RowBuddy

Software Requirement Specification

study course:	Software Engineering
modul:	JEE - Java Enterprise Edition and Architectural Patterns
lecturer:	Mr. Uwe van Heesch
date:	November 8, 2010
status:	working
repository:	http://code.google.com/p/rowbuddy

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Changelog

Version	Description	Last Author	Date
0.1	Initial document	jnt	30/09/2010
0.2	Create Introduction	jnt	30/09/2010
0.3	Create first parts of Overall description	jnt	01/10/2010
0.4	Create use cases package Online Storage	wal	04/10/2010
0.5	Create use cases package Report Generator	dch	04/10/2010
0.6	Create use cases package Member's Profile	gef	04/10/2010
0.7	Create use cases package Route & event logger	hei	04/10/2010
0.8	Create use case diagrams	jnt	04/10/2010
0.9	Review all texts	jnt	11/10/2010
1	Handed in version 1		11/10/2010
1.1	Restructured packages and use cases	gef	05/11/2010
1.2	Rewrote use cases package Boats/Members/Routes	gef	05/11/2010
1.3	Rewrote use cases packages Member profile/Statistics/Trips	hei	08/11/2010
1.4	Reviewed versions 1.1 and 1.2	hei	08/11/2010
1.5	Reviewed version 1.3	gef	08/11/2010
2	Handed in Version 2		08/11/2010

Contents

List of Figures

List of Tables

Listings

1 Introduction

1.1 Purpose

This document describes the requirements of RowBuddy, a Web based system to log routes of rowing boats at the Crefelder Ruder-Club 1883 e.V. (Crefelder RC). It will be developed by students of the JEE course in the seventh semester of the study course Software Engineering at the Fontys University of Applied Sciences, Venlo / The Netherlands.

This document is addressed to the system developers and as well to the lecturer of the JEE course at the Fontys University of Applied Sciences.

1.2 Scope

The purpose of RowBuddy is to provide a web based software system to offer the possibility to log rowed trips, concerning a special boat, the rowers and also the route.

The Crefelder RC owns two boat houses and each house offers an own logbook for rowed courses. For statistical evaluation it is very difficult to combine the logged entries, which normally is done at the end of each year. Because the Crefelder RC consists of over 300 members and has many different boats, at least more than 50, it is very important to log every trip that is rowed. Also for insurance it is necessary to offer this possibility to every rower.

The actual situation with two different log books is found inefficient for the following main reasons:

- Inefficient statistical work at the end of each year

- No standard routes are available, which are rowed multiple times every day

- Double logged entries may occur

RowBuddy will offer the possibility to delete these inefficient points. Firstly it will offer the possibility to **save the boats, the members of the rowing club, standard routes and of course it will log rowed events**. Secondly the big improvement of RowBuddy will be the **statistical views**, the software system will offer.
Another big improvement will be the possibility to offer profiles of each member of the rowing club where logged routes are showed to visitors of his profile.

Six main parts can be identified:

- An online software system to store all members of the club

- A module to manage boats, reservations and damages

- A module to manage routes that can be rowed

- A tool to log the the rowed trips of members

- An automatic statistic generation tool

- A profile for each club member where he can present his rowed courses

1.3 Definitions, acronyms and abbreviations

Please refer to Appendix A1 for a list of definitions, acronyms and abbreviations.

1.4 References

Please refer to Appendix A2 for all document references in this software requirements document.

1.5 Overview

Section 2 of this document provides a use case model survey. It does not state specific requirements. Instead it describes the known actors and their interactions with RowBuddy from a high level view. It also lists factors and assumptions, that affect the requirements stated in this document.

2 Overall description

The purpose of this section is to provide a brief description of the project and to describe known actors and their interaction with the system. The section presents a high level view. For more detailed information, please refer to the developer team.

2.1 Stakeholders

- **Rowing club administrators:** Must integrate the system into the rowing club's network infrastructure. Their concern is, that the system is usable for logging routes without any extended knowledge of computer systems.

- **Developers:** JEE course students, that are developing the system. Developers include architects, testers and quality engineers.

- **Rowing club members:** Use the system to log their rowed routes.

- **Lecturer:** Checks the state of development and marks the result of the developers for the JEE course.

- **Rowing club:** Organization that profits from the system, because it offers the possibility to create detailed statistics and provides a log.

- **Insurance company:** Interested in accident cases to view logged routes.

