

## Chapter 6

### Additional Case Study Work, Exercises and Projects

- 6.D Check the latest version of the UML standard for the use case notation. Does the CASE tool that you use conform to the notation?
- 6.E What capabilities does your CASE tool have for linking a diagram to its supporting documentation? Does it enforce a standard for the documentation?
- 6.F Given the graphics capabilities of modern computers, how would you improve the appearance of use case diagrams to make them easier to understand?
- 6.G Read the following interview transcript and identify the use cases involved. Draw a use case diagram and write a use case description for each use case.

Rosanne Martel: Hari, you have some ideas for improving the time-recording procedures in the factories. Can you tell me what happens at present before we go on to think about how else we might do it?

Hari Patel: Right. As it is now, most of the responsibility for recording time lies with the line supervisor. They have to fill out a form for each operative to record how many hours they have worked. To do that they have to note when they start work and when they finish. They also have to note any downtime that affects operatives on their line as well as other absences. I reckon the whole thing could be done by the computer system.

RM: So what would you expect to happen?

HP: When they start work, each operative should have to clock on, and when they stop work, they should have to clock off.

RM: That seems pretty straightforward. Would you distinguish between clocking off and on for breaks and clocking off and on and the end and the start of each shift?

HP: Yes, we'd have to. When they clock on at the start of the shift, it would begin recording their time for that shift. If they have a break, they'd clock off and then back on again later, but that would be recorded as temporary, and not the end of the shift.

RM: So, at the end of the shift, they'd clock off and that would be it for that day's shift?

HP: Yes. So they might have to press a different button or something to tell the system what kind of clocking-on or -off it is.

RM: Fine. There are all kinds of ways of recording time: keypads, swipe cards, smart cards. We can think about the most suitable one for FoodCo's situation later. A couple more questions, though... Would you expect the system to handle different situations that might occur automatically or just report them to someone.

HP: What sort of situations?

RM: Oh, things like someone working a shorter than normal shift or clocking off for a temporary break but not clocking on again before the shift ends.

HP: I think we'd want them reported. We don't want people being held up while someone else is clocking on or off because they have to answer all kinds of questions from the computer system.

RM: That's fine. What about fire safety? Would you want some mechanism for automatically printing out a list of everyone who is clocked on for each production line if there's a fire alarm?

HP: Yes, that would be useful. Could it be printed once everyone is clocked on, say thirty minutes after a shift starts, and then updated as people clock off and on during the shift?