1. Record Nr.   UNISA996558570803316

   Autore   Lano Kevin

   Titolo   Introduction to Software Architecture [[electronic resource]] : Innovative
                      Design using Clean Architecture and Model-Driven Engineering / / by
                      Kevin Lano, Sobhan Yassipour Tehrani

   Pubbl/distr/stampa Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2023

   ISBN   3-031-44143-5

   Edizione   [1st ed. 2023.]

   Descrizione fisica 1 online resource (264 pages)

   Collana   Undergraduate Topics in Computer Science, , 2197-1781

   Disciplina   005.12

   Soggetti   Software engineering
                      Computer science
                      Mobile computing
                      Internet programming
                      Software Engineering
                      Models of Computation
                      Mobile Computing
                      Web Development

   Lingua di pubblicazione   Inglese

   Formato   Materiale a stampa

   Livello bibliografico   Monografia

   Nota di contenuto Introduction to Software Architecture Concepts -- Introduction to Clean
                      Architecture Concepts,- Development Methods -- Compound
                      Components and Complex Connectors -- Architectural Styles -- Mobile
                      Application Architectures -- Enterprise Systems and Application Servers
                      -- Web Application and Enterprise Information System Architectures --
                      Service-oriented Architectures -- Safety-critical and Embedded
                      Systems Architectures -- Architectural Design for Machine Learning
                      Systems -- Software Architectures and Re-engineering -- References
                      -- Appendix A: User guide for the architecture diagram tool --
                      Appendix B: User guide for AgileUML -- Index.

   Sommario/riassunto This unique, accessible textbook gives a comprehensive introduction to
                      software architecture, using 'clean architecture' concepts with agile
                      methods and model-driven development. The work introduces the key
                      concepts of software architectures and explains the importance of
                      architectural design for the long-term usefulness and sustainability of

software systems. In addition, it describes more than 30 architectural styles and patterns that can be used for constructing mobile applications, enterprise and web applications, machine-learning systems, and safety-critical systems. Topics and features: Combines clean-architecture principles with agile model-driven development Employs practical examples and real industrial cases to illustrate architectures for mobile apps, web apps, enterprise systems, safety-critical systems and machine-learning systems Explores support tools for architectural design and system development using the approach Provides tutorial questions and slides to support teaching and learning Delivers material that has been class-tested over 10 years with more than 1,000 students The textbook can be used to support teaching of an undergraduate module in software architecture, yet also includes more advanced topics suitable for a specialised software architecture module at master's level. It also will be eminently suitable and relevant for software practitioners and researchers needing or wanting to explore the field in short courses or self-study. Dr. Kevin Lano is Reader in Software Engineering, Department of Informatics, King's College London, UK. Dr. Sobhan Tehrani is a Lecturer, Department of Computer Science, University College London, UK.