The diagram illustrates the **types of reviews used during the software development cycle**, ensuring quality assurance at each stage. Below is a breakdown of the process:

1. Stages of Software Production

- **System Specification and Design:** Initial phase where system requirements and design are specified.
- **Requirements Specification:** Defines what the system should do.
- **Preliminary Design:** Outlines the system architecture and basic design.
- **Programming Phase:** Involves detailed design, coding, unit testing, and integration.
- **Validation Phase:** Ensures that the developed software meets the specified requirements.
- **System Integration and Validation:** Final stage where all components are tested together.

2. Types of Reviews at Different Phases

- **Project Launch Review:** Conducted at the beginning to ensure a proper start.
- **End of Phase Reviews:** At key milestones (requirements, design, coding, validation).
- **End of Project Review:** Final review after project completion.

3. Quality Control & Assurance Mechanisms

- **SQAP (System Quality Assurance Plan)** writing is the process of creating a structured document that defines **quality assurance (QA) activities** for a software project
- **Document Reviews:** Verifying correctness and completeness of written documents.
- **Inspections:** Detailed examination of design/code to detect defects.
- **Metrology:** Ensuring software measurements and quality metrics are maintained.
- **Audits:** Formal evaluations of the processes followed.
- **Project Reviews:** Ongoing evaluation of project status, risks, and issues.

This structured approach helps ensure **software quality, early defect detection, and compliance** with standards throughout the development lifecycle.