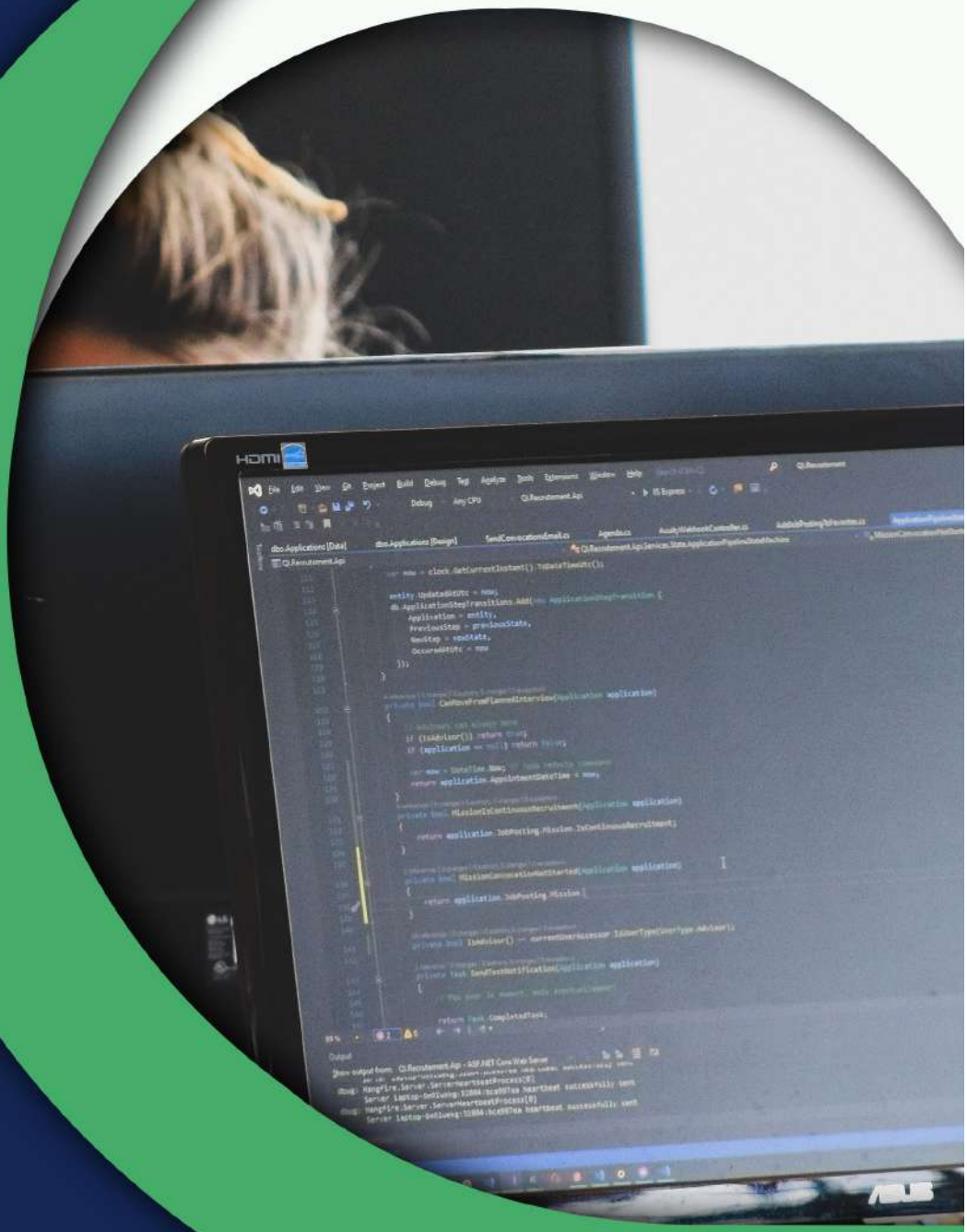

FULL STACK JAVA

COURSE ID	DEPARTMENT	CAMPUS
FSJ	SOFTWARE ENGINEERING	1 CORNHILL

LEVEL	METHOD	DURATION
CERTIFICATE	LECTURE + PROJECT	4 MONTHS

Make yourself more employable by learning about end-to-end development. More and more companies are now looking to hire individuals who can work on frontend as well as backend. LSET's Full Stack Java Development course will open a lot of opportunities for you.

