



**LONDON SCHOOL
OF EMERGING TECHNOLOGY**

JAVA

PROGRAMMING

COURSE ID

JDP

DEPARTMENT

SOFTWARE
ENGINEERING

CAMPUS

1 CORNHILL

LEVEL

CERTIFICATE

METHOD

LECTURE + PROJECT

DURATION

3 MONTHS

Do you want to see yourself earning six figure salary in coming years? Do you want to learn a language which has strong foothold in the enterprise world? If your answer is yes, Java is what you should be looking to learn. Java is not only one of the most popular programming languages loved by 9 million developers but also offers one of the most high-paying jobs in the industry. Join LSET's Java Programming course which will prepare you for your bright future in the software industry.

**APPLY
NOW!**

to become a professional Java Developer



Add on



Add on

Java is one of the oldest and among the most popular programming languages in the software industry. Java is supported by millions of programmers around the world and constantly getting updated with latest features. This makes Java relevant to the modern development despite being invented 2 decades ago. Java has a strong foothold in the enterprise software market. Many fortune 500 companies and top banks

including investment banks prefer Java as their backend development language. Java also made its place in the cloud development and becoming a preferred language for serverless.

This course starts with introduction of algorithm, concept of time and space complexity, Big O notation, etc. You will learn and develop pseudocodes and flowcharts to find solutions to problems. You will then move on to learn Object-Oriented Principles (OOP) like Abstraction, Polymorphism, Inheritance, and Encapsulation. You will get an opportunity to grasp these concepts through hands-on examples. Then you will get introduced to Classes and Objects which are the two most important concepts in OOP. You will work on practical examples and learn these by relating to real life scenarios. You will learn how to restrict access to variables and methods by using the concept of access modifiers like public, private, protected, and default. In addition, you will learn about non-access modifiers like final, static, etc. After this, you will get an opportunity to understand the concept of conditional statements like if else, switch, etc. and loops. Along with this, you will learn about exception handling, String operations, Generics, and Collections. Java 8 added some cool features like functional programming and lambda expressions. You will learn these concepts with hands-on examples. You will get introduced to Java 14 features like Switch expressions, text blocks, Pattern Matching for instanceof, Records, etc. In addition, you will get introduced to Java 17 features like if...else chain, Pattern matching with null, refining patterns in switch, sealed classes, etc. Towards the end of the course, you will learn multi-threading, file handling, and database concepts.



COMPLEMENTARY WORKSHOPS



GIT MANAGEMENT



AGILE PROJECT
MANAGEMENT



TEAM BUILDING



PERSONALITY
DEVELOPMENT



INTERVIEW
PREPARATION

COURSE INFORMATION



SEPTEMBER
END: DECEMBER



JANUARY
END: APRIL



MAY
END: AUGUST

ENTRY CRITERIA

- ✓ No prior programming knowledge
- ✓ Basic proficiency with computers
- ✓ Have access to personal laptop
- ✓ Ability to complete assignments on time
- ✓ Ability to follow instructions in English
- ✓ Ability to work in Group

COURSE HIGHLIGHTS

- ✓ Hands-on Sessions
- ✓ Project-based Learning
- ✓ Live or Offline Capstone Project
- ✓ Real world development experience
- ✓ Industry Mentors
- ✓ Interactive Teaching Methodologies

EVALUATION CRITERIA

- ✓ 18 Coding exercises
- ✓ 5 Assignments
- ✓ 5 Quizzes
- ✓ Capstone Project
- ✓ Group activities
- ✓ Presentations

LEARNING OBJECTIVES

- ✓ Get hands-on experience on developing Java applications
- ✓ Learn key concepts like OOP, Generics, Collections, etc.
- ✓ Learn about functional programming, lambda expression, etc.
- ✓ Stream API to generate, filter, process & reduce stream data
- ✓ Understand exception handling with exception hierarchy



- ✓ Gain knowledge of Java's latest features
- ✓ Learn to process files, directories in Java
- ✓ Learn to Database concepts and use JDBC to connect to a database

3 MONTHS / 70+ HOURS



WEEKDAYS BATCH

5:30 pm - 7:30 pm
(Wed, Thu, Fri)



WEEKENDS BATCH

9:00 am to 12:00 am
(Sat, Sun)



INTERVIEW PREPARATION

Wednesday
(4 Workshops)



HANDS-ON WORKSHOPS

Thursday (2 Workshops)



PERSONALITY DEVELOPMENT

Friday (1 Workshop)



HANDS-ON WORKSHOPS



INTERVIEW PREPARATION



CV PREPARATION



PERSONALITY DEVELOPMENT

Join the LSET Java course to master the backend development. Learn to build scalable, secure, and performance driven microservices. LSET follows project-based, hand-on approach to develop real-world applications using latest industry standards.



