SiriusAI

UNDERSTANDING

SOFTWARE DEVELOPMENT LIFE CYCLE

A STEP-BY-STEP JOURNEY

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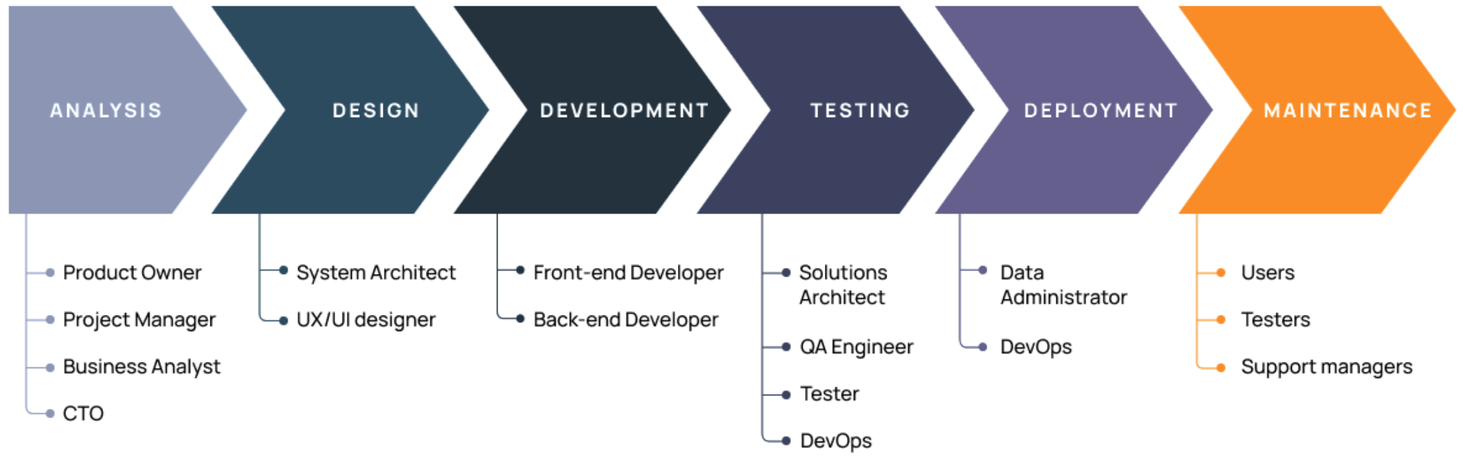
What is SDLC?

SDLC (Software Development Life Cycle) is a systematic, step-by-step process used to develop software that meets technical, business, and user expectations.

