

1. A) **Patient Role:** Inspector would check the functional requirements from a patient's point of view. The purpose would be to check if the patients staff members can interact with the clinic in terms of appointments in an easy and efficient manner. The inspection would be related to booking, cancelling, and changing appointments made at the clinic.

Clinical Staff Role: Inspector would check the functional requirements from the clinical staff's point of view. The purpose would be to check if the clinical staff members can interact with the system in an easy and efficient manner. The inspection would be related to getting and administering vaccines in addition to working with the system to update patient information.

Administrative Staff Role: Inspector would check the functional requirements from the administrative staff members' point of view. The purpose would be to check if the administrative staff members can interact with the system in an easy and efficient manner. The inspection would be related to booking, cancelling, or changing appointments and receiving clinic information for management reports.

System Developer Role: Inspector would check the system's feasibility and estimated time required to complete the system with relation to non-functional requirements. The inspection would be related to checking if the system is within the estimated time and budget.

Clinic Management Role: Inspector would check if the clinic is running efficiently and cost effectively. The purpose would be to check if any risks might occur for the clinic's management. The inspection would be related to vaccine supply, patient numbers, and overall costs of the clinic.

B) Omission

- Are the goals of the system defined?
- Have the requirements of the system been defined?
- Are all technical terms included in a glossary?
- Is there a section with an explanation for any acronyms?

Contradiction

- Are the goals consistent with the requirements of the system?
- Are the roles of clinic staff consistent with the functions of the system?

Inadequacy

- Are the goals and requirements of the system what the management team of the clinic expect?
- Is the system functional enough for all staff members to perform their job?

Ambiguity

- Can the requirements or goals be interpreted differently from different stakeholders?
- Are the technical terms used consistently have different meanings?

Unmeasurability

- Can the requirements fit in a measured criterion?
- Are the criteria measurable and quantifiable?
- Can the system be predicted with an estimated time and budget?

Overspecification

- Are there any requirements that have a specific design method associated with it?
- Do requirements have specific functional requirements based on estimates?

C)

- Is the requirement of booking appointments properly implemented in the system?
- Is the requirement of cancelling appointments properly implemented in the system?
- Is the requirement of changing appointments properly implemented in the system?
- Is the requirement of marking appointments properly implemented in the system?
- Is there implementation to ensure that management reports are generated monthly?
- Is there implementation to ensure that users can see patient copies when there is no secure network access?
- Does the system comply with laws in relation to data protection and health laws?
- Does the system properly identify “at risk” patients?

2. Completeness:

- Row 1:
 $\text{false} \vee \text{true} = \text{true}$
- Row 2:
 $(\text{HasCondition} \vee \text{HasAllergy}) \vee (\neg \text{HasCondition} \vee \neg \text{HasAllergy})$
 $= \text{HasCondition} \vee \text{HasAllergy}$

Therefore, the condition table is not complete because row 2 does not give true.

Consistency/Disjointness:

- Row 1:
 $\neg (\text{false} \wedge \text{true})$
 $= \text{true}$
- Row 2:
 $\neg (\text{HasCondition} \vee \text{HasAllergy}) \wedge (\neg \text{HasCondition} \vee \neg \text{HasAllergy})$
 $= \neg (\text{false} \wedge \text{false})$
 $= \text{true}$

Therefore, the condition table is consistent.

3. Low-Stability Requirement:

- R_1 – Reports are likely to change depending on the information it contains.
- R_2 – this may vary from report to report depending on the information requested.
- R_6 – Local copies may be out of date.

Medium-Stability Requirement:

- R_3 – Only case where system would not be available is if it shut down.
- R_{10} – Budget may change depending on problems that arise but should stay close to that number.
- R_8 – Errors can be caused by a variety of factors.

High-Stability Requirement:

- R_4 – This requirement probably won't change and will stay for all future developments.
- R_5 – All of the information will be needed for each patient, won't change.

- R_7 – Laws governing this are unlikely to change and will need to be enforced in the future as well.
- R_9 – Definition of this won't change even in the future.

4.

	R_1	R_2	R_3	R_4	R_5	R_6	R_7	R_8	R_9	R_{10}
R_1	0	1	0	0	0	0	0	0	0	0
R_2	0	0	0	0	0	0	0	0	0	0
R_3	0	0	0	0	0	0	0	0	0	0
R_4	0	0	0	0	0	0	0	0	0	0
R_5	1	0	1	0	0	1	0	0	0	0
R_6	0	0	0	0	0	0	0	1	0	0
R_7	0	0	0	0	1	0	0	0	1	0
R_8	0	0	0	0	0	0	0	0	0	0
R_9	0	0	0	0	1	0	0	0	0	0
R_{10}	0	0	0	0	0	0	0	0	0	0

- R_i 's row gives the forward retrieval of all items depending on R_i
- R_i 's column gives the backward retrieval of all items on which R_i depends