2.2 Actors

The following actors can be defined:

- **Rowing club administrator:** The rowing club administrator uses the system to create and publish boats and routes. Rowing club administrators also use the system to generate analysis and view statistics. Another task of him is to observe the status of boats for retrieving information about damaged boats.

- **Rowing club member:** The rowing club member uses the system to log their rowed routes and publish these routes on their profile.

2.3 Use case Model Survey

According to the six parts identified in section 1.2, the use case model is broken into packages. The use cases presented in this survey are high level use cases and are presented in figure 1.
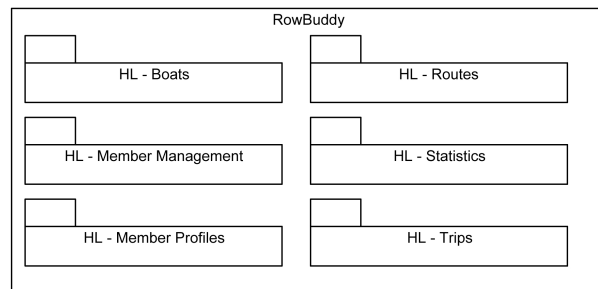
Figure 1: RowBuddy Packages

2.3.1 Package RowBuddy Boat Management
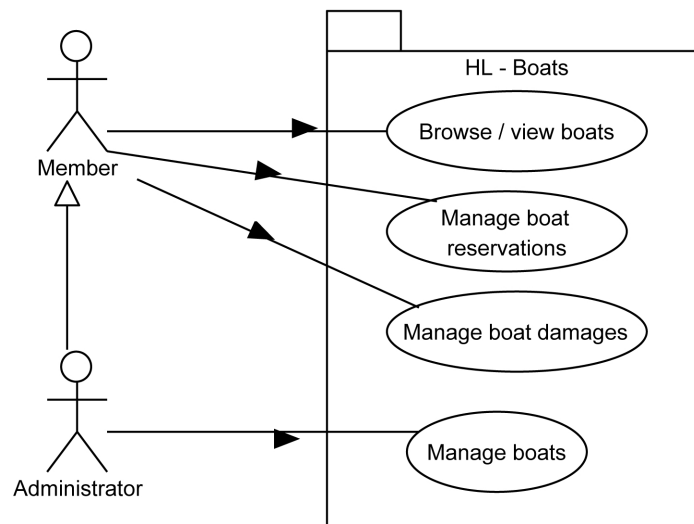
Figure 2: Use case diagram package boat management

Code:	HLUC-1	Name:	Browse / view boats	Package:	Boats
Description:	A member can browse through the boats that exist in the system and view the details of a boat. The detail view of a boat contains information about the properties of a boat like the number of rowers and information about if the boat has a cox.				
Refined by:					
Version:	1	Author:	gef		

Table 1: HLUC-1 - Browse / view boats

Code:	HLUC-2	Name:	Manage boats	Package:	Boats
Description:	An administrator can add, edit and delete boats in the system. A boat that is deleted is completely removed from the system as long as it is not used in any other part of the system. If it is deleted and still referenced anywhere, it is visible in any parts where it is referenced, but it cannot be selected any longer for boat relevant actions. A boat can be locked and unlocked so that it cannot be used for trips if it is broken or under repair.				
Refined by:					
Version:	1	Author:	gef		

Table 2: HLUC-2 - Manage boats

Code:	HLUC-3	Name:	Manage boat reservations	Package:	Boats
Description:	If a member wants to use certain boats at a certain point in the future he is able to reserve them. Therefore he can select a time period and boats that are available during that time. If boats are blocked by other reservations he is able to see that, too. A reservation can be modified or deleted by the person that has created it and an administrator. Modification includes the adding and removing of additional boats. During reservation time the reserved boats can only be used by the person that has reserved the boat.				
Refined by:					
Version:	1	Author:	gef		

Table 3: HLUC-3 - Manage boat reservations

Code:	HLUC-4	Name:	Manage boat damages	Package:	Boats
Description:	A member can record a damage that has occurred on a boat. He browses for a boat and chooses to add a damage. He enters information about the damage on the boat and additional information on the circumstances how the damage has happened. The creator and an administrator is able to edit the damage. An administrator can resolve the damage as fixed. A damage that is not fixed yet does not block a boat for trips.				
Refined by:					
Version:	1	Author:	gef		