Apply now to start your journey to becoming a full-stack Java developer with LSET

Full Stack Development is a concept which includes the end-to-end development of both front-end and back-end of an application. Many companies are looking to hire a resource who will be proficient in working across multiple stacks which enables them to save money and get the product faster to the market. This Java Full Stack Development course will teach you to work on different aspects of web development including front-end, back-end, databases, debugging, testing, version control, and other essential technologies. You will start with frontend technologies like HTML, CSS3, Bootstrap 5, and JavaScript. You get an option to select between Angular and React JS as your front technology. Both of these frameworks are in great demand and enables you to build responsive single page applications.

After mastering the frontend, you will get to learn the backend development using Java Spring framework. In this, you will learn about Spring Boot, Spring Cloud, Spring Data, and other relevant tools. You will learn to build scalable, fault tolerant, and secure microservices. This part will teach you to use Spring Cloud which offers service discovery, load-balancing, circuit breaking, distributed tracing, API gateway, and monitoring. You will also get introduced to the event-driven development to consume and produce events from your microservices in real-time. On the database side, you will learn to build entities and create ERDs (Entity Relationship Diagram) to setup your database tables. You will learn the concept of Normalisation and build tables using 3rd normal form.

Final part will take you through the deployment process and teach you to build docker images, setup and execute CICD pipeline by using Jenkins, do code quality checks using sonarqube, etc. All these will prepare you to land on the highly paid and most in demand job in the industry.

Frontend Technologies: HTML is the standard markup language to develop web pages. CSS is use to style the HTML elements. JavaScript adds interactivity to the web page. BootStrap is a CSS Framework for developing responsive and mobile-first websites.

Angular: Angular is a component-based framework for building scalable web applications. It offers a collection of well-integrated libraries that cover a wide variety of features, including routing, forms management, client-server communication, etc.

React: React is a free and open-source front-end JavaScript library for building fast and interactive user interfaces for web and mobile applications.

Spring Boot: Spring Boot is an open-source Java-based framework widely known to create Microservices. It simplifies the creation of stand-alone, production-grade, ready to run Applications with minimal efforts.

Docker: Docker enables to develop, ship, and run applications with minimal efforts. It allows us to separate our applications from our infrastructure which help in speeding up the software delivery. Docker helps to package and run an application in a loosely isolated environment called a container. We can run many containers simultaneously on a single host. Containers are lightweight and contain necessary configurations and libraries to run the application. We can easily share containers which can run on any server.

JOB GUARANTEE

Job Guarantee is an add-on program you can register with this course. You will need to clear an assessment interview to get enrolled. Once successful in the assessment, you will be offered Job Guarantee with this certificate course. There is a fee to join this program as it takes you to rigorous career development, interview preparation, mock interviews, etc. The fee for joining the Job Guarantee add-on program is £500. This is a 12 months program which starts at the end of your certificate course. As part of this program, we represent you to the prospective employers and train on career development elements...

You need to abide by the rules of this program which you can find on the Job Guarantee page. If we can't find you a relevant job or you don't find it by yourself in the similar industry in any part of the world within these 12 months, we will refund you the course fee + Job Guarantee program fee. The refund process will start after the end of the 12 months and every month we will pay £500 until the entire fee is paid back. But if you find a relevant job during this time then the remaining payments will be stopped. This program is only applicable to home students (UK permanent residents / citizens).

INDUSTRIAL TRAINING

LSET offers an optional add-on industry training program to its students. Students wishing to enrol in this program require to pay fee of £2000 to receive training from industry experts at IT companies in the US or UK. This is a month-long program which takes place at the host company's location. Interested students need to go through an assessment and host company's interview process to be accepted in the program.

