Daily Fitness CRM Project Description

Background

The organization

Daily Fitness is a profit-oriented gymnasium operated by a large organization since 2000. It runs under a membership-only system. A person has to become a member before being welcomed to the gym. However, customers who have become members for more than one year have the privilege to bring any non-member friend to the gym twice a month.

Due to the expansion of the business, Daily Fitness nowadays has nearly 50,000 members and 100 branches in the US. In order to welcome their members to all branches as well as to share information of registration and access record with every branch, the management team of Daily Fitness decides to upgrade its customer relationship management(CRM) system and make it online.

Business Operations

Membership Registration: A non-member comes to a branch of Daily Fitness and registers for a member through a consultant after his/her bank account detail provided for further fee issued.

Membership Fee Deduction: On the first working day of every month, a sum of monthly membership fee is deducted from the bank account of every member.

Member Access: A member comes to a branch of Daily Fitness and accesses the gymnasium by his/her membership card.

Course Registration: A member registers a course in a branch of Daily Fitness. All courses in Daily Fitness are open to all members and free for charge. However, every course has a class vacancy and the registration is based on first come first serve rule.

Guest Access: A non-member comes to a branch of Daily Fitness accompanied by a member. They both access the gym as long as the member has been registered for more than one year, and the number of his/her guests in that month has not reached two.

Referral Bonus: If the guest accompanied by a member registers for a membership, the member, as a referral, gets a 20% cash back of has/her monthly membership fee for the following month.

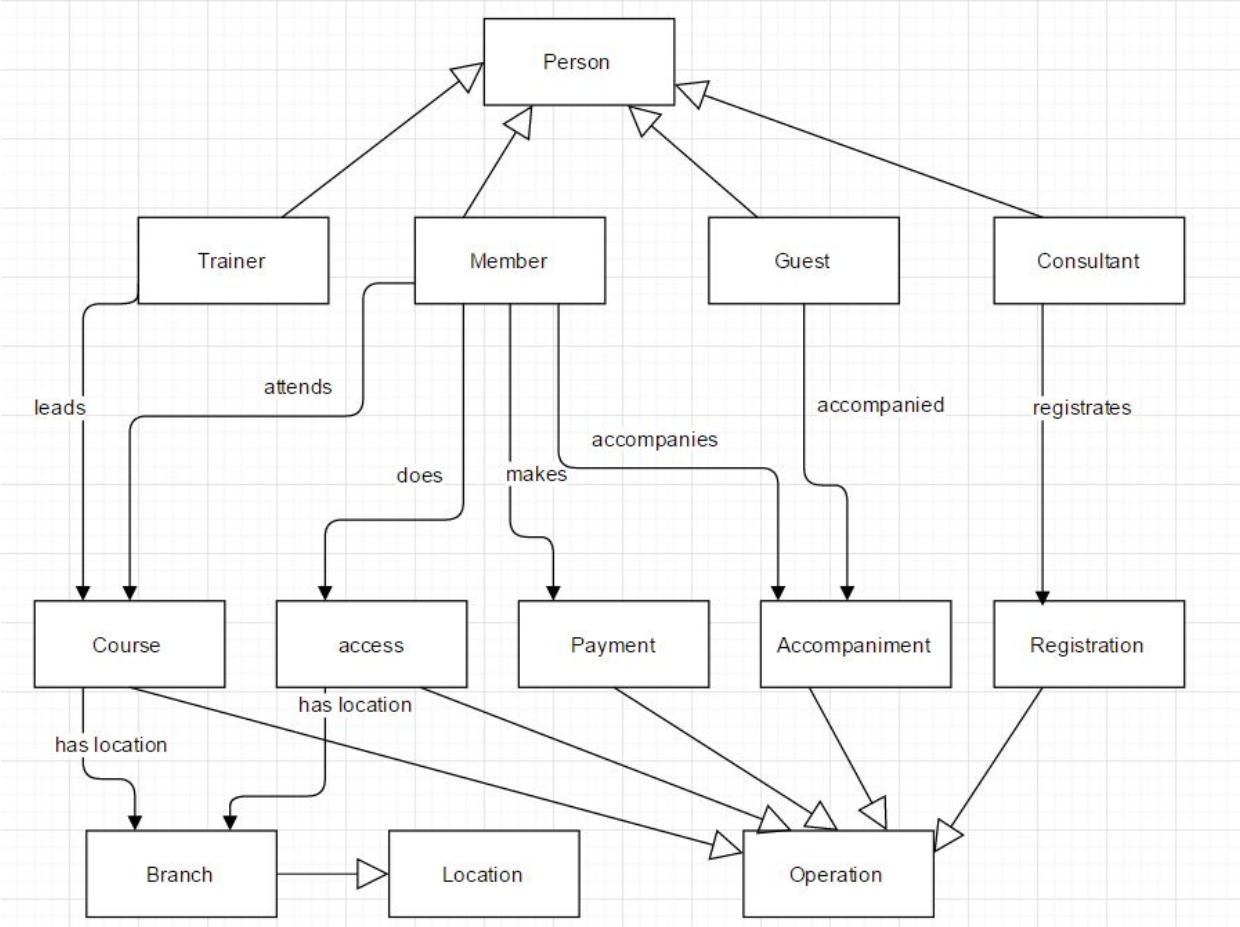
Membership Termination: A member comes to a branch of Daily Fitness and teminates his membership.

