

# Solutions Architect Handbook

- [Software Architecture basics](#)

# Software Architecture basics

Software architecture main requirements:

- User requirements
- Business requirements
- IT System requirements

Software architecture key principles:

- minimize complexity
- separation of concerns
- single responsibility principle
- principle of least knowledge
- don't repeat yourself
- minimize upfront design

General guidelines:

- no duplicate functionality
- consistent patterns in your layers
- composition over inheritance
- use code conventions

Layer guidelines

- separate areas of concern
- clearly define communication between layers
- use abstraction to loosely couple layers
- don't mix different types of components in a layer
- use consistent data formatting within layers

Component guidelines

- No component should rely on the internals of another
- Do not mix roles in a single components
- Define clear contracts for components
- Abstract system wide components away from other layers