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

- Prior Knowledge of Java Required Or Java Programming Certificate
- Prior Knowledge of HTML, CSS, and Javascript required Or Web Fundamental Certificate
- Basic Proficiency with Computers
- 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 the end-to-end application development.
- Master the front-end technologies like HTML5, CSS3, BootStrap 5, JavaScript, Angular or ReactJS.
- Learn how to develop scalable microservices using Spring Boot and Spring Cloud
- Get familiar with the Microservice architecture and various design patterns.
- Learn the CICD pipeline and tools like Gitlab, Jenkins, Grafana, Prometheus, Docker & Kubernetes, etc.
- Learn how to setup automated code quality check using Jenkins and Sonarqube

COURSE DURATION & CLASS TIMINGS

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 Full Stack Java Certificate course to learn the end-to-end development of a web application. LSET teaches this course in a project-based environment that lets you explore real-world applications.

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

WEB FUNDAMENTALS

- Introduction
- HTML
- CSS
- JavaScript
- Bootstrap

ANGULAR PROGRAMMING BASICS

- Angular Application Introduction
- Typescript
- Routing
- Building Angular Components
- Templates, Directives, and Pipes

- Flex-Layout – Responsive Layout Engine
- Working with NG Bootstrap
- Angular Material
- Dependency Injection and Services
- Integrating Backend Data Services
- Bootstrapping your angular app

SPRING FRAMEWORK

- Introduction
- Getting started with Spring Framework
- Spring Core
- Spring Expression Language (SpEL)
- Obtaining a SqlRowSet from SimpleJdbcCall
- Creating and using beans >> Bean scopes
- Conditional bean registration in Spring
- Bean Validation

BUILDING MICROSERVICE WITH SPRING BOOT

- Introduction to Spring Boot
- Creating a RESTful Services Project with Spring Boot
- Understanding the Spring Boot Auto Configuration and Dispatcher Servlet
- Understanding the Controllers, Services, Repositories, and DTOs layers
- Understanding the use of request and response objects
- Understand the POST, GET, PUT, DELETE, UPDATE methods
- Implementing Exception Handling to return Error codes
- Implementing Generic Exception Handling for all Resources
- Implementing Validations for RESTful Services

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SPRING TOOL

- Introduction Spring Tool Suite
- MVC Architecture
- Handling Forms and Complex URL Mapping
- File Upload and Error Handling
- RESTful Webservice
- Securing MVC Application
- Unit Tests and Acceptance Tests
- Optimizing the Requests
- Other Spring Offerings

SPRING ASPECT ORIENTED PROGRAMMING (AOP)

- Understanding AOP Concepts
- Spring AOP Components
- Spring AOP Proxies
- AspectJ Support
- Design with AOP
- Three-tier Spring Application, Domain-Driven Design
- Tests and AOP

DATABASE CONNECTIVITY WITH SPRING DATA AND HIBERNATE

- An Introduction to Hibernate
- Integrating and Configuring Hibernate
- The Persistence Life Cycle
- An Overview of Mapping
- Mapping with Annotations
- JPA Integration and Lifecycle Events
- Using the Session
- Hibernate Query Language
- Advanced Queries Using Criteria

- Filtering the Results of Searches
- NoSQL Database and Hibernate
- Hibernate Envers
- Introduction to Spring Data
- Learn about Entities and Entity Relationship Diagram
- Learn about RDBMS, NoSQL databases
- Explore basic SQL Queries including Joins
- Learn to Connect MySQL and Postgres Databases

DEPLOYMENT

- Optimizing the Requests
- Introduction to Tomcat
- Deploying Web Application to the Cloud

*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.

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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		■ Course Introduction ■ How to make the best of this course ■ GIT Introduction and Setup ■ Course Induction ■ Student Introduction	■ Web Fundamentals Intro ■ HTML	■ CSS
Week 2			■ JavaScript Quiz	■ Bootstrap	■ Angular Application Introduction ■ Invocation Types and Modes
Week 3	Student Feedback		■ Useful Tools Introduction ■ Setup an AWS Account, AWS SAM	■ Typescript ■ Routing	■ Building Angular Components ■ Templates, Directives, and Pipes Assignment
Week 4	Personality Development		■ Flex-Layout – Responsive Layout Engine ■ Working with NG Bootstrap Quiz	■ Angular Material ■ Dependency Injection and Services	■ Integrating Backend Data Services ■ Bootstrapping your angular app

