Changes

Swimmer is abstract with Adult and Youth subclasses. It makes sure each Adult and Youth object has several methods, including toggleEntry(), checkStatus(), clearStatus(), and checkAllergies(). The Swimmer abstract method implements the Status interface.

Employee is abstract and has Admin and Operator as subclasses. Each Employee has a Credential attribute, which stores their employee ID and password. Credential implements the Login interface to verify correct password for login.

Status is abstract with Permanent, Temp, and Pending as subclasses. Each is used in a different situation to define a swimmer’s status as it relates to pool membership. Abstract Status ensures each subclass has a togglePermitted() and generateComment() method.

The CheckStatus interface is used to provide the isPermitted() and generateComment() methods to the classes implementing it.

The Person interface makes sure all classes which implement it have a getFirstName(), getLastName(), and getFullName() method. Such classes will be Swimmer and Employee.

The Pool class will encapsulate three repositories: EmployeeRepository, SwimmerRepository and VisitRepository. Each repository is responsible for management of a collection of similar objects (CRUD operations) and for their storage.

Summary

3 abstract classes

3 interfaces

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| Class | Description |
| Person (*interface*) | An interface which makes sure Employee and Swimmer classes have a getFirstName(), getLastName(), and getFullName() method. |
| Swimmer (abstract) | Swimmer is abstract and contains all necessary information regarding pool members necessary for look-up, identification, and pool safety. |
| Adult | A Swimmer subclass, responsible for adult swimmers. These have phone numbers for emergency contact and lookup |
| Youth | A Swimmer subclass, responsible for child swimmers. These have an Adult guardian and a Skill level. |
| Visit | Visit documents individual occurrences of when a swimmer checked into and out of the pool. |
| SwimmerStatistic | SwimmerStatistic keeps working calculations concerning statistics of each swimmer’s overall pool usage. Total visits, average visit time, and total visit time are tracked for each swimmer. |
| PeriodStatistic | PeriodStatistics keeps working calculations concerning the basic statistics of aggregate pool usage. The hours of maximum and minimum visitation are calculated for each day as well as the daily average. |
| Skill | Skill documents the overall swimming proficiency of the swimmer as well as any tests they have passed or special requirements for safety given their age or swimming ability. |
| Address | Contains attributes with different aspects of an address and enables searching by address as well as name. |
| Pool | Pool is an aggregator and encapsulator of SwimmerRepository, EmployeeRepository, and VisitRepository for easy access. |
| SwimmerRepository | Responsible for management of a list of Swimmers, enabling CRUD operations and handling its storage. |
| EmployeeRepository | Responsible for management of a list of Employees, enabling CRUD operations and handling its storage. |
| VisitRepository | Responsible for management of a list of Visits, enabling CRUD operations and handling its storage. |
| Role | Role describes an employee’s position and grants them administrative privileges. Privileges give employees managerial permissions so they may issue denials, view statistics, and add/delete/edit profiles. |
| Employee (abstract) | Employee is abstract and contains all employee information such as firstName, lastName, empID, and credentials of type Credential |
| Admin | Admin stores any employees with elevated privileges. It stores empID, firstName, lastName, role, and a Credential object |
| Operator | Operator stores any employees with regular privileges. It stores empID, firstName, lastName, role, a Credential object, and an Admin object |
| Credential | Credential stores the Employee’s credential values (empID and password). It implements interface Login for verification |
| Login (*interface*) | Login is an interface with a sole method: verifyLogin. This returns true or false |
| Report | Report is subclass of AbstractReport and superclass of all other reports. It contains the start and end dates that will define the period of the report as well as tabular data in the form of the abstractreport attribute. |
| AbstractReport | AbstractReport is a java class used to contain data in tabular formats that may be easily abstracted into tables of the view class. It is extended into Report in our project. |
| ReportSearch | ReportSearch extends Report and provides a list of swimmers matching specific criteria entered by the user. The criteria may be confined to a particular attribute (name or DOB) or it may be a general search through all swimmer attributes. |
| ReportVisits | ReportVisits extends Report and provides check-in/check-out data given a specific start and end date. It may be applied to a particular swimmer or include all swimmers. |
| ReportSwimmer | ReportSwimmer extends Report and provides average visitation time, total visitation time, and visit count data given a specific start and end date. |
| ReportPeriods | ReportPeriods extends Report and provides daily maximum and minimum visitation data as well as daily average data given a specific start and end date. |
| ReportActiveSwimmers | ReportActiveSwimmers extends Report and provides data tallying the number of swimmers active at the pool in hourly increments given a specific start and end date. |
| Status (abstract) | StatusType is abstract with Permanent, Temp, and Pending as subclasses. It makes sure each type of Status has a toggle and generate comment function. |
| StatusChange (*Interface*) | An interface used to force the implementation of isPermitted() and generateComment() in sub classes regarding user status. |
| Permanent | Connected to swimmer to mark them as a permanently registered members of the pool. Extends status interface. |
| Temp | Used to mark a temporary status as a member of the pool. Includes variables to note expiration date and remaining days on their temporary status. |
| Pending | Status used to define a swimmer who has a pending membership. Implements the Status interface. |
| Contact | The contact class contains the name, phone number, and relationship of an emergency contact supplied on a swimmer’s profile. |