this session, the trainer explained about Interface and Abstract Class in Java

1. Abstract Class

An abstract class is a class that cannot be instantiated and may contain both abstract (unimplemented) and concrete (implemented) methods. It is used to define a common template for subclasses. 2. Interface

An interface is a collection of abstract methods (before Java 8) or default/static methods (from Java 8 onward). It defines a contract that a class must follow.



Date : 07.02.2025 - AN

Topic : Connect Java to Database

The trainer connects java to database his views about how the database worked. Java connects to databases using JDBC (Java Database Connectivity), which provides a standard API for interacting with relational databases like MySQL, PostgreSQL, Oracle, and SQLite. Steps to Connect Java to a Database

1. Install JDBC Driver
2. Load the JDBC Driver
3. Establish a Database Connection
4. Execute SQL Queries
5. Process the Results
6. Close the Connection

Date : 08.02.2025 - FN

Topic : What are Client Server and Web Server?

Trainer has given detailed insights about Client-Server and Web Server in Computing
I. Client-Server Model
The client-server model is a network architecture where multiple clients (users/devices) communicate with a central server to request and receive services. How It Works:
1. The client sends a request (e.g., accessing a webpage, fetching data).
2. The server processes the request.
3. The server sends the response back to the client.
II. Web Server
A web server is a specialized type of server that handles HTTP/HTTPS requests and serves web pages to clients (usually browsers). Functions of a Web Server: Stores and delivers web pages, images, videos, and data to users. Processes dynamic requests using scripts (e.g., PHP, JSP, ASP.NET).

