

KK05 — Characteristics of functional and non-functional requirements

Analysis & Design · Comprehensive exam study guide

Requirements define what the solution must do (functional) and how well (non-functional). This mirrors Programming KK02 but in the analysis context — you may be asked to derive requirements from a scenario or classify statements.

Requirements compared

Type	Describes	Example
Functional	A task/behaviour the solution performs.	Generate a weekly sales report; let a user reset a password.
Non-functional	A quality of how it performs (usability, performance, reliability, security, etc.).	Reports generate within 5 seconds; interface usable on a phone; data encrypted.

Writing good requirements

- Make each requirement **specific and testable** (you can check whether it is met).
- Functional = a verb describing an action the system does.
- Non-functional = an adjective/quality describing performance or constraint-like attributes.

EXAM TIP

Test: 'is this what the system DOES (functional) or HOW WELL it does it (non-functional)?'

Key definitions to memorise

Functional requirement

A task or behaviour the solution must perform.

Non-functional requirement

A quality attribute describing how well the solution performs (e.g. speed, usability, security).

Exam technique

EXAM TIP

- Phrase examples as testable statements, not vague goals.
- Non-functional requirements often relate to usability, performance, reliability and security.

COMMON MISTAKES

- Classifying 'easy to use' as functional — it is non-functional.
- Writing requirements too vaguely to be testable.

Quick revision checklist

- I can define both requirement types with testable examples.
- I can derive requirements from a scenario and classify statements.

Exam practice — questions & model answers

Q1. Classify each as functional or non-functional: (a) the app sends a confirmation email; (b) the app must work for colour-blind users.

Classify · 2 marks

Model answer

- (a) Functional (1).
- (b) Non-functional (1).

Q2. From this scenario — ‘Members log in and book a court; bookings must load within three seconds’ — identify one functional and one non-functional requirement.

Identify · 2 marks

Model answer

- Functional: members can log in / book a court (1).
- Non-functional: bookings load within three seconds (1).