2nd Month

DAY	MON	TUE	WED	THU	FRI
Week 1			■ Spring Framework Intro ■ Spring Core	■ Spring Expression Language ■ Obtaining a SqlRowSet from SimpleJdbcCall	■ Creating and using beans ■ Bean scopes Assignment
Week 2	Interview Preparation		■ Conditional bean registration in Spring ■ Bean Validation Quiz	■ Introduction to Spring Boot ■ Creating a RESTful Services Project with Spring Boot	■ Understanding the Spring Boot Auto Configuration and Dispatcher Servlet ■ Understanding the Controllers, Services, Repositories, and DTOs layers
Week 3	Student Feedback		■ Understanding the use of request and response objects ■ Understand the POST, GET, PUT, DELETE, UPDATE methods	■ Implementing Exception Handling to return Error codes ■ Implementing Generic Exception Handling for all Resources	■ Implementing Validations for RESTful Services ■ Introduction Spring Tool Suite Assignment
Week 4	Interview Preparation	Hands-on Workshops	■ MVC Architecture ■ Handling Forms and Complex URL Mapping Quiz	■ File Upload and Error Handling ■ RESTful Webservice	■ Securing MVC Application ■ Unit Tests and Acceptance Tests Product Backlog and Sprint Planning

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.

3rd Month

DAY	MON	TUE	WED	THU	FRI
Week 1			■ Other Spring Offerings ■ Optimizing the Requests	■ Understanding AOP Concepts ■ Spring AOP Components	■ Spring AOP Proxies ■ AspectJ Support Assignment
Week 2	Interview Preparation		■ Design with AOP ■ Three-tier Spring Application, Domain-Driven Design Quiz	■ Tests and AOP ■ An Introduction to Hibernate ■ Integrating and Configuring Hibernate	■ The Persistence Life Cycle ■ An Overview of Mapping
Week 3	Student Feedback Project Introduction Self Study	Project Introduction Self Study	■ Mapping with Annotations Project Introduction Self Study	■ JPA Integration and Lifecycle Events Project Introduction Self Study	■ Using the Sessiong Assignment Project Introduction Self Study
Week 4	Interview Preparation Project Introduction Self Study	Hands-on Workshops Project Build-up and Environment Setup	■ Hibernate Query Language Quiz Project Build-up and Environment Setup	■ Advanced Queries Using Criteria Product Backlog and Sprint Planning	■ Advanced Queries Using Criteria Product Backlog and Sprint Planning

4th Month

DAY	MON	TUE	WED	THU	FRI
Week 1	Interview Preparation User Stories Execution and Development	User Stories Execution and Development	■ Filtering the Results of Searches User Stories Execution and Development	■ NoSQL Database and Hibernate User Stories Execution and Development	■ Hibernate Envers Assignment User Stories Execution and Development
Week 2	Student Feedback User Stories Execution and Development	Hands-on Workshops User Stories Execution and Development	■ Introduction to Spring Data Quiz User Stories Execution and Development	■ Learn about Entities and Entity Relationship Diagram User Stories Execution and Development	■ Learn about RDBMS, NoSQL databases User Stories Execution and Development
Week 3	Interview Preparation User Stories Execution and Development	User Stories Execution and Development	■ Explore basic SQL Queries including Joins Testing, Deployment and Completion	■ Learn to Connect MySQL and Postgres Databases Testing, Deployment and Completion	■ Optimizing the Requests Assignment
Week 4	Testing, Deployment and Completion	Testing, Deployment and Completion	■ Introduction to Tomcat Testing, Deployment and Completion	■ Deploying Web Application to the Cloud 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	Student Services Welcome Call					■ Course Introduction ■ How to make the best of this course ■ GIT Introduction and Setup ■ Course Induction ■ Student Introduction	■ Web Fundamentals Intro ■ HTML
Week 2						■ CSS ■ JavaScript Quiz	■ Bootstrap
Week 3	Student Feedback					■ Angular Application Introduction ■ Typescript	■ Routing ■ Building Angular Components Assignment
Week 4	Personality Development					■ Templates, Directives, and Pipes ■ Flex-Layout – Responsive Layout Engine Quiz	■ Working with NG Bootstrap ■ Angular Material

