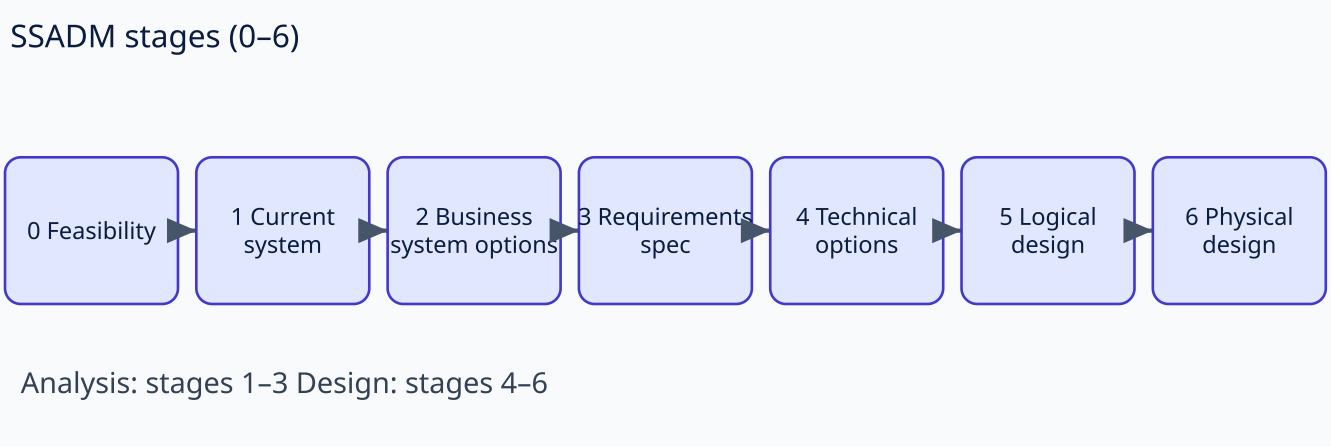
Grade 12 A/L ICT · Lesson 7

7.4 Structured Systems Analysis and Design Method (SSADM)

Syllabus 7.4. SSADM is a structured, Waterfall-style method for analysing and designing information systems. You define SSADM and list the **SDLC stages** it covers, from feasibility to physical design.

1. What is SSADM?

SSADM was developed for UK government projects. It uses three main **views** of a system: **data flow modelling** (how data moves), **logical data modelling** (what data is stored) and **entity event modelling** (how data changes over time).



SSADM stages 0 to 6

2. Stages covered

- Stage 0 – Feasibility study: is the project worth doing?
- Stage 1 – Investigation of the current system (DFDs, LDS of today).
- Stage 2 – Business system options (BSO): choose what the new system will do.
- Stage 3 – Requirements specification: detailed functional and non-functional needs.
- Stage 4 – Technical system options: hardware/software choices.
- Stage 5 – Logical design: dialogues, logical processes and data.
- Stage 6 – Physical design: tables, files, programs specification.

SSADM covers the **analysis and design** part of the SDLC. Development, testing, deployment and maintenance follow after Stage 6.

© 2026 schoolict.net (Ruwan Mangala Suraweera) · All rights reserved

🧱 **Worked example: A school wants a new library system. Which SSADM stage produces each item: (a) cost-benefit report, (b) DFD of the current card system, (c) table layouts?**
(a) Stage 0 feasibility. (b) Stage 1 investigation of current system. (c) Stage 6 physical design.

💡 Analysis asks WHAT the system must do; design decides HOW it will do it.

🚀 **Beyond the syllabus (2026 update)** *Not required for the exam – read for interest.* Modern teams often mix SSADM-style models with Agile sprints and UML tools.

Key Words

SSADM – Structured Systems Analysis and Design Method.

Feasibility study – Checks if a project is worth doing.

Current system investigation – Studying how the existing system works.

Business system options – Alternative scopes for the new system.

Requirements specification – Detailed statement of what the system must do.

Technical system options – Hardware and software choices.

Logical design – Design independent of technology.

Physical design – Design using actual tables, files and programs.

Data flow modelling – Showing how data moves between processes.

Logical data modelling – Showing what data is stored and related.

Entity event modelling – Showing how events change entities.

Structured method – Step-by-step top-down development approach.

Sample Q&A

1. Define SSADM.

Answer: A structured, step-by-step method for analysing and designing information systems.

2. How many SSADM stages?

Answer: Seven: stage 0 to stage 6.

3. What happens in stage 2?

Answer: Business system options are proposed and one is chosen.

© 2026 schoolict.net (Ruwan Mangala Suraweera) · All rights reserved

4. Logical vs physical design?

> **Answer:** Logical is technology-independent; physical uses real tables and programs.

5. Name the three SSADM views.

> **Answer:** Data flow, logical data and entity event modelling.

6. Which SDLC stages does SSADM cover?

> **Answer:** Feasibility, analysis and design (up to physical design).

