

CHAPTER 4 & CHAPTER 5

chapter 4

Process Models:

Prescriptive process models advocate an orderly approach to software engineering. process models strive for structure and order, if we reject traditional process models and replace them with something less structured, do we make it impossible to achieve coordination and coherence in software work?

The Waterfall Model	The V-Model	The Incremental Model	The Prototyping Model	The Spiral Model	The Concurrent Model
---------------------	-------------	-----------------------	-----------------------	------------------	----------------------

Unified Process— “use-case driven, architecture-centric, iterative and incremental” software process closely aligned with the Unified Modeling Language (UML).

chapter 5

Agile Development:

Agility is: Effective, rapid and adaptive. response to change Effective communication among all stakeholders, Organizing a team so that it is in control of the work performed Yielding.

An Agile Process:

Is driven by customer descriptions of what is required.

Recognizes that plans are short-lived.

Develops software iteratively with a heavy emphasis on construction activities.

Delivers multiple ‘software increments’.

Adapts as changes occur.

EXTREME PROGRAMMING (XP)			
XP Planning	XP Design	XP Coding	XP Testing
<ul style="list-style-type: none"> •Begins with the creation of “user stories” •Agile team assesses each story and assigns a cost •Stories are grouped to for a deliverable increment •A commitment is made on delivery date •After the first increment “project velocity” is used to help define subsequent delivery dates for other increments. 	<ul style="list-style-type: none"> •Follows the KIS principle •Encourage the use of CRC cards. •For difficult design problems, suggests the creation of “spike solutions”—a design prototype •Encourages “refactoring”—an iterative refinement of the internal program design. 	<ul style="list-style-type: none"> •Recommends the construction of a unit test for a store <i>before</i> coding commences •Encourages “pair programming”. 	<ul style="list-style-type: none"> •All unit tests are executed daily •“Acceptance tests” are defined by the customer and executed to assess customer visible functionality.