COURSE CONTENT

Browse the LSET interactive and practical curriculum

INTRODUCTION

- ▶ Course Introduction
- ▶ How to make the best of this course
- ▶ GIT Introduction and Setup
- ▶ Course Induction

JAVA INTRODUCTION

- ▶ What is Java
- ▶ History of Java
- ▶ Benefits of Learning Java

INTRODUCTION TO ALGORITHM

- ▶ Design an Algorithm
- ▶ Pseudocode
- ▶ Flowchart

DECLARATIONS AND ACCESS CONTROL

- ▶ Identifiers
- ▶ Declare Classes
- ▶ Declare Interfaces
- ▶ Declare Class Members

OBJECT ORIENTATION

- ▶ Inheritance, Is-A, Has-A
- ▶ Polymorphism
- ▶ Overriding / Overloading
- ▶ Reference Variable Casting



- ▶ Implementing an Interface
- ▶ Legal Return Types
- ▶ Constructors and Instantiation
- ▶ Statics
- ▶ Coupling and Cohesion

ASSIGNMENTS

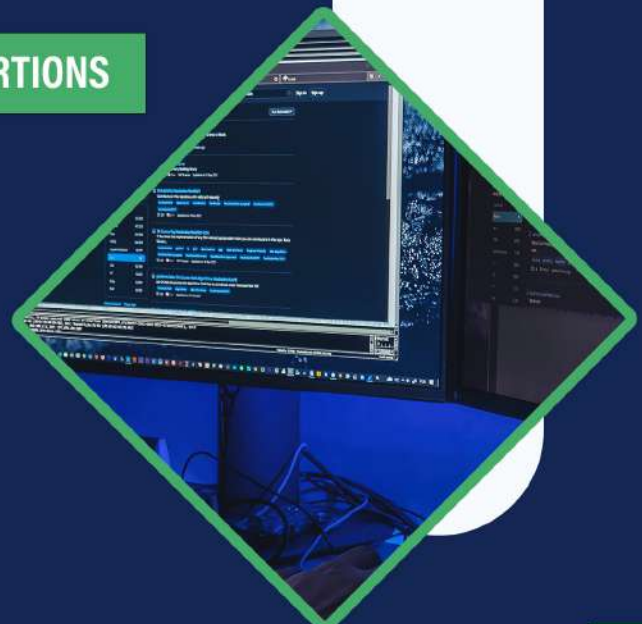
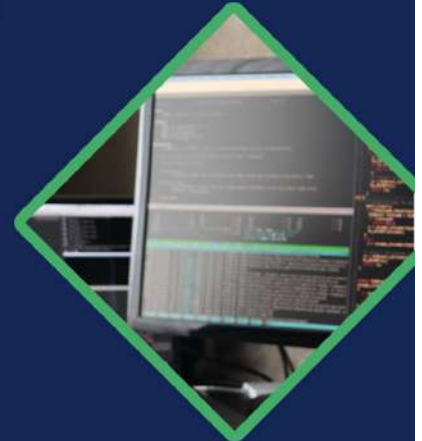
- ▶ Literals, Assignments, and Variables
- ▶ Passing Variables into Methods
- ▶ Array Declaration, Construction, and Initialization
- ▶ Using Wrapper Classes and Boxing
- ▶ Overloading
- ▶ Garbage Collection

OPERATORS

- ▶ Assignment Operators
- ▶ Relational Operators
- ▶ Instance of Comparison
- ▶ Arithmetic Operators
- ▶ Conditional Operator
- ▶ Logical Operators

FLOW CONTROL - EXCEPTIONS AND ASSERTIONS

- ▶ If and switch Statements
- ▶ Loops and Iterators
- ▶ Handling Exceptions
- ▶ Common Exceptions and Errors
- ▶ Working with the Assertion Mechanism



STRINGS - I/O - FORMATTING AND PARSING

- ▶ File Navigation and I/O
- ▶ Serialization
- ▶ Dates, Numbers, and Currency
- ▶ Parsing, Tokenizing, and Formatting

GENERICS AND COLLECTIONS

- ▶ Collections
- ▶ Using the Collections Framework
- ▶ Generic Types

INNER CLASSES

- ▶ Inner Classes
- ▶ Method-Local Inner Classes
- ▶ Anonymous Inner Classes
- ▶ Static Nested Classes

THREADS

- ▶ Thread States and Transitions
- ▶ Synchronizing Code
- ▶ Thread Interaction

DATABASE FUNDAMENTALS

- ▶ Introduction to Database
- ▶ Introduction to SQL
- ▶ Create Database and Table Commands
- ▶ DDL and DML
- ▶ Aggregation Functions
- ▶ JOINS
- ▶ Conditional Expressions and Procedures
- ▶ Database Connection from Program



DEVELOPMENT

- ▶ JAR Files
- ▶ Using Static Imports



*Modules of our curriculum are subject to change. We update our curriculum based on the new releases of the libraries, frameworks, Software, etc. Students will be informed about the final curriculum in the course induction class.