2nd Month

DAY	MON	TUE	WED	THU	FRI	SAT	SUN
Week 1						■ Dependency Injection and Services ■ Integrating Backend Data Services	■ Bootstrapping your angular app ■ Spring Expression Language (SpEL) Assignment
Week 2	Interview Preparation Student Feedback					■ Obtaining a SqlRowSet from SimpleJdbcCall ■ Creating and using beans Quiz	■ Bean scopes ■ Conditional bean registration in Spring
Week 3	Student Feedback					■ Bean Validation ■ Introduction to Spring Boot	■ Creating a RESTful Services Project with Spring Boot ■ Understanding the Spring Boot Auto Configuration and Dispatcher Servlet Assignment
Week 4	Interview Preparation	Hands-on Workshops				■ Understanding the Controllers, Services, Repositories, and DTOs layers ■ Understanding the use of request and response objects Quiz	■ Understand the POST, GET, PUT, DELETE, UPDATE methods ■ Implementing Exception Handling to return Error codes

3rd Month

DAY	MON	TUE	WED	THU	FRI	SAT	SUN
Week 1						■ Implementing Generic Exception Handling for all Resources ■ Implementing Validations for RESTful Services	■ Introduction Spring Tool Suite ■ MVC Architecture Assignment
Week 2	Interview Preparation Student Feedback					■ Handling Forms and Complex URL Mapping ■ File Upload and Error Handling Quiz	■ RESTful Webservice ■ Securing MVC Application
Week 3	Student Feedback		Project Introduction Self Study	Project Introduction Self Study	Project Introduction Self Study	■ Unit Tests and Acceptance Tests ■ Optimizing the Requests Project Introduction Self Study	■ Other Spring Offerings ■ Understanding AOP Concepts Assignment Project Introduction Self Study
Week 4	Interview Preparation	Hands-on Workshops	Project Introduction Self Study	Project Build-up and Environment Setup	Project Build-up and Environment Setup	■ Spring AOP Components ■ Spring AOP Proxies Quiz Product Backlog and Sprint Planning	■ AspectJ Support ■ Design with AOP ■ AThree-tier Spring Application, Domain-Driven Design Product Backlog and Sprint Planning

4th 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	■ Tests and AOP ■ An Introduction to Hibernate ■ Integrating and Configuring Hibernate User Stories Execution and Development	■ The Persistence Life Cycle ■ An Overview of Mapping ■ Mapping with Annotations Assignment User Stories Execution and Development
Week 2	Student Feedback		User Stories Execution and Development	User Stories Execution and Development	User Stories Execution and Development	■ JPA Integration and Lifecycle Events ■ Using the Session ■ Hibernate Query Language Quiz User Stories Execution and Development	■ Advanced Queries Using Criteria ■ Filtering the Results of Searches ■ NoSQL Database and Hibernate User Stories Execution and Development
Week 3	Interview Preparation		User Stories Execution and Development	User Stories Execution and Development	Testing, Deployment and Completion	■ Hibernate Envers ■ Introduction to Spring Data ■ Learn about Entities and Entity Relationship Diagram Testing, Deployment and Completion	■ Learn about RDBMS, NoSQL databases ■ Explore basic SQL Queries including Joins ■ Learn to Connect MySQL and Postgres Databases Assignment Testing, Deployment and Completion
Week 4			Testing, Deployment and Completion	Testing, Deployment and Completion	Testing, Deployment and Completion	■ Optimizing the Requests ■ Introduction to Tomcat ■ Deploying Web Application to the Cloud Capstone Project Presentation	Student Services Completion Alumni Welcome Session 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


Certificate of Achievement

This is to Certify that

Gabriella Plumb

has completed all prescribed requirements of the institute for the Certificate in

Java Serverless Cloud Developer

IN WITNESS WHEREOF, I have hereunto set my hand, this fourteenth day of August, in the year of two thousand twenty one, and caused the Seal of the London School of Emerging Technology to be affixed.

