



THE CATALOG OF DESIGN PATTERNS



CONTENT



01

DEFINITION OF DESIGN PATTERNS

02

IMPORTANCE IN SOFTWARE DEVELOPMENT

03

OVERVIEW OF CATEGORIES: CREATIONAL, STRUCTURAL, BEHAVIORAL

1-DEFINITION OF DESIGN PATTERNS?

Design Patterns

In software engineering, design patterns are **reusable solutions to common problems that occur within a given context in software design**. They provide a template for how to solve a problem in a way that can be reused across different projects



2- IMPORTANCE IN SOFTWARE DEVELOPMENT

DESIGN PATTERNS ARE ESSENTIAL IN SOFTWARE DEVELOPMENT FOR SEVERAL REASONS.

Efficiency



User Experience

Collaboration



Scalability

Problem-Solving

Economic Growth

Security



OVERVIEW OF CATEGORIES: , ,

Creational

**Singleton,
Factory Method,
and
Abstract Factory**

Structural

**Adapter,
Composite,
and
Decorator**

Behavioral

**include Observer,
Strategy,
and
Command**