



STANLEY
COLLEGE OF ENGINEERING & TECHNOLOGY FOR WOMEN
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SE-567

MODEL-DRIVEN SOFTWARE DEVELOPMENT

UNIT-I

Introduction and Framework - Traditional Software Development. The Productivity Problem, The Portability Problem, The Interoperability Problem, The Maintenance and Documentation Problem, The Model Driven Architecture, The Model Driven Transformation Steps. MDA Benefits, MDA Building Blocks, Model Relationships between Models, Business and Software Model, Structural and Dynamic Models, Platform Independent and Platform Specific Models. The Target Platforms of a Model, Transformations between Identical Languages, The Basic MDA Framework, Public and Private Attributes, Associations.

UNIT-II

Meta Modeling and Domain Architecture - Metamodeling, MDSD- Capable Target Architectures, Building Domain Architectures.

UNIT-III

Transaction and Code Generation Techniques - Code Generation Techniques, Model Transformation Techniques, **MDSD Tools:** Roles, Architecture, Selection Criteria, and Pointers.

UNIT-IV

Process Engineering - MDSD Process Building Blocks and Best Practices, Testing, Versioning.

UNIT-V

Applications in Real World - Case Study: Embedded Component Infrastructures, Case Study: An Enterprise System, Adoption Strategies for MDS.

Suggested Reading:

1. Thomas Stahl, Markus Voelter, “*Model-Driven Software Development: Technology, Engineering, Management*”, Wiley, 2006.
2. Anne Kleppe, Jos Warmer and Wim Bast. “*The Model Driven Architecture, Practice and Promise*”, Pearson Education, Boston, USA, 2003.