

Licenciaturas em Engenharia Informática

Modelação e Design

AULAS LABORATORIAIS – 2017 / 2018

FICHA 2 – USE CASE SPECIFICATION

1. Consider that you are designing a point-of-sale (POS) system. This system allows an operator to record the purchases made by a customer and receive their payment. When registering a new customer's purchase, the system should display a welcome message. Whenever a purchase is registered, the system must display the total value. Consider, in addition, other features such as calculating the change, cancelling the current transaction, printing an invoice, and processing returns. The system must ensure that all transactions are stored in a database.
 - a) Construct a possible use case diagram that includes the use cases "Register Purchases" and "Return Products".
 - b) Specify (through a written description) the use case "Register Purchases" using the following template:
 - Title
 - Description
 - System
 - Primary Actor
 - Participants
 - Goal
 - Pre-condition
 - Post-condition
 - Event flow
 - c) Specify the "Return product" use case, using the same template.
2. Consider that you are developing an application for project management in an information systems company. The application should allow the project manager to set up a work team. Subsequently, new elements may also be included or deleted. The definition of tasks includes the title, the start date, the end date and the assignment of one responsible person and the other team members. An individual team member can participate in various tasks but can only be responsible for a maximum of four tasks.

In order to evaluate the progress of the project, the manager should also define a calendar where a set of milestones can be established. In each milestone, the status of the project's development is evaluated.

- a) Construct a possible use case diagram.
- b) Specify the use cases.

3. Consider the simplified operation of an ATM (automatic teller machine). The ATM system offers the following services:

- Any user with an ATM card can withdraw money through a card reader and a terminal.
- Customers of the bank that owns the ATM machine, can check the balance of one or more of their accounts and make deposits (in cash or by cheque).

Assume that all transactions must be carried out safely and that the machine requires periodic maintenance. The maintenance operator must replace banknotes, collect any cards that have been retained and collect the deposited cheques.

- a) Identify the actors.
- b) Identify the use cases.
- c) Construct the use-case diagram.
- d) Provide a written description of the use cases.