System Used

Daily Fitness is planning to employ a customer relationship management (CRM) system to achieve the business operations mentioned above. In the system, there are entities that refer to human beings such as **member**, **guest**, **trainer**, and **consultant**. A **consultant** is able to registrate new **member** instance over an entity called **registration**. A **member** is able to registrate new **guest** instance over an entity called **accompaniment**. A **trainer** could lead a **course** instance in entity **course** for which a number of **member** could sign up. Another entity called **access** could be used for logging the records of **member** accessing specific **branch** instance. A **payment** entity simply indicated the amount of fee each member should pay for the following month. The amount could be modified when a referring action happens, and the **payment** entity will be reset monthly.

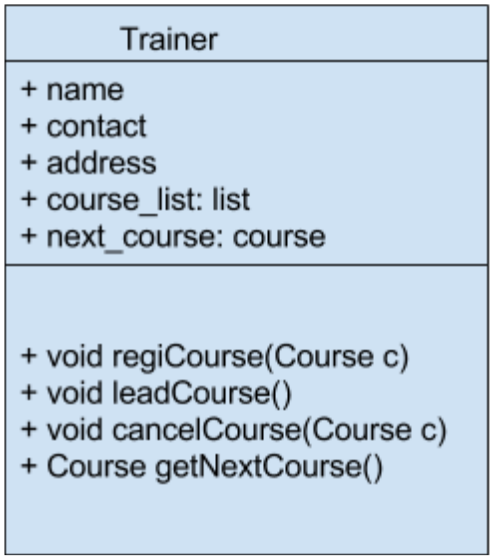
Class Relationships

UML Diagram

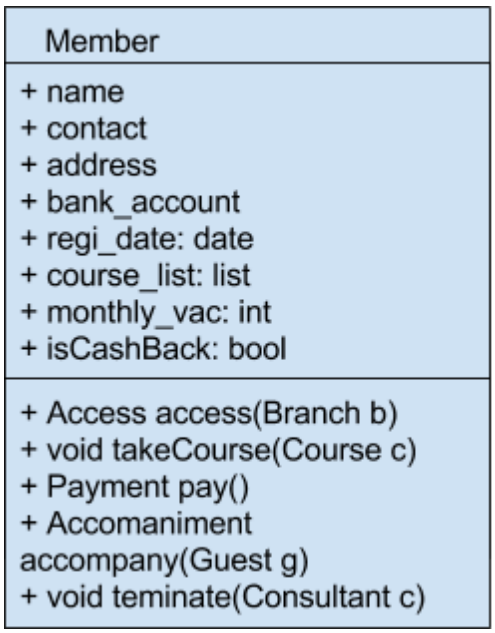


Documentation

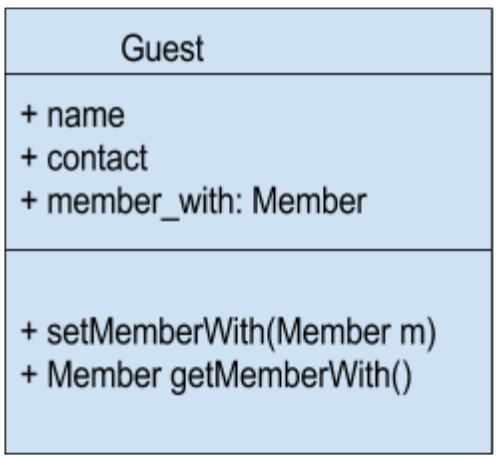
(Trivial set and get methods could be omitted for a clearer presentation.)

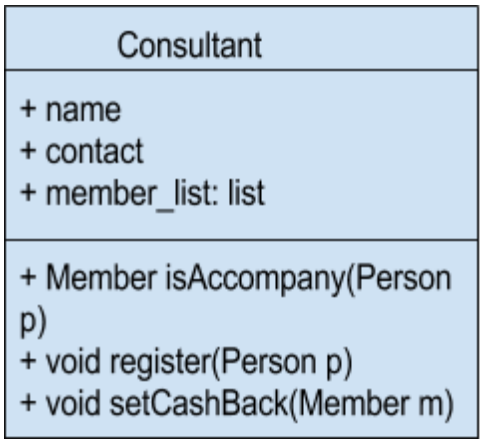


+ regiCourse() takes in a new course and append it to course_list. course_list is sorted in time.
+ leadCourse() shifts next_course to be the following course of the current course.
+ cancelCourse() removes a course from course_list
+ getNextCourse() returns the next course that the trainer is going to lead.

