Practice

Study Case

BikeClub

Ingeniería del Software

ETS Ingeniería Informática
DSIC – UPV

Curso 2018-2019

A group of bike enthusiasts has decided to form a club to organize the different activities they arrange. To help them, they have spoken with ISWSoft to perform the analysis and subsequent development of the application to be used

The club will be formed by its registered members. A president, a treasurer and two spokespersons who form the executive committee of the club. The president and the two spokespersons are elected by vote among the club members. The one with the most quantity of votes will be the president and the following two in votes will be the two spokespersons. The president chooses the treasurer.

Election takes place annually in December, during a week. The president decides about the specific day that the election begins. The system must manage the votes of the registered members, storing them. Voting must be anonymous. A person cannot vote twice. Once the election is over and the president and the members are chosen, the voting data must be eliminated. They want to have a register of the presidents throughout the history of the club.

You must register to become a club member. The annual fee is € 24, although it is expected that in the future it may change. It is necessary to collect the banking information (name of the holder, ID of the owner and IBAN) to debit the receipts that will be sent on January 7 of each year. In case a person was enrolled in the club in a different month than January, the fee to pay the first year will be proportional to the remaining months of the year. For example, if a person registers in June, there are only 7 months left, so the person must pay € 14.

One of the objectives of the club is the promotion of the bicycle among the youngest. To do this, a club member can enrol their children under 18 years paying a fee with a reduction of 50%. In the system should be reflected who is the father of the person registered with the reduced fee. From the age of 18, the fee will not be reduced. Members with reduced fees have same rights and obligations as those who pay the full fee.

The club schedules outings to make routes. A route has a start, a finish, a distance in kilometres, a difference in meters, and a difficulty (basic, medium, difficult, and pro). There are two types of outings: outing of a day, which is programmed to make a route, a specific day at a specific time; and the outing of several days, in which each day a different route is made. Any enrolee can propose an outing, becoming responsible of it.

Members can sign up to an outing until two days before it. Children under 18 cannot sign up for pro difficulty outing. A child under 18 can sign up for a medium or difficult outing if his or her father is also enrolled in it.

The person responsible for an exit, after it finished, must describe how it was and if there were incidents in it.

Members can exit from the club at any time. The money already collected is not returned but, next year, no fee is charged to them. Also, if members are in charge of some minors, all of them are deregistered with them

It is desired to know the full name, date of birth, login, password and bank information of the people who is registered in the club.

In an election, the three people who have received the most votes and the number of votes they have received should be known. The outgoing president will assign the incoming president and the rest of the board members. The incoming president appoints the new treasurer.

Every year at the end of January, the treasurer needs a list to know how much money has been collected for the concepts of annual quotas and inscriptions formalized during the previous year.

The system must manage everything described above. In addition, the definition of the initial club president must be provided to the system.