MCQ

1. SSADM stands for

A. System Security And Data Management
B. Standard System Access Design Mode
C. Structured Systems Analysis and Design Method
D. Structured Software Assembly Development Model
E. Simple Software And Data Model

2. SSADM stage 0 is

A. feasibility study
B. coding
C. maintenance
D. physical design
E. testing

3. Choosing between business system options is stage

A. 4
B. 0
C. 6
D. 5
E. 2

4. Table and file layouts are produced in

A. current system study
B. physical design
C. requirements only
D. business options
E. feasibility

© 2026 schoolict.net (Ruwan Mangala Suraweera) · All rights reserved

5. Technology-independent design is

A. physical design
B. pilot design
C. logical design
D. direct design
E. black box design

6. SSADM is closest in style to

A. Prototyping
B. Agile
C. RAD
D. Waterfall
E. Spiral only

7. Which is NOT an SSADM view?

A. none of these
B. data flow modelling
C. logical data modelling
D. user training modelling
E. entity event modelling

8. Hardware/software choices are made in

A. current system investigation
B. technical system options
C. feasibility
D. acceptance testing
E. maintenance

9. Which term means: “Structured Systems Analysis and Design Method”?

A. Current system investigation
B. Physical design
C. Technical system options
D. Entity event modelling
E. SSADM

10. Which term means: “Checks if a project is worth doing”?

A. Feasibility study
B. Business system options
C. Data flow modelling
D. Logical design
E. Structured method

© 2026 schoolict.net (Ruwan Mangala Suraweera) · All rights reserved

11. Which term means: “Studying how the existing system works”?

A. Requirements specification
B. Current system investigation
C. Physical design
D. SSADM
E. Logical data modelling

12. Which term means: “Alternative scopes for the new system”?

A. Technical system options
B. Entity event modelling
C. Business system options
D. Feasibility study
E. Data flow modelling

13. Which term means: “Detailed statement of what the system must do”?

A. Current system investigation
B. Logical design
C. Structured method
D. Logical data modelling
E. Requirements specification

14. Which term means: “Hardware and software choices”?

A. Technical system options
B. SSADM
C. Physical design
D. Entity event modelling
E. Business system options

15. Which term means: “Design independent of technology”?

A. Structured method
B. Data flow modelling
C. Feasibility study
D. Logical design
E. Requirements specification

16. Which term means: “Design using actual tables, files and programs”?

A. Technical system options
B. Current system investigation
C. SSADM
D. Physical design
E. Logical data modelling

© 2026 schoolict.net (Ruwan Mangala Suraweera) · All rights reserved

17. Which term means: “Showing how data moves between processes”?

A. Feasibility study
B. Entity event modelling
C. Logical design
D. Business system options
E. Data flow modelling

18. Which term means: “Showing what data is stored and related”?

A. Current system investigation
B. Logical data modelling
C. Structured method
D. Physical design
E. Requirements specification

19. Which term means: “Showing how events change entities”?

A. SSADM
B. Technical system options
C. Entity event modelling
D. Business system options
E. Data flow modelling

20. Which term means: “Step-by-step top-down development approach”?

A. Structured method
B. Logical data modelling
C. Feasibility study
D. Logical design
E. Requirements specification

Structured Questions

1. Define SSADM and state one advantage. *(2 marks)*

> Structured analysis/design method; clear documentation and standard steps.

2. List SSADM stages 0–6. *(6 marks)*

> Feasibility; current system; BSO; requirements; technical options; logical design; physical design.

3. Explain the three SSADM views. *(3 marks)*

> Data flow (movement); logical data (storage); entity event (change over time).

© 2026 schoolict.net (Ruwan Mangala Suraweera) · All rights reserved

4. Distinguish logical and physical design. *(2 marks)*

> Logical: what, technology-free; physical: how, real tables and programs.

5. Map library-system outputs to SSADM stages. *(3 marks)*

> Cost-benefit stage 0; current DFD stage 1; tables stage 6.

Summary

- SSADM is a structured method.
- Seven stages: 0 to 6.
- Analysis = stages 1–3; design = 4–6.
- Three views: data flow, logical data, entity event.
- Logical design before physical design.

MCQ answer key – 7.4

1. **C** – Full form.
2. **A** – Stage 0.
3. **E** – Stage 2.
4. **B** – Stage 6.
5. **C** – Logical.
6. **D** – Structured sequential.
7. **D** – Three views only.
8. **B** – Stage 4.
9. **E** – SSADM – Structured Systems Analysis and Design Method.
10. **A** – Feasibility study – Checks if a project is worth doing.
11. **B** – Current system investigation – Studying how the existing system works.
12. **C** – Business system options – Alternative scopes for the new system.
13. **E** – Requirements specification – Detailed statement of what the system must do.
14. **A** – Technical system options – Hardware and software choices.
15. **D** – Logical design – Design independent of technology.
16. **D** – Physical design – Design using actual tables, files and programs.
17. **E** – Data flow modelling – Showing how data moves between processes.
18. **B** – Logical data modelling – Showing what data is stored and related.
19. **C** – Entity event modelling – Showing how events change entities.
20. **A** – Structured method – Step-by-step top-down development approach.

© 2026 schoolict.net (Ruwan Mangala Suraweera). All rights reserved.