COURSE SCHEDULE

We offer weekdays and weekend batch choices so you can up-skill yourself while keeping your fulltime job. Both batches follow the same curriculum and learning style. However, weekend batches take a little faster approach.

WEEKDAYS		1st Month				
DAY	MON	TUE	WED	THU	FRI	
Week 1	Student Services Welcome Call		<ul style="list-style-type: none"> Course Introduction How to make the best of this course GIT Introduction and Setup Course Induction Student Introduction 	<ul style="list-style-type: none"> What is Java History of Java Benefits of Learning Java 	<ul style="list-style-type: none"> Design an Algorithm Pseudocode Flowchart 	
Week 2			<ul style="list-style-type: none"> Identifiers Declare Classes 	<ul style="list-style-type: none"> Declare Interfaces Declare Class Members 	<ul style="list-style-type: none"> Inheritance, Is-A, Has-A Polymorphism 	
Week 3	Student Feedback		<ul style="list-style-type: none"> Overriding / Overloading 	<ul style="list-style-type: none"> Reference Variable Casting 	<ul style="list-style-type: none"> Implementing an Interface 	
Week 4	Constructors and Instantiation		<ul style="list-style-type: none"> Statics Coupling and Cohesion 	<ul style="list-style-type: none"> Literals Assignments 	<ul style="list-style-type: none"> Variables Passing Variables into Methods 	
			Quiz		Assignment	
			Quiz			



2nd Month

DAY	MON	TUE	WED	THU	FRI
Week 1			<ul style="list-style-type: none"> Array Declaration Construction, and Initialization 	<ul style="list-style-type: none"> Using Wrapper Classes and Boxing Overloading 	<ul style="list-style-type: none"> Garbage Collection Operators Introduction
Week 2			<ul style="list-style-type: none"> Assignment Operators Relational Operators 	<ul style="list-style-type: none"> Instance of Comparison Arithmetic Operators 	<ul style="list-style-type: none"> Conditional Operator Logical Operators
	Interview Preparation		Quiz		Assignment
Week 3			<ul style="list-style-type: none"> Flow Control - Exceptions and Assertions Intro 	<ul style="list-style-type: none"> If and switch Statements 	<ul style="list-style-type: none"> Loops and Iterators
	Student Feedback	Project Introduction Self Study			Assignment
	Project Introduction Self Study		Project Introduction Self Study	Project Introduction Self Study	Project Introduction Self Study
Week 4		Hands-on Workshops	<ul style="list-style-type: none"> Handling Exceptions Common Exceptions and Errors 	<ul style="list-style-type: none"> Working with the Assertion Mechanism Strings - I/O - Formatting and Parsing Intro 	<ul style="list-style-type: none"> File Navigation and I/O Serialization
	Interview Preparation	Project Build-up and Environment Setup	Quiz		
	Project Introduction Self Study		Project Build-up and Environment Setup	Product Backlog and Sprint Planning	Product Backlog and Sprint Planning

3rd Month

DAY	MON	TUE	WED	THU	FRI
Week 1			<ul style="list-style-type: none"> Dates, Numbers, and Currency Parsing, Tokenizing, and Formatting 	<ul style="list-style-type: none"> Collections Intro, Collections 	<ul style="list-style-type: none"> Using the Collections Framework Generic Types
	Interview Preparation				Assignment
	User Stories Execution and Development	User Stories Execution and Development	User Stories Execution and Development	User Stories Execution and Development	User Stories Execution and Development
Week 2		Hands-on Workshops	<ul style="list-style-type: none"> Method-Local Inner Classes Anonymous Inner Classes 	<ul style="list-style-type: none"> Static Nested Classes Thread States and Transitions 	<ul style="list-style-type: none"> Synchronizing Code Thread Interaction
	Student Feedback		Quiz		
	User Stories Execution and Development	User Stories Execution and Development	User Stories Execution and Development	User Stories Execution and Development	User Stories Execution and Development
Week 3			<ul style="list-style-type: none"> Introduction to Database Introduction to SQL 	<ul style="list-style-type: none"> Create Database and Table Commands DDL and DML 	<ul style="list-style-type: none"> Aggregation Functions JOINS Conditional Expressions and Procedures
	Interview Preparation				Assignment
	User Stories Execution and Development	User Stories Execution and Development	Testing, Deployment and Completion	Testing, Deployment and Completion	
Week 4			<ul style="list-style-type: none"> Database Connection from Program JAR Files Using Static Imports 		Testing, Deployment and Completion
	Testing, Deployment and Completion	Testing, Deployment and Completion	Testing, Deployment and Completion	Capstone Project Presentation	Testing, Deployment and Completion
					Course Completion Session
					Alumni Welcome Session
					Awards Ceremony