President's Signature

Digital Verification

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 Full Stack Java course.

Best Career Paths

Frontend Developer

The front-end developers are responsible for designing and maintaining the client-side of an application. He/she has to use HTML, CSS, JavaScript and more in the development process.

System Administrator

A system administrator has to work with computers, operating systems, software equipment, network components, and more. They provide complete IT support to an organisation.

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.

Backend Developer

A backend developer is responsible for the development of the server-side of an application. They work with web services and API to support front-end developers.

Software Tester

A software tester has to work in the quality assurance of software development. They have to do both manual and automated testing to find bugs, issues, and vulnerabilities.

Business Analyst

A business analyst helps organisations to leverage the data and provide useful insights to an organisation. This requires knowledge of programming and databases.

Top Companies Hiring Full Stack Developers

Microsoft, SAP, Cognizant, Boeing, DBS, EY, Google

The Course Provides Shared Expertise by

- LSET TRAINERS
- INDUSTRY EXPERTS
- TOP EMPLOYERS

Skills You will Gain

Spring Framework
- Spring Boot
- Spring MVC
- Spring Cloud
- Spring Security

Web Technologies
- CSS
- HTML
- JavaScript, JQuery
- Bootstrap

Containers
- Docker
- Docker Compose
- Docker Registry
- Kubernetes

ORM
- Hibernate
- Data Access Objects
- JPA
- Data Transfer Objects

Testing
- JUnit
- Spring MockMVC
- DataJpaTest
- Mockito

Version Control
- Git Commands
- GitHub
- Gitlab
- Bitbucket

Architecture
- Design Thinking
- UI/UX Design
- Prototyping

Front End
- HTML
- JS
- CSS
- Angular

Data
- RDBMS
- SQL
- ERD
- Spring Data
- NoSQL
- JDBC
- Normalization

Code Quality Tools
- SonarQube
- Checkstyle

CICD and Build Tools
- Maven
- Gradle
- Jenkins

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.

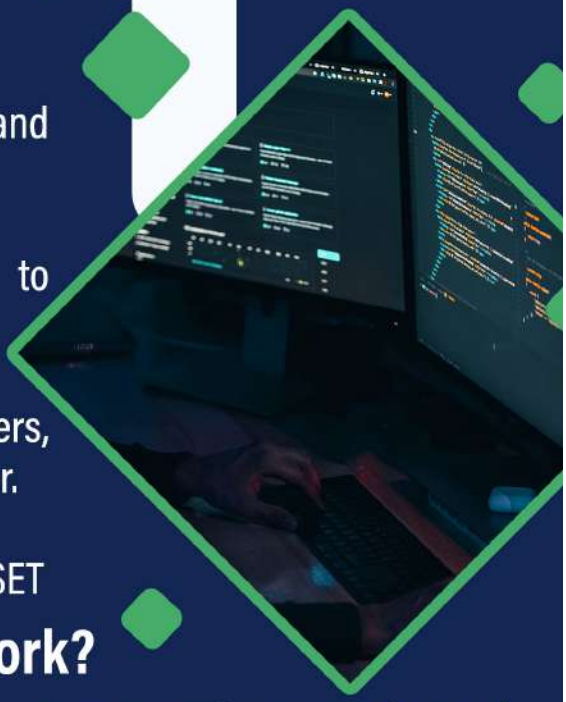
- We constantly update the curriculum to include the latest releases and features.
- We focus on teaching the industry best practices and standards.
- We let you explore the topics through guided hands-on sessions.
- We provide industry experienced mentor support to every student.
- We give you an opportunity 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 CICD to Deploy

In this step, students learn to use CICD (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.

Phase 5: Testing, Deployment and Completion [5 days]

In this phase, students will test the application and deploy to the cloud environment. Students will experience the deployment process in cloud and learn the best practices. After the successful deployment, students will present their project to the instructor and/or to the external project reviewer. A feedback will be given to the students. Students will have 1 week to work on the feedback and submit the final copy of the project which will be sent to the external examiner for evaluation.