Table 4: HLUC-4 - Manage boat damages

2.3.2 Package RowBuddy Member Management
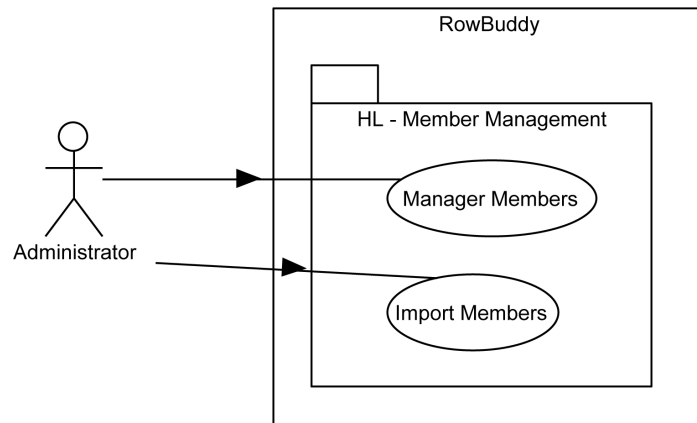
Figure 3: Use case diagram package member management

Code:	HLUC-5	Name:	Manage Members	Package:	Member Management
Description:	An administrator can manage the members in the system. The information that is stored for a member is his address and the email address. A member can be marked as inactive. His data is still appearing in all statistical reports. A member can have certain roles. Every member has the role *member*, optionally he can have the role *administrator*.				
Refined by:					
Version:	1	Author:	gef		

Table 5: HLUC-5 - Manage Members

Code:	HLUC-6	Name:	Import Members	Package:	Member Management
Description:	An administrator can import members from a table based file. This is used to import a large amount of member data. A member is identified by its member-id. If a member-id does already exist in the system, all member data is overridden with the imported data.				
Refined by:					
Version:	1	Author:	gef		

Table 6: HLUC-6 - Import Members

2.3.3 Package RowBuddy Member Profiles
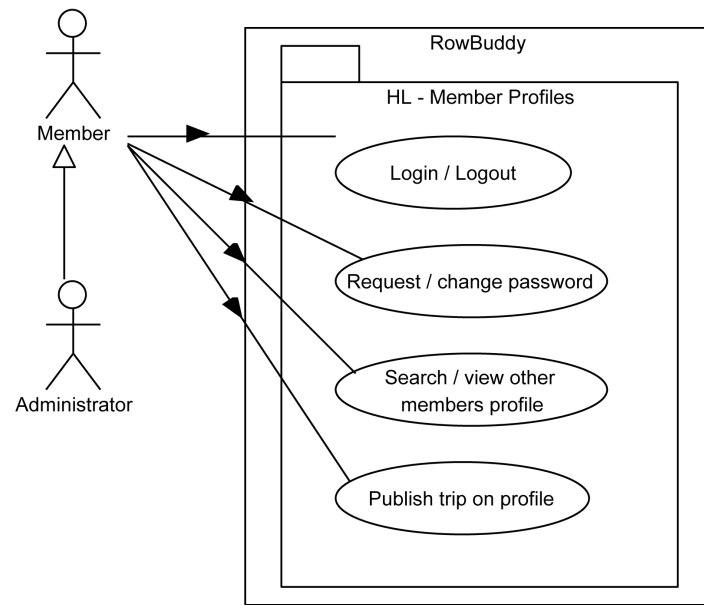
Figure 4: Use case diagram package member profiles

Code:	HLUC-7	Name:	Login / Logout	Package:	Member Profiles
Description:	The member enters the email address that is known to the club and a password to authenticate himself regarding the system. After a successful login the member is able to view member-specific pages. A member that is not authenticated is only able to view an info page that shows whom he has to contact to get a member account. If the member does not visit any other pages for 1 hour, or clicked on logout, the member is logged out of the system.				
Refined by:					
Version:	1	Author:	hei		

Table 7: HLUC-7 - Login / Logout

Code:	HLUC-8	Name:	Request / change password	Package:	Member Profiles
Description:		The member can change his password. For that he has to be logged into the system. He enters his current password and the new password twice. The old password can not be used any more for a login, the new password is valid now. If a member has not logged in into the system at all, he is able to request a temporary password by providing his e-mail address, which is used to mail the password. The members e-mail address has to be known to the system before the password can be requested. If the member has forgotten his password he can also request it. In this case an e-mail is dispatched with a link to confirm that he really wants to change his password. If the confirmation is done, a new e-mail is sent with his new temporary password. The temporary password should be changed afterwards.			
Refined by:					
Version:	1	Author:	hei		

