NIELIT Virtual Academy

INTERSHIP PROSPECTUS

Name of the Internship: Online Internship in Scala

Internship Code: IN35

Mode of Conduction: Online

Starting Date: 1st July 2026

Last date of registration: 28th June 2026

Duration: 8 Weeks

Objective of the Course

- ❖ Provide a strong foundation in Scala programming concepts, syntax, and object-oriented programming principles.
- ❖ Develop expertise in functional programming techniques, collections, higher-order functions, and immutability.
- ❖ Provide comprehensive knowledge of concurrency, asynchronous programming, and error handling in Scala applications.
- ❖ Enable learners to build scalable, maintainable, and high-performance applications using Scala and its ecosystem.

Outcome of the Course

- ❖ Understand and apply core Scala programming concepts to develop robust software applications.
- ❖ Design and implement object-oriented and functional programming solutions using Scala.

Course Fee: **Rs: 1000/-(inclusive of GST)**

Eligibility: **Pursuing an Undergraduate level course or above**

Methodology

- ✓ Teaching Mode: Self-Pace
- ✓ Access from anywhere anytime
- ✓ Content Access through e-learning portal
- ✓ Doubt Removal Session
- ✓ Covers both Theory & Practical
- ✓ Certification: On completion of the Mini Project

Registration Link: http://nva.nielit.gov.in

Contact Details:

- ✓ Course coordinator Name: Mr.Anant Tudu
- ✓ Email: trng.chennai@nielit.gov.in; contact.nva@nielit.gov.in
- ✓ Mobile number: **7598730125**

Course Structure:

Module No	Module Title
1	Introduction to Scala
2	Scala Fundamentals
3	Control Structures & Functions
4	Recursion & Collections
5	Collections & OOP Concepts-1
6	OOP Concepts-2
7	Functional Programming & Exception Handling
8	Error Recovery & Option/Either
9	Implicits & String Processing
10	Traits & Pattern-Based Programming
11	Project

Syllabus:

Detailed Syllabus

Module 1: Introduction to Scala

- ✓ Introduction to Scala
- ✓ Installation of Scala
- ✓ Scala REPL, Basics of Scala

Module 2: Scala Basics & Decision Making

- ✓ Variables and Constants
- ✓ Types
- ✓ Comments

- ✓ Operators
- ✓ Conditional Statements (if, if-else, nested if)

Module 3: Loops, Pattern Matching & Functions

- ✓ Loops (for, while, do-while)
- ✓ Pattern Matching
- ✓ Functions and Function Types
- ✓ Procedures in Scala

Module 4: Recursion & Scala Collections

- ✓ Recursion
- ✓ Introduction to Collections
- ✓ Lists
- ✓ Sets
- ✓ Maps

Module 5: Advanced Collections & OOP Fundamentals

- ✓ Advanced Collection Operations
- ✓ Collection Transformations
- ✓ Objects and Classes
- ✓ Creating Class Instances

Module 6: Encapsulation, Inheritance & Polymorphism

- ✓ Encapsulation
- ✓ Access Control
- ✓ Inheritance
- ✓ Types of Inheritance
- ✓ Polymorphism

Module 7: Abstraction, Constructors & Functional Programming

- ✓ Abstraction
- ✓ Abstract Classes
- ✓ Constructors
- ✓ Access Modifiers
- ✓ Functional Programming Basics

Module 8: Functional Programming & Exception Handling

- ✓ Higher-Order Functions
- ✓ Anonymous Functions
- ✓ Exception Handling Basics
- ✓ Multiple Catch Blocks
- ✓ Finally Block

Module 9: Error Recovery, Option, Either & Implicits

- ✓ Recover and RecoverWith
- ✓ Option
- ✓ Either
- ✓ Implicit Conversions
- ✓ Implicit Classes

Module 10: Advanced Scala Features & Pattern-Based Programming

- ✓ Advanced Implicit Classes
- ✓ Strings and String Operations
- ✓ Traits
- ✓ Pattern-Based Programming
- ✓ Real-World Pattern Matching Applications

Module 11. Project

- ✓ Capstone project
- ✓ Project Report Submission