

## **Photography Problem (Problem 2)**

### **Part 1:**

The company FotoMix SL operates with photographers that work as free professionals. In order to work in the company, photographers must submit an application that is evaluated by the person in charge of the company, who decides whether the photographer becomes part of the company's photographers' bag or not. Photographers who are on the stock exchange are classified into four quality levels, based on which they charge a price per photo. Photographers can promote level. The functionality of the system can be summarized in next points:

- Register a new application: This functionality aims to keep a record of the applications that are presented, since a photographer can submit more than one application (in case it has been rejected on previous occasions). Each application will have an Identifier, a date, a description of the photographic equipment, a summary of the photographer's CV. In addition, if the application presented is the first for a photographer, he must provide his personal information: ID, name, surname, address, city, zip code, telephone. It is possible that the application is rejected, therefore, the same photographer can submit several applications throughout her/his life. Among several requests, the personal data of the photographers do not vary. The only thing that varies is his photographic equipment and the CV. There is a restriction at the time of submitting the application, and that is that a photographer cannot submit more than one application per month, since it is considered that in less than a month will not have substantially modified neither his team nor his CV. The system must maintain all the history of requests submitted by a photographer. The applications are entered by the secretary in the system, and must be able to list the entire set of existing requests.
- Approve applications: Once a month, the company's director says which photographer applications must be approved. Once a list of accepted photographers has been made, this list is passed to the secretary, who is responsible for updating the information in the system. For each approved photographer, the level at which he enters must be specified. The secretary must be able to list the set of accepted requests.
- Manage levels: a category is assigned to each photographer. For each level there is a fixed price that photographers of that level charge per photo. This price may vary and is updated by the secretary according to director orders. The set of levels can be queried in a list.
- Promote photographer: Photographers can increase their level when they improve the quality of their photographs. The secretary is in charge of storing the promotion in the system. For each photographer, the secretary can modify the level, but only ascending the level. The photographer cannot change to a lower level.

### **Part 2:**

Photographers make reports. A report is a compendium of photos on a specific topic, for example, the wedding of a celebrity. These reports are stored in the system and those publishers who want the reports must pay the agency to get the photos. With the money collected, the secretary pays the photographers who made the report and the rest of the income is for agency. The functionality is the following:

- Register a new report: this functionality stores a new photo report in the system. For each report, the secretary indicates: the photographer who took the photos, the number of photos included in the report, and a brief description of the content of the report. The report is exposed to publishers who want to acquire it. The secretary should be able to list the set of existing reports.
- Manage publisher data: the photographers agency works with a group of publishers, who must be stored in the system. The secretary of the company is responsible for creating new publishers, modify their data, and delete them. For each publishing company we are interested in knowing: name, CIF, address. The secretary should be able to list the set of editorials.
- Acquire a story: when a publisher wishes to acquire a report, the secretary creates a purchase order. The delivery note specifies: the report to be acquired, the publisher that purchases it, the amount of money that the publisher will pay for that report, the amount of money that the photographer who made the report will receive, and the date of creation of the delivery note. The price to pay to the photographer must be automatically calculated as the product of the price per photo (depending on the photographer's level) for the total number of photos contained in the report. There is a restriction, the price to charge should never be less than the price to pay to the photographer. The reports sold do not become exclusive for the publisher, that is, the photographic agency can sell the same report as many times as needed. Each one of these sales generates a different delivery note. The secretary must list all the existing delivery notes.

### **Part 3:**

Apart from the photographic reports that are made by photographers on their own initiative, the publishers can propose photos on a specific topic. It is known as exclusive. Once an exclusive has been created, it is offered to the agency in case there is a photographer interested in the work. The functionality is the following:

- Register a new exclusive: the editorials come the agency and indicate the subject on which they want an

exclusive. The secretary of the agency must enter in the system to make the request for the exclusive, a brief description of the subject, the price to pay to the photographer interested in the exclusive, the date of creation of the exclusive. The secretary should list all existing exclusives.

- Assign exclusive to photographer: photographers can see the list of exclusives offered by publishers. If any photographer is interested in any of the offered exclusives, the secretary can assign it to the photographer indicating the date of assignment. Once the exclusive is assigned to a photographer, no other photographer can take it. The date of assignment cannot be less than the date of creation of the exclusive. The secretary must list exclusives that are assigned.
- Finish the exclusive: once the photographer has finished the exclusive, she/he returns to the agency to deposit all the photos. At this time, the secretary of the agency unassigns the photographer to that exclusive and enters the date of completion of the exclusive. The end date must always be greater or equal to the date of assignment of the exclusive. The finished exclusives cannot be assigned to any photographer again. The secretary must list the finished exclusives.