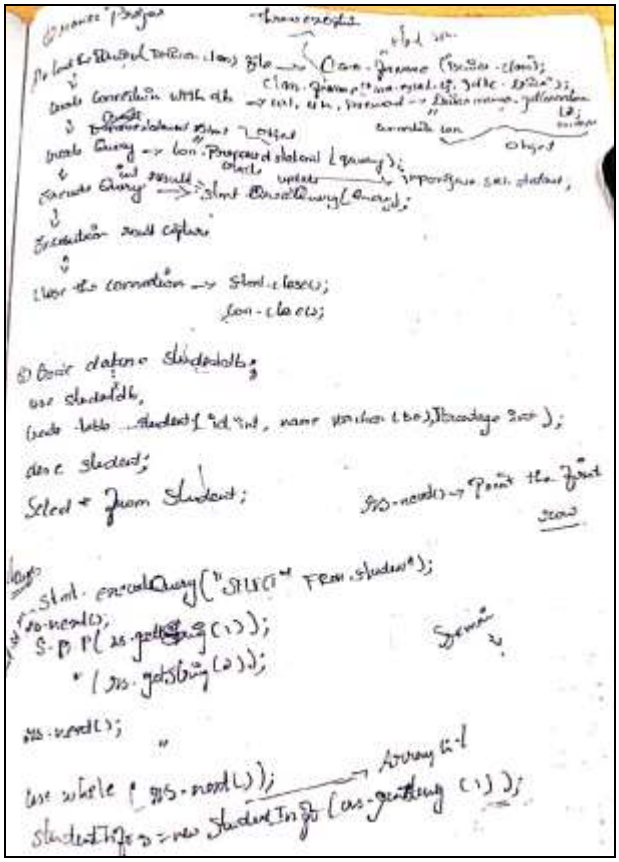
Date : 08.02.2025 - AN

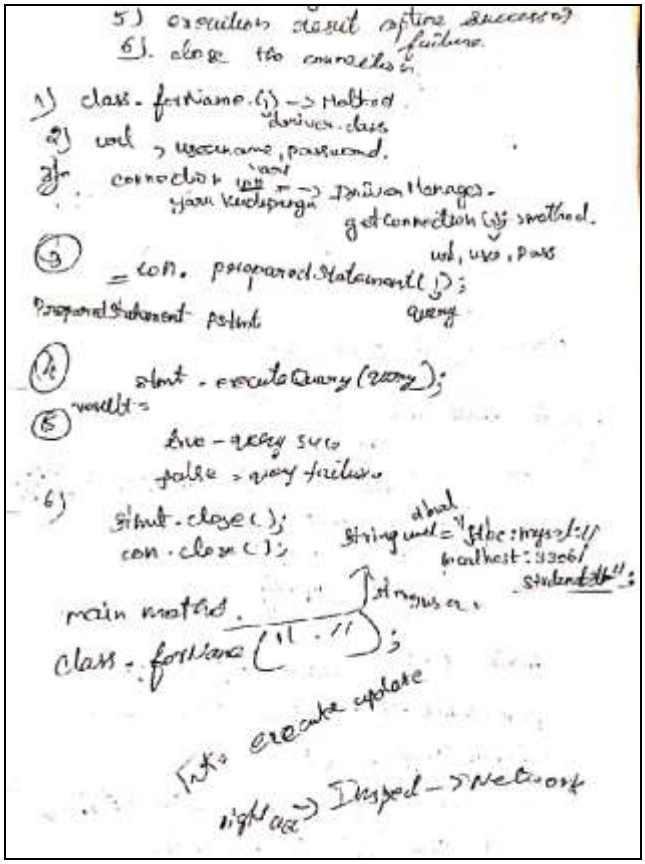
Topic : React JS

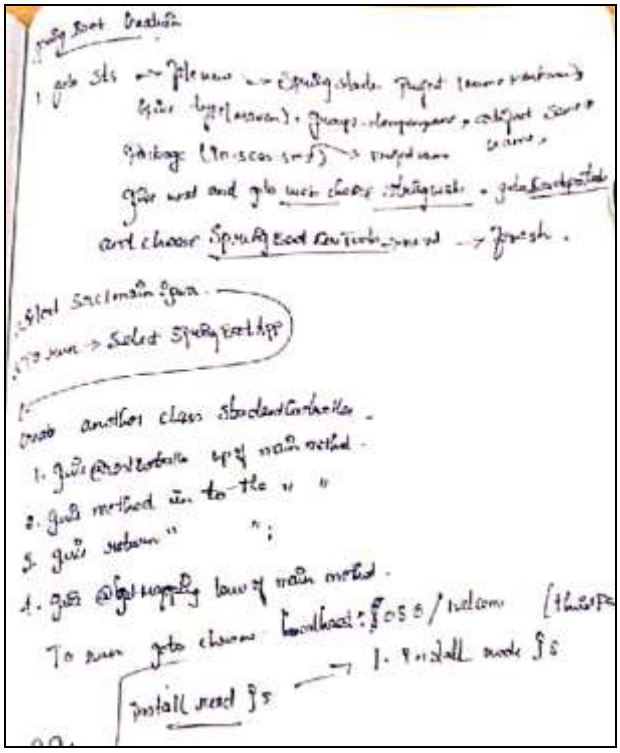
In this session students were learnt about React.js is a popular JavaScript library developed by Facebook for building interactive and dynamic user interfaces for web applications.

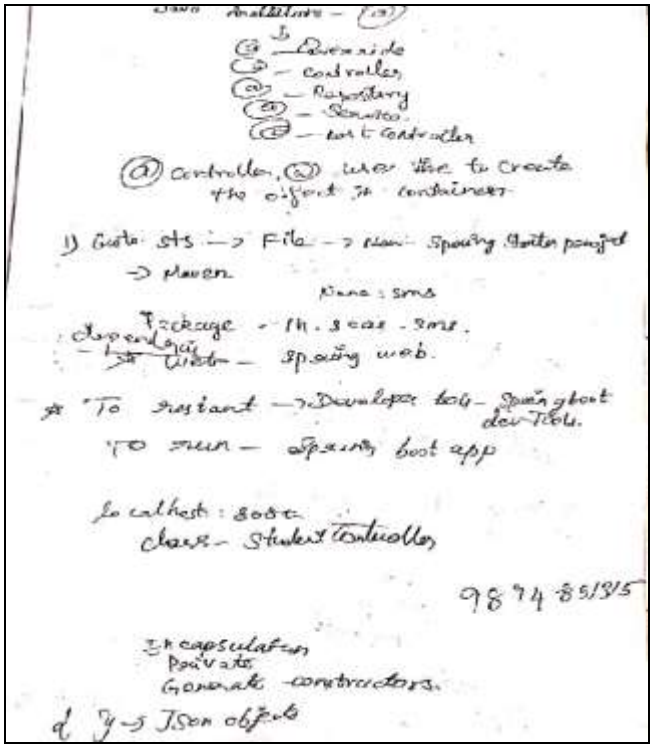
Core Concepts of React.js
1. Components – The building blocks of React applications. Functional Components – Simple and stateless. Class Components – Stateful and lifecycle-aware.
2. State & Props – Manage data within components. State – Holds component-specific data. Props – Passes data between components.
3. Lifecycle Methods – Control component behavior at different stages (Mounting, Updating, Unmounting).
4. React Router – Enables navigation in single-page applications. 5. State Management – Uses React Context API or external libraries like Redux.