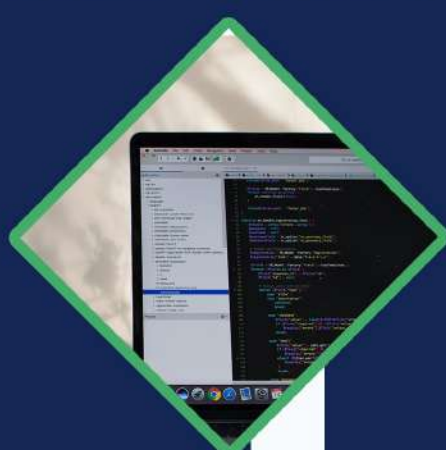
WEEKEND		1st Month						
DAY	MON	TUE	WED	THU	FRI	SAT	SUN	
Week 1						<ul style="list-style-type: none"> Course Introduction How to make the best of this course Course Induction Student Introduction 	<ul style="list-style-type: none"> GIT Introduction and Setup What is Java History of Java Benefits of Learning Java 	
	Student Services Welcome Call							
Week 2						<ul style="list-style-type: none"> Design an Algorithm Pseudocode Flowchart 	<ul style="list-style-type: none"> Identifiers Declare Classes Declare Interfaces 	
						Quiz		
Week 3						<ul style="list-style-type: none"> Declare Class Members Inheritance Is-A, Has-A 	<ul style="list-style-type: none"> Polymorphism Overriding / Overloading Reference Variable Casting 	
	Student Feedback						Assignment	
Week 4						<ul style="list-style-type: none"> Implementing an Interface Legal Return Types Constructors and Instantiation 	<ul style="list-style-type: none"> Statics Coupling and Cohesion Literals 	
	Personality Development					Quiz		

2nd Month								
DAY	MON	TUE	WED	THU	FRI	SAT	SUN	
Week 1						<ul style="list-style-type: none"> Assignments, Variables Passing Variables into Methods Array Declaration 	<ul style="list-style-type: none"> Construction and Initialization Using Wrapper Classes and Boxing Overloading Garbage Collection 	
							Assignment	
Week 2	Interview Preparation					<ul style="list-style-type: none"> Assignment Operators Relational Operators Instance of Comparison 	<ul style="list-style-type: none"> Arithmetic Operators Conditional Operator Logical Operators 	
	Student Feedback					Quiz		
Week 3						<ul style="list-style-type: none"> If and switch Statements Loops and Iterators Handling Exceptions 	<ul style="list-style-type: none"> Common Exceptions and Errors Working with the Assertion Mechanism File Navigation and I/O 	
	Student Feedback		Project Introduction Self Study	Project Introduction Self Study	Project Introduction Self Study	Project Introduction Self Study	Assignment	
Week 4		Hands-on Workshops				<ul style="list-style-type: none"> Serialization Dates Numbers, and Currency 	<ul style="list-style-type: none"> Parsing Tokenizing, and Formatting Collections 	
	Interview Preparation	Project Build-up and Environment Setup	Project Build-up and Environment Setup	Project Build-up and Environment Setup	Project Build-up and Environment Setup	Quiz	Project Introduction Self Study	
	Project Introduction Self Study					User Stories Execution and Development	User Stories Execution and Development	