Table 8: HLUC-8 - Request / change password

Code:	HLUC-9	Name:	Search / view other members profile	Package:	Member Profiles
Description:		A members profile can be searched for when a member is logged in. The member is able to provide keywords for a full-text-search, or use a name, e-mail-address, role type or member since field to conduct the search. Logged in members can view other members profiles. The information shown on a profile includes the name, surname, birth date, e-mail-address, roles, published trips, since when the member is member of the club and if the member is active.			
Refined by:					
Version:	1	Author:	hei		

Table 9: HLUC-9 - Search / view other members profile

Code:	HLUC-10	Name:	Publish trip on profile	Package:	Member Profiles
Description:		A trip-member can publish selected trips on his profile. These trips can be selected as published in a members personal rowed routes view. After a trip-member has checked a trip as published other members can view it under a members published trip site on his profile.			
Refined by:					
Version:	1	Author:	hei		

Table 10: HLUC-10 - Publish trip on profile

2.3.4 Package RowBuddy Route Management
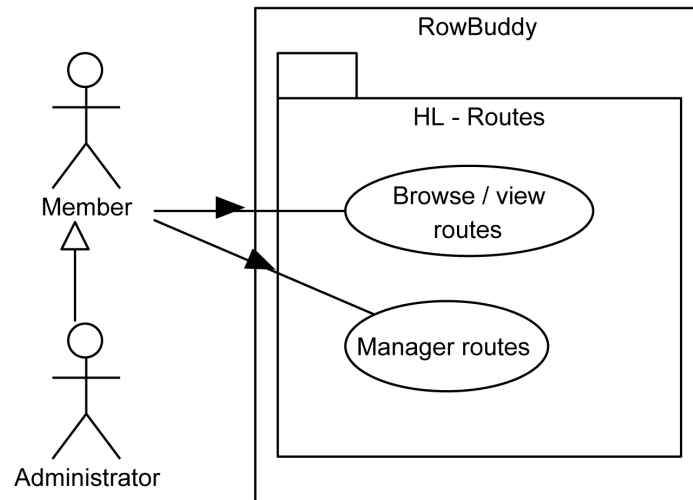
Figure 5: Use case diagram package routes

Code:	HLUC-11	Name:	Browse / view routes	Package:	Routes
Description:	A member is able to browse all routes in the system. He can view all details concerning a route. These are a description, the length and a map showing the points of the route.				
Refined by:					
Version:	1	Author:	gef		

Table 11: HLUC-11 - Browse / view routes

Code:	HLUC-12	Name:	Manage routes	Package:	Routes
Description:	A member can add, edit and delete routes in the system. Routes can be edited and deleted by any member if they are marked as mutable. Otherwise they can only be edited and deleted by the owner and administrators. If a route is modified the trips that have already used this route must not be altered, otherwise the log book would be manipulated. Therefore, edited routes exist as a new version of the route. If the current version of the route is not used yet, no new version has to be created.				
Refined by:					
Version:	1	Author:	gef		

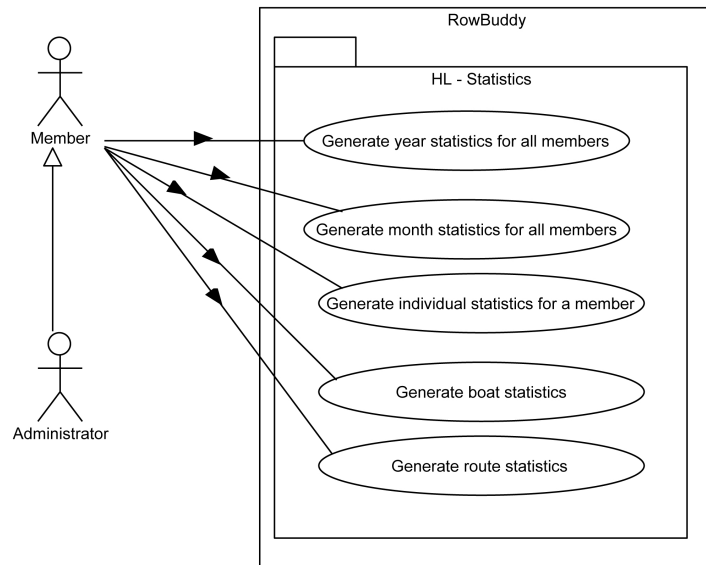Table 12: HLUC-12 - Manage routes

2.3.5 Package RowBuddy Statistics

Figure 6: Use case diagram package statistics

Code:	HLUC-13	Name:	Generate year statistics for all members	Package:	Statistics
Description:	Members can watch year statistics for all members, including a high score statistic that shows how many km a member has rowed in total over a year.				
Refined by:					
Version:	1	Author:	hei		