Students Notes









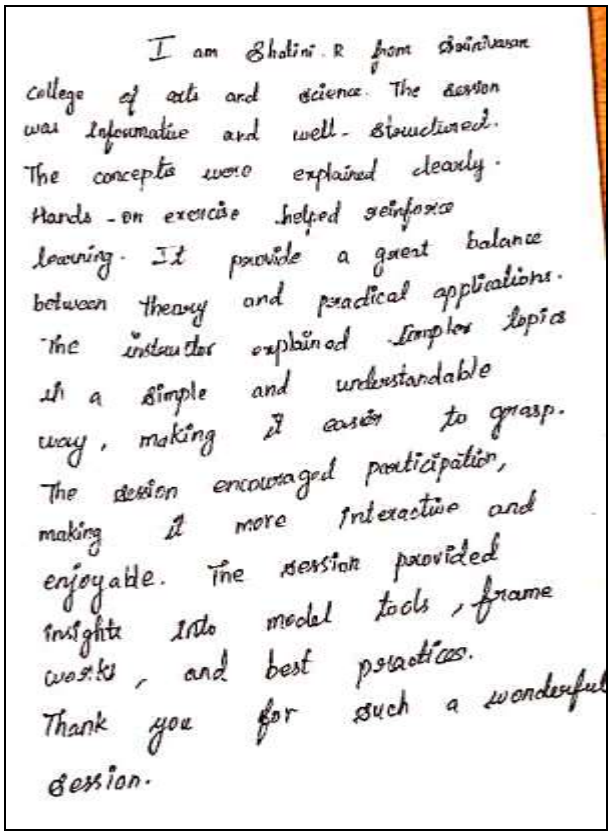
Toppers List

All the five days core topics have been taught in both Theory and Laboratory sessions for our Students in the chosen Topic based on the various activities, involvement and Assessment for five days, 5 – Toppers have selected, announced and honored in this session with Merit Certificate and Shield. Overview of five days training was given by our Trainer. The following Toppers students are,

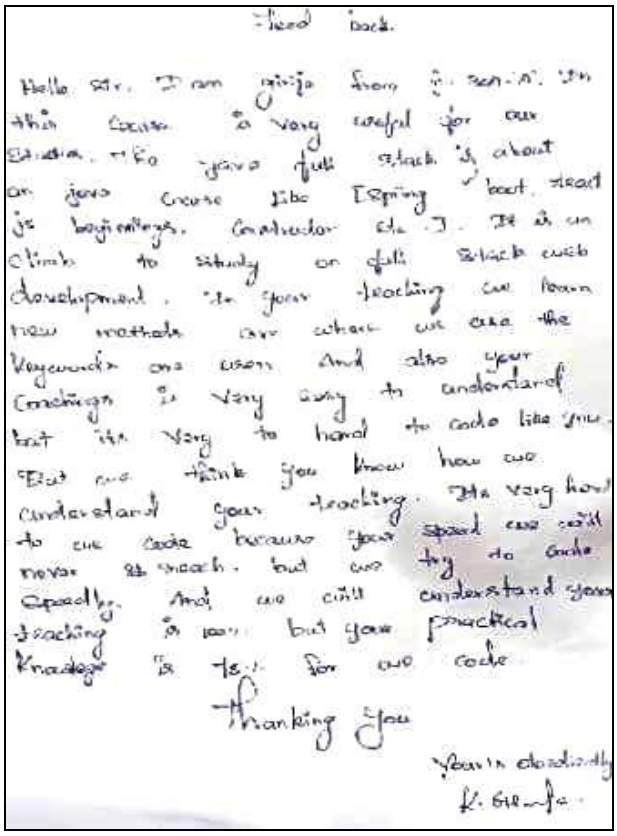
1. Shalini.R
2. Malavika.K.R
3. Sakthivel.S
4. Hariharan.V
5. Vallarasu.S

Sample Certificate

Testimonial Report



I am Shalini. R from Srinivasan college of arts and science. The session was informative and well-structured. The concepts were explained clearly. Hands-on exercise helped reinforce learning. It provide a great balance between theory and practical applications. The instructor explained complex topics in a simple and understandable way, making it easier to grasp. The session encouraged participation, making it more interactive and enjoyable. The session provided insights into model tools, frame works, and best practices. Thank you for such a wonderful session.

