

Clean Code: Naming, Functions & TDD

Learn to write clean, maintainable code through better naming, focused functions, formatting and test-driven development.

12

MODULES

41

TOPICS

COURSE OVERVIEW

This course covers the foundations of clean code, including core principles, self-documenting code and the DRY principle. It addresses naming conventions for classes and methods, writing small single-responsibility functions, and guidelines for using comments and formatting effectively. It also covers objects and data structures, error handling, working with interface boundaries and third-party code, unit testing and test-driven development, and designing small, cohesive classes, concluding with practices for reviewing and refactoring code over time.

WHO THIS COURSE IS FOR

Software Developers

Software Engineers

Development Team Leads

Code Reviewers

Quality Assurance Engineers

LEARNING OBJECTIVES

- Explain the core principles behind writing clean, self-documenting code
- Apply naming conventions to classes, methods and variables
- Write small functions that follow the single responsibility principle
- Identify warning signs in comments and when they are necessary
- Apply formatting guidelines to improve code readability
- Compare return codes and exceptions for handling errors
- Develop small, cohesive classes designed for change
- Plan test-driven development using clean unit tests

12 Modules, 41 Topics

01

Introduction

TOPICS

Why this is needed · Foundations · Ownership · Resources

02

Principles

TOPICS

Tools & Core Principles · Self Documenting Code · DRY Principles · Boundaries

03

Naming Conventions

TOPICS

Names with meaning · Class Names · Method Names · Warning Signs

04

Writing Functions

TOPICS

Size is everything · Single Responsibility Principles · Arguments · Side Effects · Fail Fast · Return early

05

Comments and Usage Guidelines

TOPICS

When to write them · Intent · Warning Signs · Necessary comments · Clean Comments

06

Formatting

TOPICS

Purpose and types of formatting · Excessive Indentation

07

Objects and Data Structures

TOPICS

Law of Demeter · Data Abstraction and Symmetry

08

How to Handle Errors

TOPICS

Return Codes vs Exceptions · Working with Nulls

09

Interface Boundaries

TOPICS

Introduction · Working with 3rd Party code · Using non-existent code

10

Unit Tests & Test-Driven Development

TOPICS

Why TDD? · Clean Tests

11

Classes

TOPICS

Creation · Small classes · Cohesion · Developing for change

12

Keeping Going & Conclusion

TOPICS

Reviews & Other Developer Practices · Boy Scout Rule · Refactoring tips

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training

Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

Flexi (Self-Paced)

1-on-1 Training

Ready to Get Started?

Talk to a learning advisor about schedules, group training and customised delivery.

[Visit koenig-solutions.com](https://koenig-solutions.com)[✉ info@koenig-solutions.com](mailto:info@koenig-solutions.com)