3rd Month

DAY	MON	TUE	WED	THU	FRI	SAT	SUN
Week 1	Interview Preparation		User Stories Execution and Development	User Stories Execution and Development	User Stories Execution and Development	<ul style="list-style-type: none"> Using the Collections Framework Generic Types Inner Classes 	<ul style="list-style-type: none"> Method-Local Inner Classes Anonymous Inner Classes Static Nested Classes
						User Stories Execution and Development	Assignment
Week 2	Student Feedback		User Stories Execution and Development	User Stories Execution and Development	User Stories Execution and Development	<ul style="list-style-type: none"> Thread States and Transitions Synchronizing Code Thread Interaction 	<ul style="list-style-type: none"> Introduction to Database Introduction to SQL Create Database and Table Commands
						Quiz	User Stories Execution and Development
Week 3	Interview Preparation		Testing, Deployment and Completion	Testing, Deployment and Completion	Testing, Deployment and Completion	<ul style="list-style-type: none"> DDL and DML Aggregation Functions 	<ul style="list-style-type: none"> JOINS Conditional Expressions and Procedures Database Connection from Program
						Testing, Deployment and Completion	Assignment
Week 4						<ul style="list-style-type: none"> JAR Files Using Static Imports 	Testing, Deployment and Completion
			Testing, Deployment and Completion	Testing, Deployment and Completion	Testing, Deployment and Completion		Student Services Completion
							Alumni Welcome Session
						Capstone Project Presentation	Awards Ceremony

*Course Schedule is subject to change. Students will be informed about the final schedule in the course induction class.



ASSESSMENT CRITERIA

Students will need to clear all the assessments, quizzes, and project work in order to earn the certificate. At a minimum, students are required to satisfy the pass criteria of the course. Students who score 75% or more will be awarded Merit Grade, while students with 85% or more will be awarded Distinction Grade.

Following are the detailed criteria for each level

Pass Grade Criteria

Score minimum 50% aggregate and demonstrate the following;

- Proficiency in the technical skills and techniques
- Must have a minimum attendance of 90% in the classes unless proper medical proof is provided
- Submit all the projects and assignments before the last submission date
- Collaborate with peers in group projects



Merit Grade Criteria

Score minimum 75% aggregate and demonstrate the following;

- Excellent technical skills and techniques
- Discover and apply strategies to find the perfect solutions
- Select/design and apply appropriate methods/techniques
- Present and communicate appropriate findings



Distinction Grade Criteria

Score minimum 85% aggregate and demonstrate the following;

- Mastery of technical skills and techniques
- Use critical thinking for self-evaluation and justify valid conclusions
- Take the responsibility the manage and organise activities and teams
- Showcase convergent/lateral/creative thinking.



ASSESSMENT METHODS

LSET follows strict uniform standards in assessing students' performance during the certificate course. This ensures that the LSET certificate holders demonstrate high ethics and deep technical knowledge. Internal and external examiners will be assessing the students, while the platform will automatically evaluate the quizzes. Instructors are the internal examiners who only evaluate students' soft skills. At the same time, the external examiners are responsible for evaluating students' assessments and project work.

Internal Evaluation

Instructors only evaluate students on the following, which contribute to 20% of the total score. The total points that can be earned are 100.

- **Punctuality [10 points]:** Students are expected to show punctuality with their attendance, presence, and project/assignment submission time.
- **Dedication [10 points]:** LSET expects the students to give attention and show dedication throughout the curriculum.
- **Time Management [10 points]:** Students should show good time management by completing and submitting their assignments on time. Learning time management is very important for the students to prepare for the real work environment.
- **Attendance [10 points]:** Minimum 90% attendance is required unless a proper reason with evidence is provided. Attendance in LSET classes is important to ensure that the student has thoroughly learned the technical and non-technical concepts taught in the curriculum.
- **Working with Others (Teamwork) [10 points]:** LSET teaches concepts in a collaborative environment where we expect each student to show teamwork and collaboration skills.