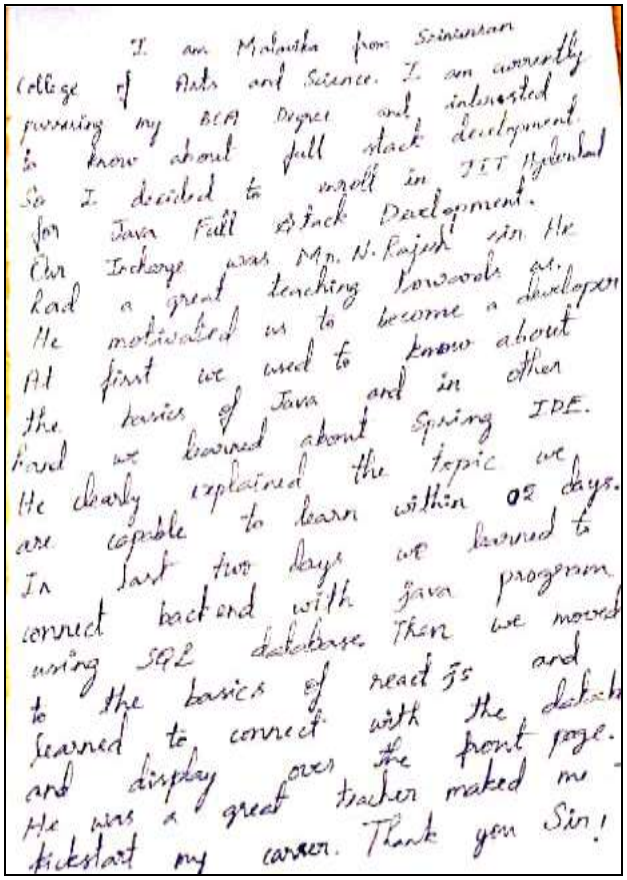


Feed back.

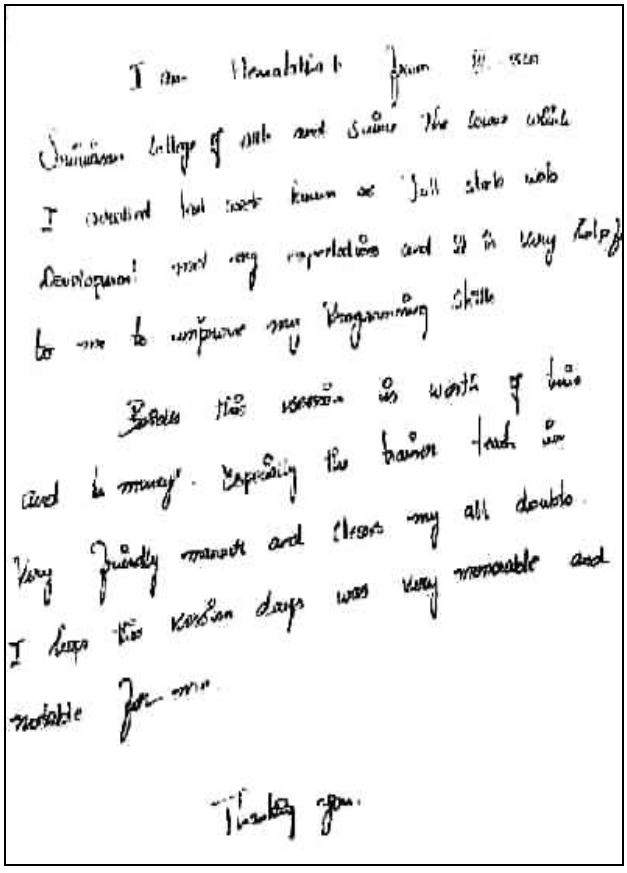
Hello Sir. I am girija from [illegible]. In this course is very useful for our studies. Also your full stack is about on java course like [Spring boot, react js beginnings, Constructor etc.]. It is an climb to study on full stack web development. In your teaching we learn new methods are where we use the keywords are used. And also your teachings is very easy to understand but its very to hard to code like you. But we think you know how we understand your teaching. Its very hard to we code because your speed we will never be reach. but we try to code speedly. And we will understand your teaching is [illegible] but your practical knowledge is [illegible] for we code.

Thanking you

Yours obediently
K. Girija.



I am Malavika from Srinivasan College of Arts and Science. I am currently pursuing my BCA Degree and interested to know about full stack development. So I decided to enroll in JIT Hyderabad for Java Full Stack Development. Our Incharge was Mr. N. Rajesh sir. He had a great teaching towards us. He motivated us to become a developer. At first we used to know about the basics of Java and in other hand we learned about Spring IDE. He clearly explained the topic we are capable to learn within 02 days. In last two days we learned to connect backend with java program using SQL database. Then we moved to the basics of react js and learned to connect with the database and display over the front page. He was a great teacher maked me kickstart my career. Thank you Sir!



I am Hemalatha from [illegible] Srinivasan College of Arts and Science. The course which I enrolled last week known as full stack web Development met my expectations and it is very helpful to me to improve my programming skills.

Besides this session is worth of time and to money. Especially the trainer teach in very friendly manner and clears my all doubts. I hope this session days was very memorable and notable for me.

Thanking you.

List of Participants (44)

S. No	NAME	E-Mail	Mobile No.	Photo
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Glimpses

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