

# Writing Requirements as Use Cases

An Extremely Short Tutorial for the Opening Work-Session

## What is a use case

A use case expresses a behavioral portion of a contract between the stakeholders of a system. It describes the system's behavior and interactions under various conditions as it responds to a request on behalf of one of its stakeholders, the *primary actor*, showing how the primary actor's goal gets delivered or fails.

## The Writing Process – How

First, we work as a group. The major deliverables are in bold, italic type. They are fairly simple devices, so don't worry about what they look like.

1. Name the system scope and boundaries.  
*Build initial **context diagram** with the **In/Out List**.*
2. Brainstorm and list the primary actors .  
*Build the **Actor List** to include every human and non-human primary actor, over the life of the system.*
3. Brainstorms and exhaustively list user goals for the system.  
*Start the **Actor-Goal List**.*
4. Capture the outermost summary use cases to see who really cares.  
*Check for an outermost use case for each primary actor.*
5. Reconsider and revise the summary use cases. Add, subtract, or merge goals.  
*Double-check for time-based triggers and other events at the system boundaries.*

*After the group-work, we start writing individual use cases.*

## What does a use case look like?

### Register for Courses:

**System:** Course Enrollment System

**Level:** User Goal

1. Student requests to construct a schedule.
2. The system prepares a blank schedule form.
3. The system gets available courses from the Course Catalog System.
4. Student selects up to 4 primary course offerings and 2 alternate course offerings from the available offerings.
5. For each course, the system verifies that the Student has the necessary prerequisites, adds the Student to the course, marking Student as "enrolled" for that course in the schedule.
6. When the Student indicates the schedule is complete, the system saves the schedule.

The writing can be distributed throughout the team. More specific guidelines will follow.

## Important Concepts

Scope	the system that we are discussing.
Stakeholder	someone or something with a vested interest in the behavior of the system under discussion
Actor	anyone or anything with behavior. A use case can involve multiple actors.
Primary Actor	<p>the stakeholder who or which initiates an interaction with the system to achieve a goal</p> <p>In the example, the primary actor is the “student”.</p>
Level	<ul style="list-style-type: none"><li>▪ A <b><i>summary-level use case</i></b> takes multiple user-goal sessions to complete, possible weeks, months, or years.</li><li>▪ A <b><i>user-goal use case</i></b> satisfies a particular and immediate goal of the primary actor. Can typically be accomplished in a single sitting</li><li>▪ A <b><i>subfunction use case</i></b> satisfies a partial goal of a user-goal use case.</li></ul>