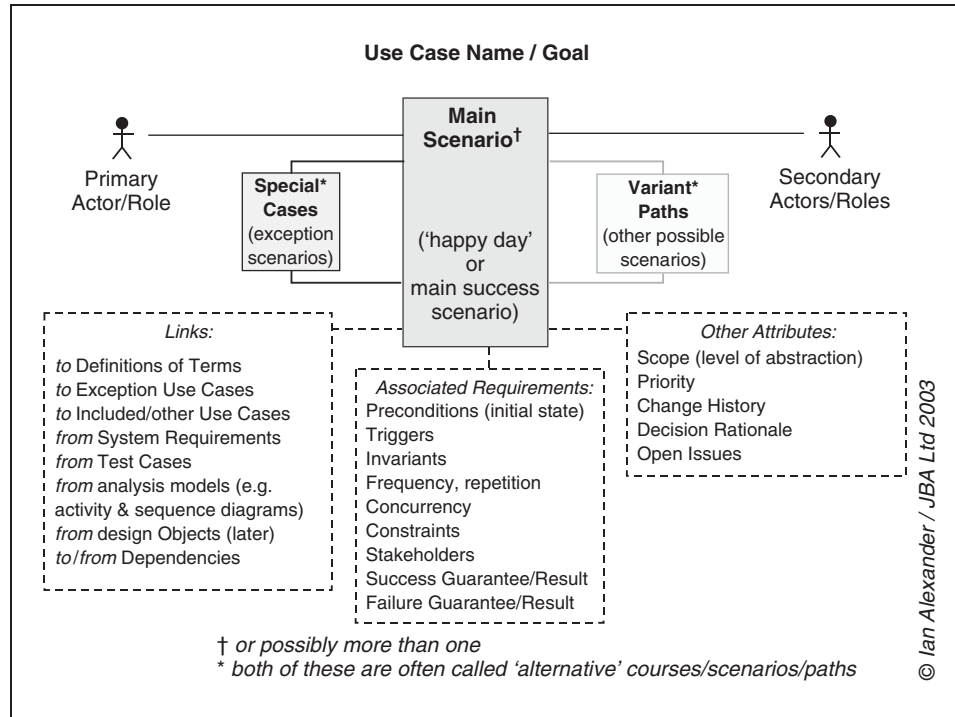


# Use Case Guidelines



abbreviated from CREWS-L'ECRITOIRE (see Chapter 8 for full details)

## General Guidelines

- GG<sub>1</sub>:** Name each Use Case as an active goal (e.g. 'Publish a Report', 'Service the Car', 'Buy a Gift').
- GG<sub>2</sub>:** Fill out a Use Case template (e.g. Templates in Appendix 1-3)—scenarios alone are not enough.
- GG<sub>3</sub>:** In each Use Case, write a set of scenarios describing alternative ways to achieve the goal.
- GG<sub>4</sub>:** Write all the scenarios of a Use Case in consistent terminology, style, and content.
- GG<sub>5</sub>:** Validate your Use Cases with a checklist (e.g. these guidelines).

## Style Guidelines

### Style of scenario interactions:

- SG<sub>1</sub>:** Describe scenario interactions in action clauses, e.g. 'The cook puts the prepared pizza into the oven.'
- SG<sub>2</sub>:** Do not include circumstances, e.g. 'in the morning', 'at the office', 'quickly'.
- SG<sub>3</sub>:** Describe what should occur; avoid negation (e.g. 'not', 'never') and modal verbs (e.g. 'could', 'may').

### Style of scenario flows of actions:

- SG<sub>4</sub>:** Describe sequences of interactions to tell a story; avoid flashbacks and forward references.
- SG<sub>5</sub>:** Make explicit when repetitions and concurrency are needed.
- SG<sub>6</sub>:** Avoid describing alternatives (e.g. 'if', 'else') within a scenario—describe alternatives separately.

### Style of scenario initial states and final states:

*SG7*: Do not describe initial and final states within scenarios—put them outside the scenario description.

### Style of scenario terminology:

*SG8*: Always use the same name for a given object or action; take care to avoid name clashes.

*SG9*: Avoid ambiguous terms like pronouns (e.g. ‘he’, ‘him’).

*SG10*: Do not refer directly to Use Case and scenario meta-models.

## Content Guidelines

### Scenario general content: single flow of interactions:

*CG1*: Make each scenario describe a single flow of interactions to achieve an agent’s goal. Describe alternative scenarios separately.

### Scenario interaction contents:

*CG2*: Describe Interactions in the general format: <Agent> <does> <something>. Examples: The Teller hands the Cash to the Customer. The Guard silences the Alarm. The Pilot acknowledges the Controller’s command.

### Content of flows of actions:

*CG3*: Make each scenario tell a story, using a list of Interactions. Write one interaction per line.

*CG4*: For repetitions, use the template: Repeat <Interactions> Until <Condition>

*CG5*: State constraints explicitly, using the template: If <Condition> Then <Interactions>

*CG6*: Interactions can be concurrent. Use the template: <Interaction> Meanwhile <Interaction>

### Scenario initial and final states:

*CG7*: Make each scenario satisfy initial states (preconditions) and end in final states (desired results).

### Scenario content, with respect to goals:

*CG8*: Make each scenario illustrate the achievement of a goal (such as handling an exception).

### Scenario content, with respect to level of context:

*CG9*: Describe each scenario at one level of context only:

- At the contextual level, scenarios describe flows of services among agents.
- At the functional level, scenarios describe interactions with the system.
- At the physical level, scenarios describe interactions between system components.