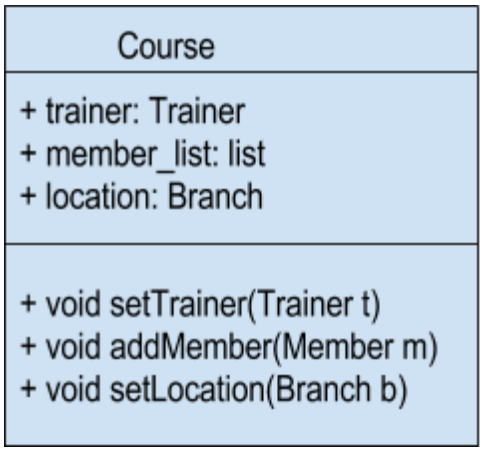


+ access() takes in a branch and returns an Access instance for access record.
+ takeCourse() appends the input course into the course_list.
+ pay() returns a payment instance for payment record.
+ accompany() returns an accomaniment instance to record the guests of the member.
+ teminate() destroy member and delete member from the consultant's member_list

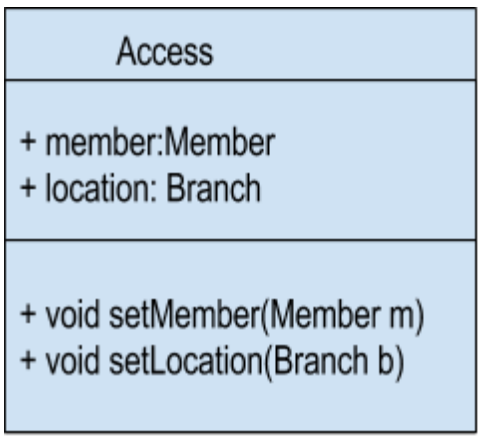


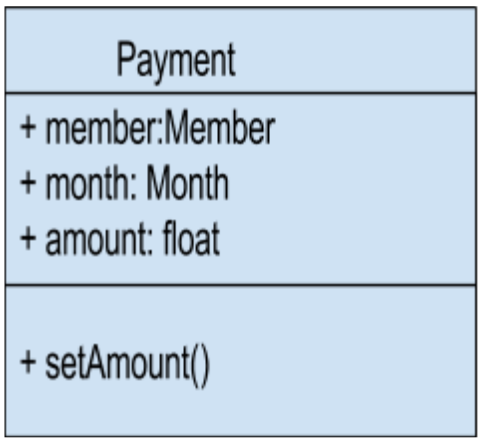


+ isAccompany() checks if a new joiner is accompanied by any member. It returns null if the person is not a guest.
+ register() creates a new member.
+ setCashBack() changes isCashBack of a member to true.

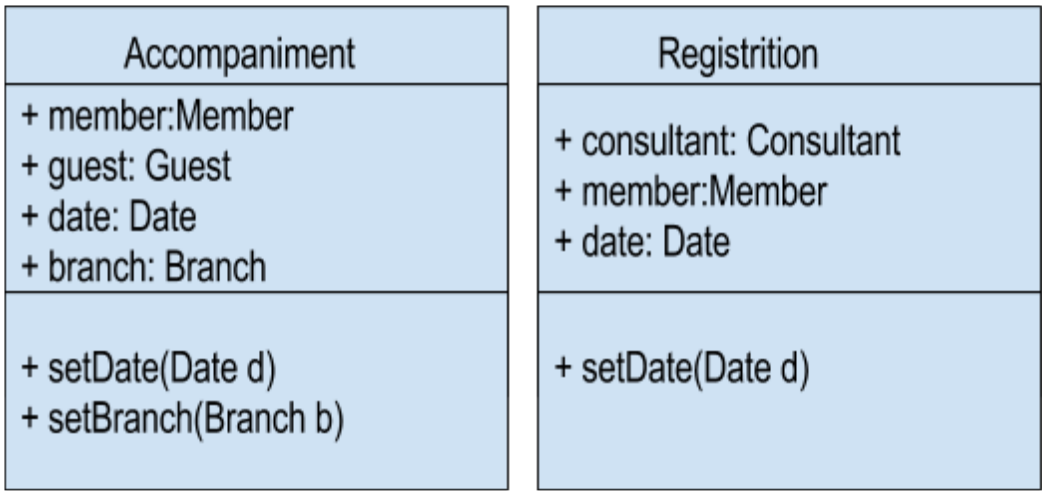


+ setTrainer() sets the trainer of the course instance
+ addMember() appends a member to the member_list of the course instance.
+ setLocation() sets the branch of course instance to indicate the location.