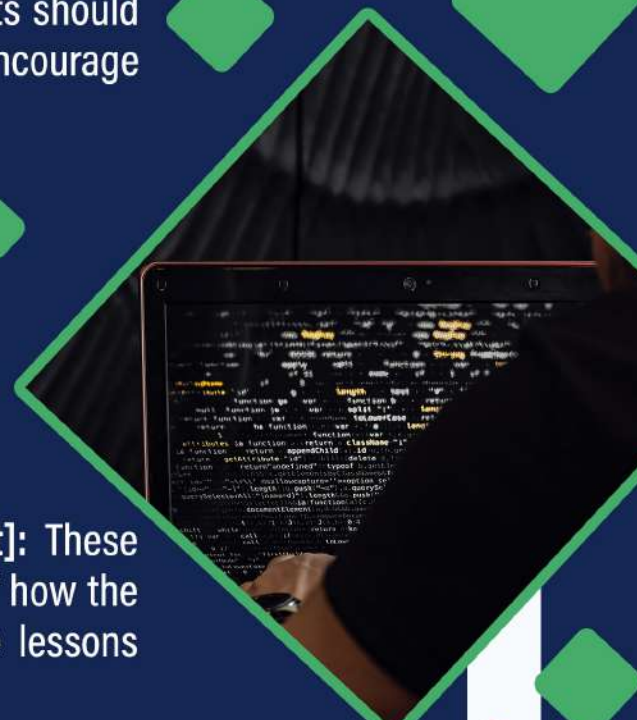


- **Problem-Solving Skills [10 points]:** Students need to demonstrate proper problem solving skills. Students need to use knowledge and skills gained in the course to solve real-world problems.
- **Class Participation [10 points]:** Engagement and participation are crucial to ensure that the learning experience is interactive.
- **Communication Skills [10 points]:** Students should display formal communication skills to communicate with their teammates. This prepares them for their future workplace.
- **Presentation Skills [10 points]:** Students have to show their presentation skills while working with their group projects and assignments to become more presentable.
- **Ability to ask Questions [10 points]:** Students should ask relevant questions in the classes to encourage healthy discussion on technical topics.

External Evaluation

External examiners evaluate students on the following, which contribute to 70% of the total score. The total points that can be earned are 250.

- **5 Assessments [10 points per assessment]:** These assessments are done entirely on the basis of how the student has performed in understanding the lessons and concepts taught by the instructor.
- **1 Capstone Project [200 points]:** The capstone project is conducted at the end of the certificate course to practice all the practical concepts. Students must satisfy the required criteria mentioned in the project requirement document in order to earn the full points.



Auto Evaluation

Auto evaluation will be conducted via the platform, which contributes to 10% of the total score. The total points that can be earned are 50

- **5 Quizzes [10 points per quiz]:** Quizzes in a class ensures maximum participation and ensure that the students have learned the taught concepts with attention. Students will be presented with multiple choice questions.

Having Doubts?

Contact LSET Counsellor

We love to answer questions, empower students, and motivate professionals. Feel free to fill the form and clear up your doubts related to our Java Developer Course.



Best Career Paths

Java Web Developer

It is the most common back-end position, where the professional has to write code, test, and debug server-side programs. They have to become proficient with both front end and back end technologies.

Java Android Developer

This is the hottest domain of Java. Every organisation want to build their robust application. It creates huge employment opportunities for Java developers with good packages and perks in the workplace.



Java Architect

A Java architect has to analyse a project and advise new changes to improve its development. These professionals have to design specifications, install instructions, evaluate the security of Java architecture.

DevOps Engineer

A DevOps engineer has to work with developers to work with code releases. They have to introduce new tools, processes, and methodologies throughout the software development cycle.

Java Enterprise Developer

These professionals have to build and maintain enterprise software solutions. These positions are provided by large scale companies who are looking for Java professionals with industry expertise.

Top Companies Hiring Front End Developers



The Course Provides Shared Expertise by



LSET TRAINERS



INDUSTRY EXPERTS



TOP EMPLOYERS

Skills You will Gain

- ⇒ Abstraction
- ⇒ Encapsulation
- ⇒ Inheritance
- ⇒ Polymorphism
- ⇒ Collections
- ⇒ Collections Framework
- ⇒ Generic Types
- ⇒ Method
- ⇒ Local Variables
- ⇒ Constructors
- ⇒ ENUM
- ⇒ Identifiers Declaration
- ⇒ Inner Classes
- ⇒ Method-Local Inner Classes
- ⇒ Anonymous Inner Classes
- ⇒ Static Nested Classes
- ⇒ Passing Variables
- ⇒ Wrapper Classes and Boxing
- ⇒ Overloading
- ⇒ Garbage Collection
- ⇒ if and switch Statements
- ⇒ Loops and Iterators
- ⇒ Handling Exceptions
- ⇒ Common Exceptions and Errors

Complete Learning Experience

This course focuses on providing a complete hands-on guided learning experience to help you learn the fundamentals in a practical manner.

- ⇒ We constantly update the curriculum to include the latest releases and features.
- ⇒ We focus on teaching the industry best practices and standards.
- ⇒ We let you explore the topics through guided hands-on sessions.
- ⇒ We provide industry experienced mentor support to every student.
- ⇒ We give you an opportunity to work on the real world examples.
- ⇒ Work with hands-on projects and assignments
- ⇒ We help you to build a technical portfolio which you can present to your prospective employers.

Reasons to Choose LSET

- ⇒ Interactive live sessions by the industry experts.
- ⇒ Practical classes with project-based learning with hands-on activities.
- ⇒ International learning platform to promote collaboration and teamwork.
- ⇒ Most up-to-date course curriculum based on current industry demand.
- ⇒ Gain access to various e-learning resources.
- ⇒ One-to-one attention to ensure maximum participation in the classes.
- ⇒ Lifetime career guidance to get the students employed in good companies.
- ⇒ Free lifetime membership to the LSET Alumni Club

What Will Be Your Responsibilities?

