VU LEARNING HUB

CS608 Assignment 1 Solution

Fall 2026

📢 Join our official WhatsApp Channel for instant VU updates, past papers & assignment solutions!

➡ **https://whatsapp.com/channel/0029VbDOzXMC6ZvZBUbW8k2n**

💬 Questions? Chat with us on WhatsApp for quick help & guidance!

➡ **https://wa.me/923135320064**

🌐 Visit our website for more past papers, notes & assignment solutions!

➡ **https://vulearninghub.xyz**

CS608 — Software Verification and Validation

Assignment No. 1 — Fall 2026 | Sample Solution

Question 1: SDLC Model for the Online Admission System

Selected Model: The Waterfall Model.

Justification: The scenario states that all requirements (online applications, merit calculation, document verification and fee processing) are finalized and approved BEFORE development begins, and that they will remain unchanged throughout the project. The Waterfall model is made exactly for this situation: it works in fixed, sequential phases (requirements, design, implementation, testing, deployment), and each phase starts only after the previous one is complete. Because the requirements are stable and well understood, there is no need to go back and revise them, which is the main strength of Waterfall.

The second condition also points to Waterfall: the university wants the COMPLETE system delivered at the end, not in separate phases. Waterfall delivers one finished product at the end of the cycle, unlike models that release the system part by part.

Why the other models are less suitable:

• Agile: it expects requirements to change and delivers in small, frequent releases — the opposite of this fixed-requirement, single-delivery project.

• Incremental Model: it delivers the system in parts, but the university requires one complete delivery at the end.

• Spiral Model: it is built for large, high-risk projects with repeated risk analysis in every cycle — costly and unnecessary here, where the requirements are already clear and stable.

• Prototyping: it is used when requirements are unclear and must be discovered through a sample system — but here the requirements are already final and approved.

Conclusion: With frozen requirements and a single final delivery, the Waterfall model is the most suitable choice.

Question 2: Verification or Validation?

Rule used: Verification checks a work product statically (without executing it) against its specification — “are we building the product right?” Validation checks the running system against the users’ real needs — “are we building the right product?”

Activity	**Verification or Validation?**
Reviewing the requirements document to ensure that all requirements are complete and consistent.	Verification
Inspecting the source code to ensure that coding standards are followed.	Verification
Reviewing test cases to ensure that they cover the requirements specified in the requirements document.	Verification
Bank employees and selected customers use the system during user acceptance testing to determine whether it meets their needs.	Validation
Executing the fund transfer feature to check whether the transferred amount is correctly deducted from one account and credited to another.	Validation

Reason in short: reviews and inspections are static checks, so they are Verification; user acceptance testing and executing a feature on the live system are dynamic checks of real needs, so they are Validation.