# STLC (Printer)

## Project Demo

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**Status:** DRAFT (The status would change to finalized post the BA, PM and dev team review and sign off)

**Task:** The Software Testing Life Cycle (STLC) for a printer involves several phases, each with specific activities aimed at ensuring the quality and functionality of the printer software. Here's a detailed overview:

## 1. Requirement Analysis

- **Objective**: Understand the requirements for the printer, both functional (e.g., print quality, speed, connectivity) and non-functional (e.g., usability, reliability).
- **Activities**:
    - Gather requirements from stakeholders.
    - Analyze requirements for clarity and testability.
    - Identify types of tests needed (e.g., functional, performance, security).
- **Deliverables**:
    - Requirement Traceability Matrix (RTM).
    - Clarified and confirmed requirements.

## 2. Test Planning

- **Objective**: Develop a comprehensive test strategy and plan.
- **Activities**:
    - Define test objectives and scope.
    - Determine test environment, tools, and resources.
    - Identify test metrics and deliverables.
    - Plan for risk management and mitigation.
- **Deliverables**:
    - Test Plan Document.
    - Test Strategy.
    - Test Effort Estimation.

## 3. Test Case Development

- **Objective**: Design and develop detailed test cases and test scripts.
- **Activities**:
    - Write test cases based on requirements.
    - Create test data.
    - Review and get approval for test cases.
- **Deliverables**:
    - Test Cases.
    - Test Data.
    - Test Scripts (for automated tests).

## 4. Test Environment Setup

- **Objective**: Prepare the testing environment and ensure it mimics the production environment.
- **Activities**:
    - Configure hardware (printers, computers, network).
    - Install necessary software and drivers.
    - Set up test environment according to specifications.
- **Deliverables**:
    - Test Environment Setup Document.
    - Environment Readiness Checklist.

## 5. Test Execution

- **Objective**: Execute test cases and report defects.
- **Activities**:
    - Execute manual and automated test cases.
    - Log defects with detailed information.
    - Retest and perform regression testing as needed.
- **Deliverables**:
    - Test Execution Report.

o   Defect Log.

## 6. Test Cycle Closure

- **Objective**: Ensure all testing activities are completed and the product meets quality standards.
- **Activities**:
    o   Evaluate test completion criteria.
    o   Prepare test summary report.
    o   Conduct a retrospective meeting to identify lessons learned.
- **Deliverables**:
    o   Test Summary Report.
    o   Lessons Learned Document.
    o   Finalized Requirement Traceability Matrix (RTM).

## Considerations for Printer Testing:

### Functional Testing:

- **Print Quality**: Test various print modes and paper types.
- **Connectivity**: Test wired (USB, Ethernet) and wireless (Wi-Fi, Bluetooth) connections.
- **Driver Compatibility**: Verify drivers on different operating systems.
- **Multi-function Features**: Test scanning, copying, and faxing capabilities if applicable.

### Non-Functional Testing:

- **Performance Testing**: Measure print speed, job processing time, and recovery from errors.
- **Usability Testing**: Assess user interface, ease of setup, and user guides.

- **Reliability Testing**: Test for prolonged use, paper jams, and error handling.
- **Security Testing**: Ensure data security during transmission and storage, especially for networked printers.

Flow chart

Start → Check stock levels → Is stock sufficient?

No → Order more stock → Receive stock delivery → Update stock levels

Yes → Continue normal operations → End