- ⇒ Work creatively in a problem-solving environment.
- ⇒ Ask questions and participate in the class discussions.
- ⇒ Work on assignments and quizzes on timely manner.
- ⇒ Read additional resources on the course topics and ask questions in the class.
- ⇒ Actively participate in the team projects and presentations.
- ⇒ Work with the career development department to prepare for interviews
- ⇒ Respond to the instructors, student service officers, career development officers, etc. in a timely manner.
- ⇒ And most importantly, have fun while learning at LSET



How Does Project-Based Learning Work?

LSET project-based learning model gives students an opportunity to work on the real-world applications and apply their knowledge and skills gained in the course to build high performing industry grade applications. As part of this course, students learn agile project management concepts, tools, and techniques to work on the assigned project in collaborative manner. Project work is done individually by each student but they are encouraged to enhance their solution by collaborating with the teammates.

Following are the steps involved in the LSET's project-based learning;

Step 1: Project Idea Discussion

In this step, students get introduced to the problem and develop a strategy to build the solution.



Step 2: Build Product Backlog

This step requires students to enhance the existing starter product backlog available in the project. This helps students to think about the real-life business requirements and formulate them in proper user stories.

Step 3: Design Releases and Sprints

In this step, students define software releases and plan sprints in each release. Students need to go through sprint planning individually and learn about story points and velocity.



Step 4: Unit and Integration Tests

In this step, students learn to write unit tests to make sure each and every part of the application works fine.



Step 5: Use CI/CD to Deploy

In this step, students learn to use CI/CD (Continuous Integration Continuous Delivery) pipeline to build their application as a docker image and deploy to Kubernetes.



Capstone Project

LSET gives you an opportunity to work on the real world project which will greatly help you to build your technical portfolio

Project Topic: Online Banking

London has been a leading international financial centre since the 19th century. In recent years, London has seen many FinTech start-ups and major innovations in the banking sector. The aim of this project is to introduce students to the financial sector and technologies used in handling billions of transactions per day. As part of this project, students will learn the current technological advances and build up their knowledge to start a simple banking application. This application focuses on building the basic functionality by using agile project management practices. Students will be presented with user stories that will build up the initial project backlog. Students then need to enhance this backlog by adding more relevant user stories and work on them.

LSET emphasis on project-based learning as it provides an opportunity to the students to master the course content by going through the near real-world work experience. LSET projects are carefully designed to teach the industry required skills and mindset. It motivates the students on various essential aspects like learning to work in teams, improve communication with peers, taking initiatives to look for innovative solutions, improve problem solving skills, understand the end user requirements to build user specific product, etc.

Capstone Projects are aimed to build students' confidence on handling projects and apply their newly learned skills to solve real world problems. This gives an opportunity to the students to reflect upon their learning and find the opportunity to get the most out of the course.

Learning Outcome

- » Students will learn to work in an agile environment
- » Students will learn the agile project management terms which are used in the industry like product backlog, user stories, story point, epics, etc.
- » Students will learn to use Git repository and learn the concepts like commit, pull, push, branch, etc.
- » Students will learn to communicate in a team environment and express their ideas in an effective manner

Guidance and Help

A dedicated project coordinator will be assigned to this project who can mentor students on the process. Students can also avail the instructor's hours as and when needed. LSET may get an industry expert with subject specific experience to come and help students to understand the industry and its challenges.



Execution Process

This project will be carried out in phases. Each phase is designed to teach students a specific aspect on the subject and/or development paradigm. Following are the phases students will follow to complete this project.

Phase 1: Project Introduction Self Study [6 days]

In the first phase, students will learn about the financial industry and go through the project introduction documentation to build up the subject knowledge. This is a self-learning stage however instructor hours are available if required.

Phase 2: Project Build-up and Environment Setup [2 days]

In this phase, students are required to follow the project guide to setup the development environment. Project document guides students on finding and connecting to the LSET Git repository and install the required libraries or tools.

Phase 3: Product Backlog and Sprint Planning [2 days]

In this phase, students will use the existing product backlog and enhance it as per their project scope. Students can seek help from the project coordinator and/or the instructor. Project coordinator will help students to do sprint planning and assign story points to the stories. This process is meant to give students real world work environment experience. Students can consider this as a mock exercise on using the agile project management practices.



Phase 4: User Stories Execution and Development [12 days]

In this phase, students will work on the user stories identified in the Phase 3 process. Students will write code and algorithms to complete the development objectives. Project coordinator will be available to help students to guide on the development and answer any questions they may have. Students can also discuss this with the instructor.