Table 13: HLUC-13 - Generate year statistics for all members

Code:	HLUC-14	Name:	Generate month statistics for all members	Package:	Statistics
Description:	Members can watch a statistic for all members that shows a high score of how many km a member has rowed in total over a month. Additionally a monthly activity statistic is available.				
Refined by:					
Version:	1	Author:	hei		

Table 14: HLUC-14 - Generate month statistics for all members

Code:	HLUC-15	Name:	Generate individual statistics for a member	Package:	Statistics
Description:		Individual statistics are generated on demand that can only be watched by the member that owns the particular statistic. These statistics include a year and month statistic that show how many km a member has rowed in a specific boat combined with the date.			
Refined by:					
Version:	1	Author:	hei		

Table 15: HLUC-15 - Generate individual statistics for a member

Code:	HLUC-16	Name:	Generate boat statistics	Package:	Statistics
Description:		Boat statistics are generated on demand that show a high score list of the rowed km of each boat. Additionally a damaged boat statistic for a year can be viewed.			
Refined by:					
Version:	1	Author:	hei		

Table 16: HLUC-16 - Generate boat statistics

Code:	HLUC-17	Name:	Generate route statistics	Package:	Statistics
Description:		A year statistic of the most popular routes can be viewed by the members. It shows how often a specific route has been chosen for a tour in form of a high score list.			
Refined by:					
Version:	1	Author:	hei		

Table 17: HLUC-17 - Generate route statistics

2.3.6 Package RowBuddy Trips
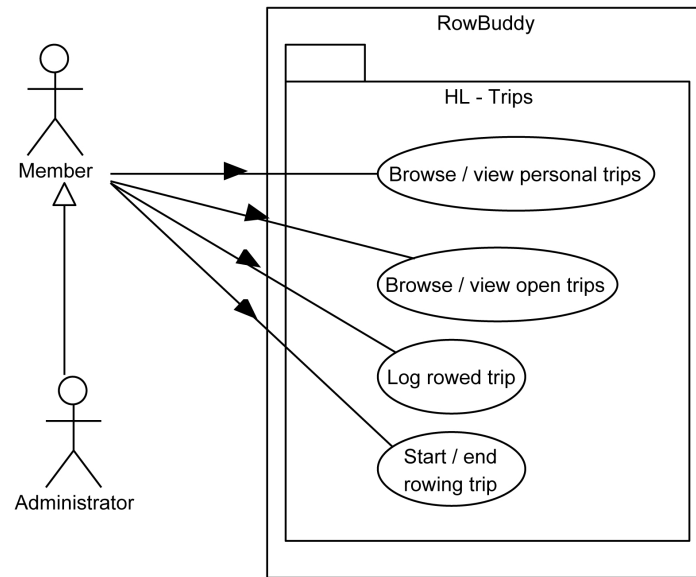
Figure 7: Use case diagram package trips

Code:	HLUC-18	Name:	Browse / view personal trips	Package:	Trips
Description:	A member can browse through his personal trips taken. The browse list gives a short overview consisting of the route name, the ending- and starting-date and how many trip-members attended the trip. The trips can be looked at in detail, with information such as the member names, the cox, the name of the boat and additional information about the trip. This view is available for open and finished trips. An administrator may as well view all trips rowed by all members.				
Refined by:					
Version:	1	Author:	hei		

Table 18: HLUC-18 - Browse / view personal trips

Code:	HLUC-19	Name:	Browse / view open trips	Package:	Trips
Description:	A member can browse through all currently open trips. The browse list gives a short overview consisting of the route name, the ending- and starting-date and how many members attended the trip. The trips can be looked at in detail, with information such as the member names, the cox, the name of the boat and additional information about the trip. In the detail view an open trip can be ended.				
Refined by:					
Version:	1	Author:	hei		

Table 19: HLUC-19 - Browse / view open trips

Code:	HLUC-20	Name:	Log rowed trip	Package:	Trips
Description:		A trip-member can log an already rowed trip. The information that can be entered is start-date, end-date, the route (the member is able to search for existing routes), the additional members of the trip (existing members can be searched), the boat (existing boats can be searched as well) and additional information about the trip.			
Refined by:					
Version:	1	Author:	hei		

