

# AI Driven & AI Native Development

## Task 7

### Spec-Kit Plus

#### Constitution

- **Definition:** The master set of global rules for your project. Applies to all papers/features.
- **Purpose:** Ensures consistent quality standards, citation rules, clarity, plagiarism checks.
- **Key Points:**
  - Written once per project
  - Immutable and committed to Git
  - Guides every downstream phase (specification → plan → tasks → implementation)
- **Example:** “All papers must cite primary sources, APA format, zero plagiarism, 50% peer-reviewed sources.”

#### Specification

- **Definition:** Paper- or feature-specific blueprint of what you are building.
- **Purpose:** Turns vague ideas into crystal-clear, testable requirements.
- **Key Points:**
  - Defines Intent, Target Audience, Focus, Success Criteria, Constraints, Non-Goals
  - Success criteria must be SMART (Specific, Measurable, Achievable, Relevant, Time-bound)
  - Aligns automatically with the Constitution
- **Example:** “Research paper on AI in K-12 education, 3000–5000 words, cites 8+ peer-reviewed sources, reader understands 3+ AI applications.”

#### Plan

- **Definition:** Step-by-step workflow to achieve the specification.
- **Purpose:** Ensures tasks are organized, quality checks included, and deadlines met.
- **Key Points:**
  - Derived from specification
  - Includes phases like research, outline, draft, fact-checking, plagiarism scan, final review
  - Makes Constitution rules actionable
- **Example:**

1. Research sources
2. Prepare outline with assigned sources
3. Draft writing with inline citations
4. Fact-check all claims
5. Run plagiarism scan
6. Final review

## Tasks

- **Definition:** Smallest units of work derived from the plan.
- **Purpose:** Breaks down the plan into actionable, verifiable steps for AI or humans.
- **Key Points:**

- Testable and measurable
- Each task aligns with Constitution and Specification
- Supports incremental progress and verification

- **Example:**

- “Collect 10 peer-reviewed sources”
- “Verify Claim #3 against original source”
- “Rewrite paragraph 4 to achieve Grade 10–12 clarity”

## Implement

- **Definition:** The execution phase where AI or human produces the final work.
- **Purpose:** Converts tasks into actual output, e.g., research paper text.
- **Key Points:**

- AI follows Constitution, Specification, Plan, and Tasks
- Ensures correct citations, readability, and verification
- Success criteria are automatically applied

- **Example:**

- AI writes Introduction using assigned sources
- Ensures APA citations and Grade 10–12 readability
- Adjusts based on feedback to satisfy Constitution rules

## Spec-Kit Plus

### Short note

Spec-Kit Plus is an AI-native development toolkit that guides projects from start to finish. It begins with a Constitution to set immutable quality standards, then uses Specifications to define precise, testable requirements. Plans organize work into structured phases, Tasks break it into actionable units, and Implement turns tasks into final output, ensuring accuracy, proper citations, and readability. This system guarantees high-quality, verifiable, and consistent results across all projects.