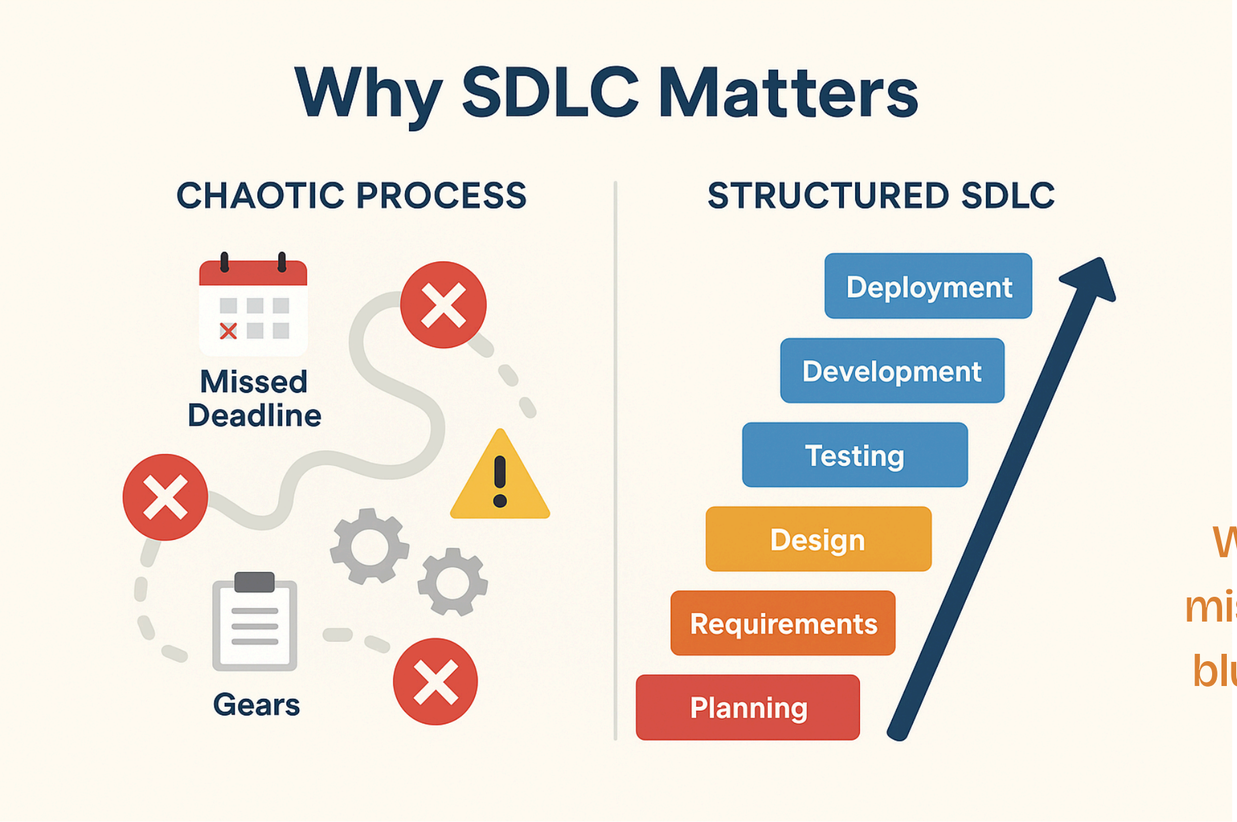
Purpose:

- Deliver high-quality software
- Meet project deadlines and budget
- Reduce risks and errors
- Provide a clear roadmap for teams



Why SDLC Matters

- Organizes the development process – eliminates guesswork and random coding
- Aligns stakeholders – ensures clients, developers, testers, and managers are on the same page
- Improves risk management – identifies potential problems early
- Provides a roadmap – avoids chaos by guiding the team through structured phases



Without SDLC, teams often face scope creep, miscommunication, and delays. SDLC acts like a blueprint, ensuring structure and predictability.

Key Phases of SDLC

List of Phases with Brief Descriptions:

- Planning – Define goals, scope, timeline, and team roles
- Requirements – Gather and document user needs and system expectations
- Design – Create architecture, user interfaces, and system models
- Development – Write and assemble the actual code
- Testing – Detect and fix bugs; validate functionality
- Deployment – Release the software for use
- Maintenance – Monitor performance, apply updates, and fix issues over time