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

REGISTER NOW!

Start your Journey to Become a Professional Full Stack Developer

LSET could provide you with the perfect headstart with your career in Full Stack Developer.

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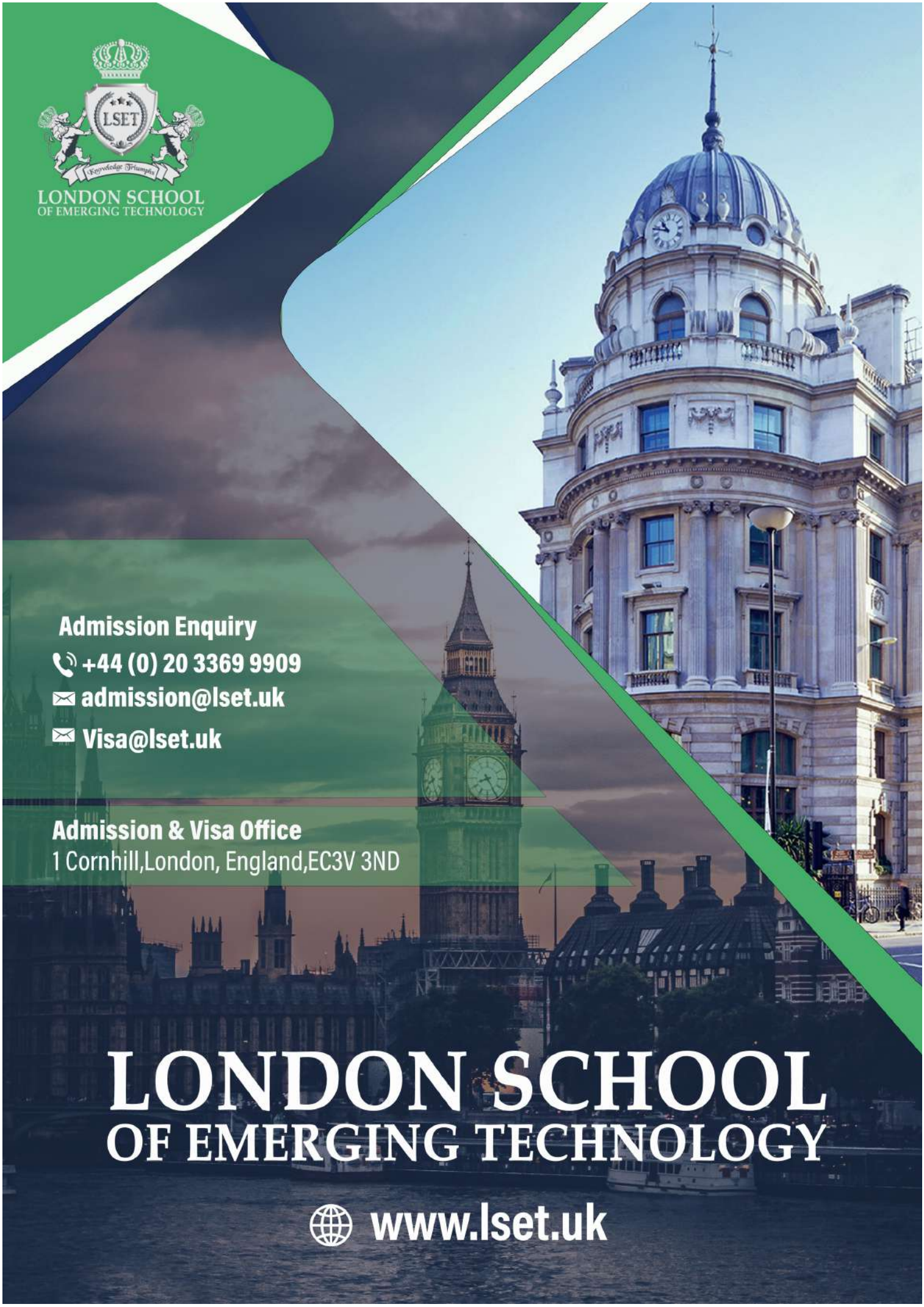
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