Project Presentation

LSET emphasis on preparing students for real work environment by giving them opportunities to learn the required soft skills. After completing the project, students are required to present their work to the instructor and an invited project reviewer panel. Please note that the assigned external examiner will not be part of this panel and hence will not know about the students. This ensures an unbiased assessment by the external examiner. The aim of this exercise is to give students an opportunity to experience an environment they may face in their real job. Also, it gives them an opportunity to get feedback from the industry experts who can guide students on various parts of the project. This will help students to learn and fix anything they find necessary in their project. This not only ensures the quality output but also help students to learn about industry requirements.

Instructor and the project reviewer panel will assess the students on the following;

Project Repository on GitHub [10 points]: Instructor will ensure that the students have uploaded the project repository to the LSET's GitHub account as per the guidelines given in the project requirement documentation. Full points will be awarded if the repository is properly setup as per the instructions given.

Presentation Skills [20 points]: Students are required to present their work in the given timeframe. Full points will be awarded if students cover everything needed to present their work in the given timeframe.

Communication Skills [20 points]: Students need to present their work in a manner which is understandable by all the participants. More focus will be given on the way student communicates and not the language. Full points will be awarded if students able to communicate their work properly.

Evaluation Criteria

LSET promotes transparent and unbiased evaluation process. All the external examiners will follow a set process to grade students. No student's personal or identification information will be shared with the external examiners so they will not be knowing about the person they are grading. They will only get the project files and grading guidelines to follow. This will ensure the equal quality standards across the institute.

Following are some of the key areas the LSET external examiners will be grading on.

Project Documentation [10 points]: Project documentation is properly filed up with the information which can be used to understand the project work. Students can use the supplied project documentation template to fill up the information. External examiner to confirm if all the information is filled up. Full points will be awarded if all the sections are covered.

Project Structure [10 points]: Students need to follow the proper structure while developing their project. This structure is being taught and/or covered in the project requirement documentation. External examiner to confirm if the project files are properly structured. Full points will be awarded if the structure meets the given guideline.

Solves Basic Problem [50 points]: Students need to ensure that they implement all the requirements given in the project documentation. External examiner to confirm if the project solves the given problem. Full points will be awarded if the students include everything that was asked in the project requirement.

Innovation [20 points]: Students are encouraged to bring new ideas into their development. They can improve the design, use new design patterns, code with a better coding style, or simply add an additional feature. External examiner to confirm if the students have added more than the requirement given to improve the design or solution. The new addition must include a new feature and should not be similar to the requirements given. Full points will be awarded if the external examiner finds a new innovation or see students going beyond the asked requirements.

Best Practices [20 points]: Students are required to follow the best practices in their development. This will help them to become a quality resource for their prospective employer. External examiner to confirm if the supplied best practices are followed in the project. Full points will be awarded if the best practices are properly implemented.



Performance Consideration [20 points]: Students need to think about performance while working on their project. Performance is one of the important industry requirement. External examiner to confirm if the student considered the performance improvements in the project. Full points will be awarded if the external examiner sees efforts taken to consider performance aspect in the development.

Security Structure [20 points]: Students need to consider the security aspect If applicable in the design and development. External examiner to confirm if the security consideration is applicable in this project, if it is applicable, the examiner to confirm if the student has considered the security elements in the project. Full points will be awarded if the external examiner sees efforts taken to consider the security aspect in the development.



Benefits of LSET Certificate

Earning the LSET Certificate means you have demonstrate hard working capabilities and learnt the latest technologies by completing hands-on exercises and real world projects. Following are some of the traits employers can trust you have built up through your course;

- You know how to work in a team environment and communicate well.
- You know the tools which are necessary in your desired job.
- You know how to use the latest technologies to develop technologically advanced solutions
- You have developed problem solving skills to navigate through complex problem scenarios and figure out right solutions.
- You are now ready to take on the challenge and help your prospective employer to build the desired solutions



What to expect after completing the course?

After earning your certificate from LSET, you are entitled to join the LSET's Alumni club. There are countless benefits associated with the Alumni Club membership. As a member of LSET Alumni you can expect the following;

- LSET to hold your hand all the way to find a successful career
- Advice you on choosing right career based on your passion and goals
- Connect you with industry experts for career progression
- Provide you opportunities to participate in events to keep yourself updated
- Provide you an opportunity to contribute to the game changing open source projects
- Provide you a platform to shine by giving you an opportunity to speak at our events

TOOLS & TECHNOLOGIES YOU WILL LEARN FROM THIS COURSE



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LSET could provide you with the perfect headstart to start your career in **Java Development.**





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