

Usecase Diagram Exercises

1. **Cats Tracking System:**
Many people have cats. Suppose you want to develop software enabling them to keep track the location of their cats; give a use case diagram modeling this software. In this example, just decide by yourself what you want from this software.
2. **Answering System:**
The Answering System is system for answering phone calls and recording messages from callers. It is intended as a personal answering system for a single owner. It will support:
Modes for announce only and accepting caller messages
Ability to review caller messages
Personalized greetings
Local management of modes, greetings, and caller messages
3. **Alarm Clock**
The clock shows the time of day. Using buttons, the user can set the hours and minutes fields individually, and choose between 12 and 24-hour display.
It is possible to set one or two alarms. When an alarm fires, it will make some noise. The user can turn it off, or choose to 'snooze'. If the user does not respond at all, the alarm will turn off itself after 2 minutes. 'Snoozing' means to turn off the sound, but the alarm will fire again after some minutes of delay. This 'snoozing time' is pre-adjustable.
4. **Ticket Distributor**
You are going to develop a ticket distributor for a train system. This system allows travelers to purchase different types of tickets: One Way Ticket, Weekly Card, Monthly Card. While purchasing ticket, if traveler takes too long to insert the right amount, the transaction will be canceled. There are also some exceptional cases which cancel the transaction: transaction aborted (i.e., traveler selected the cancel button without completing the transaction), Distributor out of change, Distributor out of paper.
In addition, the train staff can use this system to update ticket price.
5. **The bookshop** has a number of books from different titles. Each book may appear in two versions: hard-cover or soft-cover and thus may have two different prices. A user shops for a book by searching for the book title and receiving the prices of available versions of the title. Afterwards, the user either pays the price and buys the book using a credit card or cancels the purchase. Credit card payment concerns a credit card number, name of the owner, expiration date and the amount to be withdrawn. A credit card payment should be authorised by the bank. The bookshop owner can add books (of possibly new titles) to its stock.

6. The company owns a number of vehicles of different sizes which can transport goods. A client submits a request for transportation by specifying the size of the package to be transported, its source and destination. The distance between source and target determines the amount of time during which the vehicle will be en route. The company then sends an offer to the client by finding the first possible period during which a vehicle of an appropriate size is available. If the client agrees with the terms of the offer, it provides an account number and the authorisation to withdraw the amount of the offer from the account. Upon a successful transaction with the bank (given the account information provided by the user), the amount of money will be transferred to the company's account and the company will schedule the transport as specified in the offer.
7. At the start of each semester a student can request a prospectus containing a course list. Information about a course is provided, such as the tutor, department and pre-requisites. The new system will allow students to create a schedule, then select four courses. Each student chooses two others in case their first choices become full or are cancelled. No course can have more than 10 students. No course can have less than 3 students or it will be cancelled. This will be the same functionality as available to other internal users of the system.

When registration is complete, the registration system sends a message to the billing system to send out a bill to the student.

Tutors use the system to find which classes they are teaching and who the students are. The registrar will administer the system.

For a period at the beginning of the semester the student can change their schedule. Students must be allowed to access the system during this time to add or delete courses.
8. College Registration System

A student may register for classes during a specified registration period. To register, a student must see their advisor.

The advisor must approve each course that the student has selected. The advisor will use the registration system to determine if the student has met the course prerequisites, is in good academic standings and is eligible to register. If the advisor approves the courses, the advisor enters the student's college id into the course registration system. The course registration number for each course is entered. The course description, course number and section for those courses will automatically display. The system will check for schedule conflicts before saving the registrations. A bill for the courses will print in the Bursar's office. The student should proceed to pick it up.

Faculty can use the registration system to check enrollments in their classes, get a class list, check a student's transcript, look up a student's phone number and other such student information.

The registrar can use the registration system to enter new classes for an upcoming semester, cancel a class, and check conflicts in classroom/faculty assignments.

Admissions use the registration system to add new students.

Enrollment services use the registration system to report on retention, update student information, and check fulfillment of graduation requirements for those students planning to graduate.