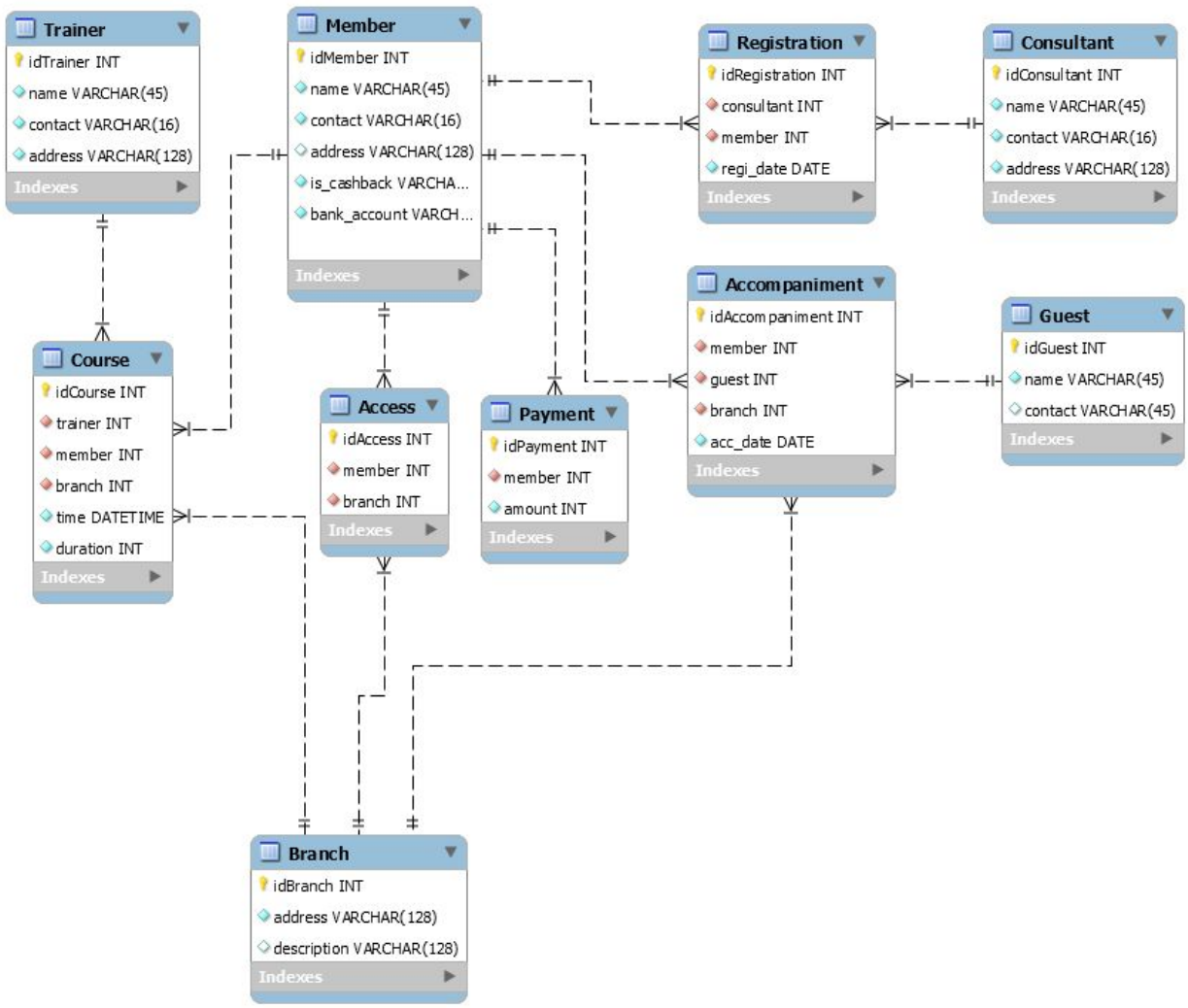


+ setAmount() sets the amount of payment for a member instance based on member's isCashBack attribute.



Database Relationships

Database Scheme



Discussion

Since for all tables, each non-key attribute is dependent on the primary key of the table, the relations are in 2NF. Because all foreign keys are primary keys of some other table, no non-key attribute is transitively dependent on the primary key. The scheme is therefore in 3NF.

Conclusion

With the new CRM system designed above, all business operations mentioned could be performed well. Daily Fitness management team would be able to manage their business using the new system.