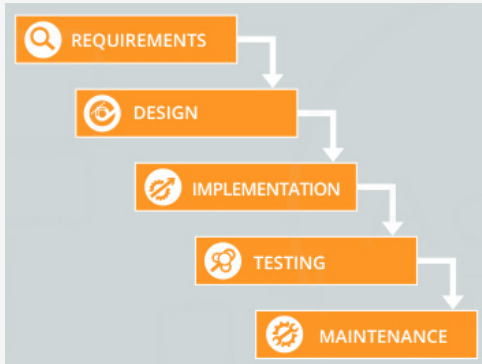
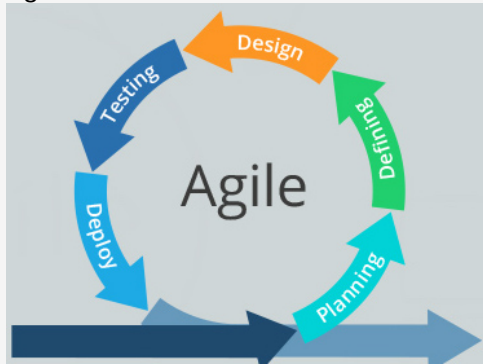
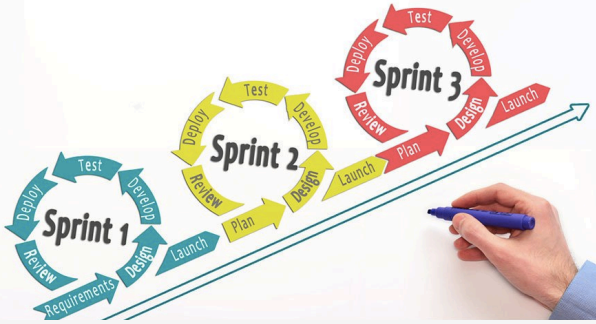



General Steps of Software Development Methodologies/Life Cycles:	<ol style="list-style-type: none"> 1. Requirements Analysis 2. Design 3. Development 4. Testing 5. Maintenance
Types of Software Development Methodologies/Life Cycles:	Waterfall, Agile, DevOps, DataOps, MLOps, etc.
Waterfall vs. Agile:	
<p>Waterfall:</p>  <pre> graph TD A[REQUIREMENTS] --> B[DESIGN] B --> C[IMPLEMENTATION] C --> D[TESTING] D --> E[MAINTENANCE] </pre>	<p>Agile:</p>  <pre> graph TD Design --> Build Build --> Plan Plan --> Deploy Deploy --> Test Test --> Design subgraph Agile Design Build Plan Deploy Test end Agile --> Right[] </pre>
Agile: Scrum vs. Kanban	
<p>Scrum:</p> <ul style="list-style-type: none"> Roles are predefined. Scrum master required. Tasks have assigned owners. Timelines are timeboxed into sprints. Changes can only be made upon completion of a sprint. Productivity is measured by the number of story points completed in each sprint. 	<p>Kanban:</p> <ul style="list-style-type: none"> Roles are fluid. Project manager optional. Tasks are shared by everyone. Timelines evolve on an as-needed basis. Changes can be made mid-stream, allowing for iterations before completion of a project. Productivity is measured by the cycle time of the complete project.

Roles in Scrum:	DEVELOPMENT TEAM, SCRUM MASTER, PRODUCT OWNER, STAKEHOLDERS
SPRINT & STAND-UP CALL in Scrum:	
Weekly Sprint Meetings:	Daily Stand-Up Meeting:
	
Hierarchy of Jira Software for Agile Projects:	<ol style="list-style-type: none"> 1. Initiative 2. Epic 3. Story/Task 4. Subtask 5. Backlog
S.O.L.I.D. - Principles for maintainable object-oriented code	
1. Single Responsibility	each class should have clear responsibilities
2. Open/Closed	published interfaces should not change
3. Liskov Substitution	base class has methods that apply to all its children; all implementations are compatible when a class uses an interface
4. Interface Segregation	keep interfaces small and focused, dependencies manageable
5. Dependency Inversion	code should depend on abstractions, not concrete implementations