Benefits of Using SDLC

Higher Quality Output

Structured steps ensure fewer bugs and better performance

Predictable Timelines & Costs

Better planning leads to fewer delays and cost orevruns

Clear Roles & Deliverables

Each team member knows what to do, when, and how

Improved Customer Satisfaction

Software meets real user needs and works reliably

✅ **Better Quality**

Fewer bugs, smoother performance

⏱️ **Predictable Delivery**

Clear timelines and controlled costs

👥 **Defined Roles**

Everyone knows their responsibilities

⭐ **Happy Customers**

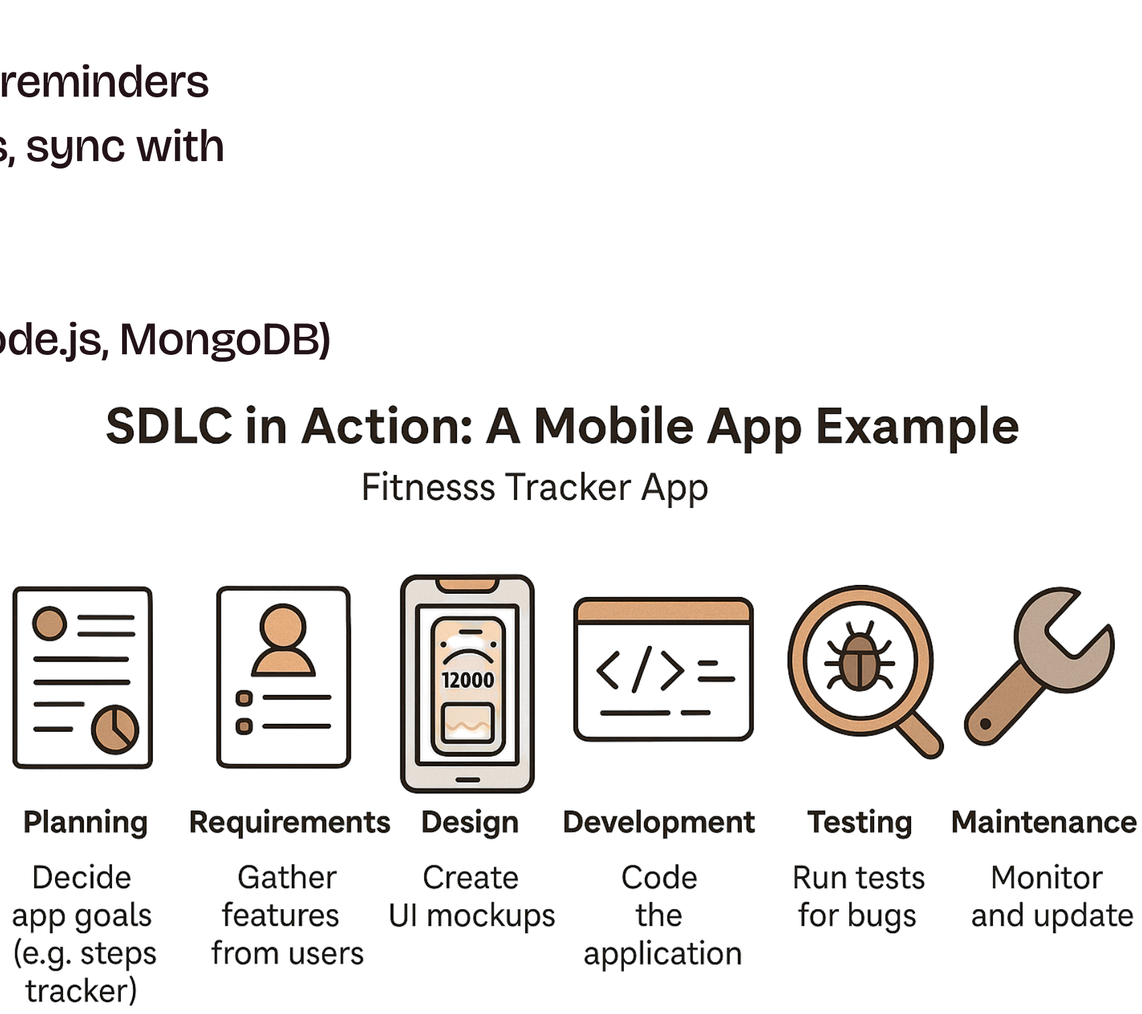
Software meets real user needs

SDLC in Action: A Mobile App Example

Scenario: Building a Fitness Tracker App

🧩 Phase-wise Breakdown:

- Planning: Decide app goals – e.g., steps tracker, water intake, reminders
- Requirements: Gather features from users – login, daily goals, sync with wearable
- Design: Create wireframes and UI mockups using Figma
- Development: Code frontend (React Native) and backend (Node.js, MongoDB)
- Testing: Run unit tests and real-device testing for bugs
- Deployment: Release on App Store / Google Play
- Maintenance: Monitor crash reports, push updates, fix bugs



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“SDLC isn’t just a process — it’s the backbone of successful software.”

Thank you