**Software requirements plan:**

Introduction: Outlines the requirements gathering process and

Objectives: Establish clear and traceable requirements for the avionics flight management and control system.

Activities:

Requirement analysis: Analyze requirements from the document given.

Requirement documentation: Document the requirements into functional, non-functional and safety requirements.

Requirement traceability: Always make sure that the requirements can be traced to design artifacts, code and tests.

**Software Verification plan**

Introduction: Establish methods and tools to be used during verification phase and how the requirements are going to be tested.

Objectives: Verify that software requirements are properly implemented.

Ensure software functions as intended.

Activities:

Use junit tests to create unit tests and aim for 100% statement and decision coverage for individual components.

Integration testing also should be done to show interaction between different modules. This is once again done in junit.

**Software Configuration Management plan**

Introduction: Outline procedures and tools that will be used to manage integrity of software configuration.

Objective: Manage changes to software artifacts and ensure version control consistency and integrity throughout the development cycle

Activities:

Establish version control using gitlab for managing source code, and documentation.

**Quality Assurance plan**

Introduction: Outline procedures for ensuring quality of software.

Objective: Ensure software meets safety requirements and is reliable.

Activities:

Coding compliance: When writing code, make sure code adheres to power of 10 rules.

Static analysis: Use static analysis tools to identify defects in the code.

Code reviews: Reviewing code and making sure it adheres to coding standards.