Table 20: HLUC-20 - Log rowed trip

Code:	HLUC-21	Name:	Start / end rowing trip	Package:	Trips
Description:		A member can start a trip. The information that can be entered is the same as in HLUC-20, except for the start-date (which is automatically set in this case) and the end-date, which is open. The trip can then be ended (by one of the trip-members or an administrator only) in the open trips-overview detail-view. (HLUC-19). Additionally a trip can be edited (the in HLUC-19 specified information) by a trip-member or an administrator.			
Refined by:					
Version:	1	Author:	hei		

Table 21: HLUC-21 - Start / end rowing trip

2.4 Domain Model

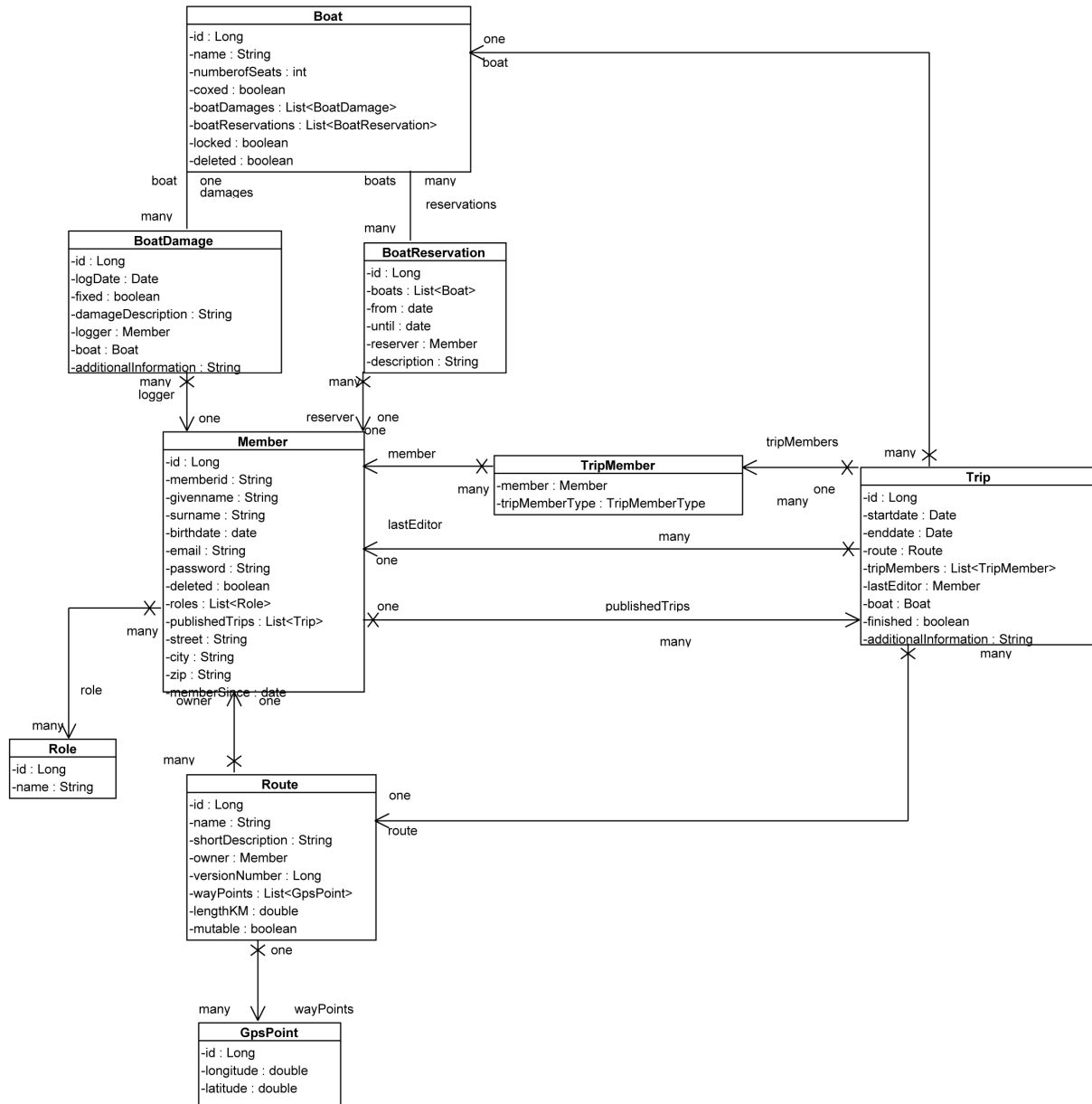The following figure 8 shows the domain model of the RowBuddy system.

Figure 8: RowBuddy Domain Model

Appendix

A1 Definitions, acronyms, and abbreviations

A2 References