SWIMMING POOL MANAGEMENT SOFTWARE

UML DIAGRAMS

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Contents

INTRODUCTION

This Structured Analysis (SA) document provides a complete analysis of the internal functioning of the software via Sequence, Collaboration, Activity and State chart Diagrams.

The Structured Design (SD) document provides all the design specifications in terms of the operating systems, programming languages, databases etc.

DATA DICTIONARY

Non-member: Anyone who is not a member of the Swimming Pool Club or is not in its administration board.

Member: Anyone who is a registered member of the Swimming Pool Club.

Committee-member: Anyone who is in its administration board of Swimming Pool Club.

SPDB: Refers to the system database.

SP: Swimming Pool.

SEQUENCE DIAGRAMS

NON-MEMBER SEQUENCES

Request Membership

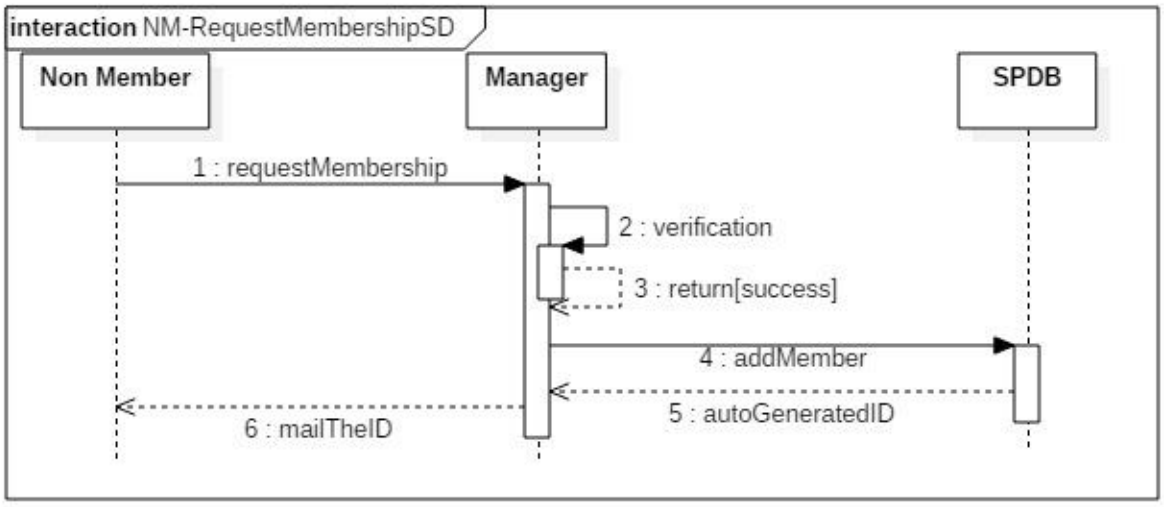

Figure 1: Apply Membership

MEMBER SEQUENCES

Member Add/Remove Slots

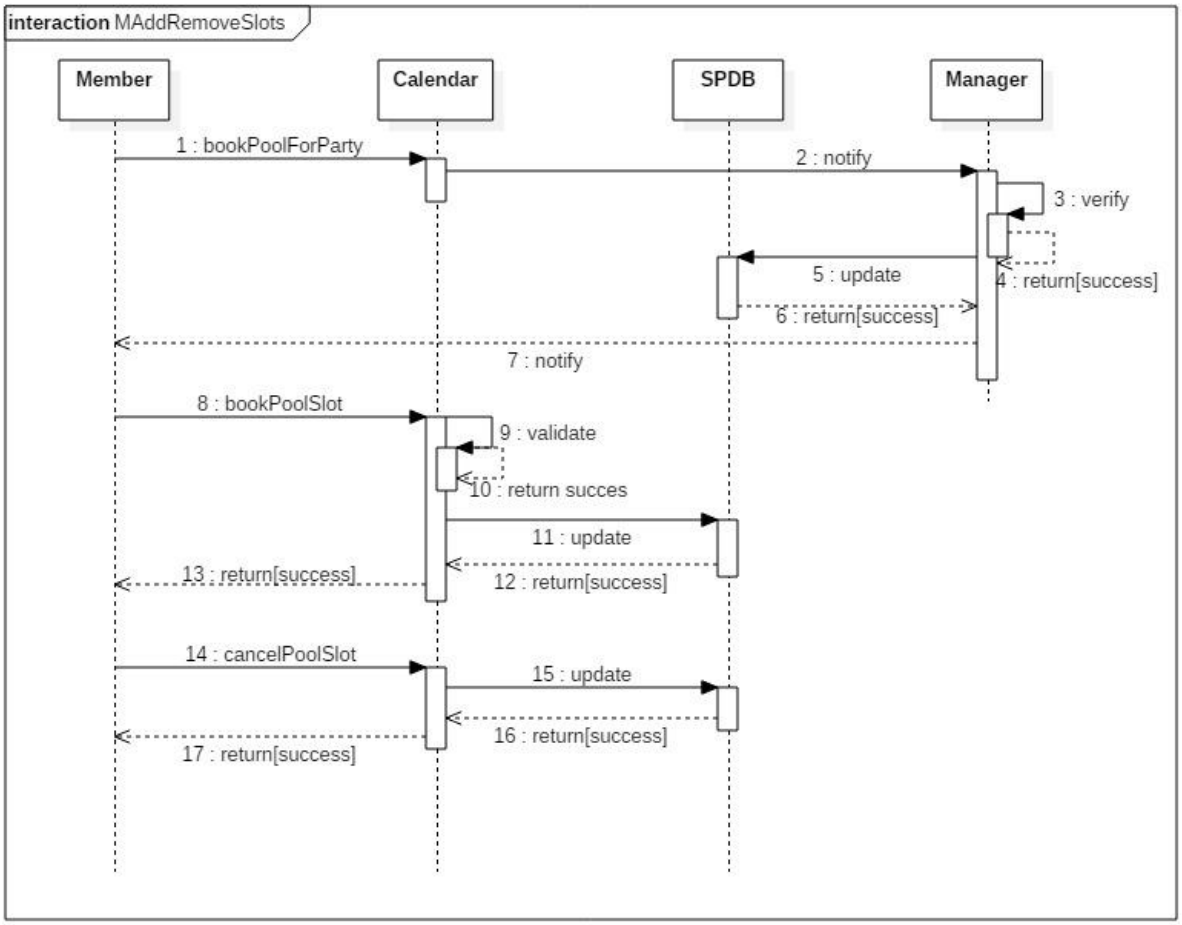

Figure 2: Add/Remove Slots

Member Social Sequences

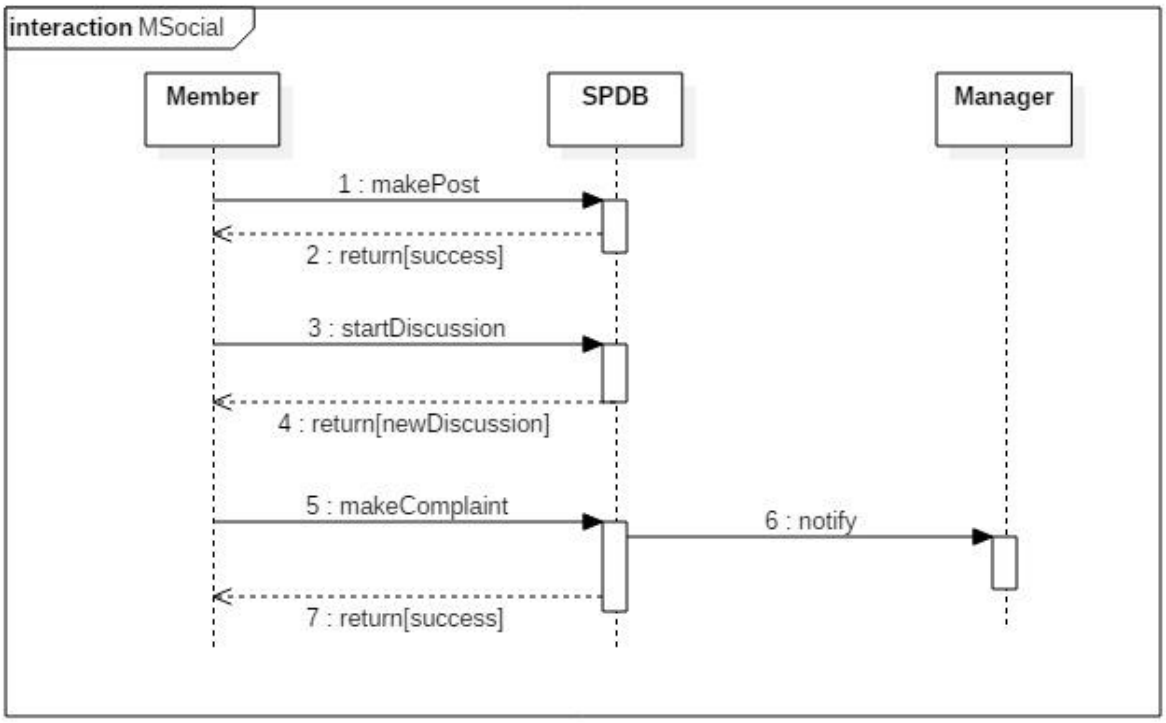

Figure 3: Member Social Sequences

Member Pay Fees

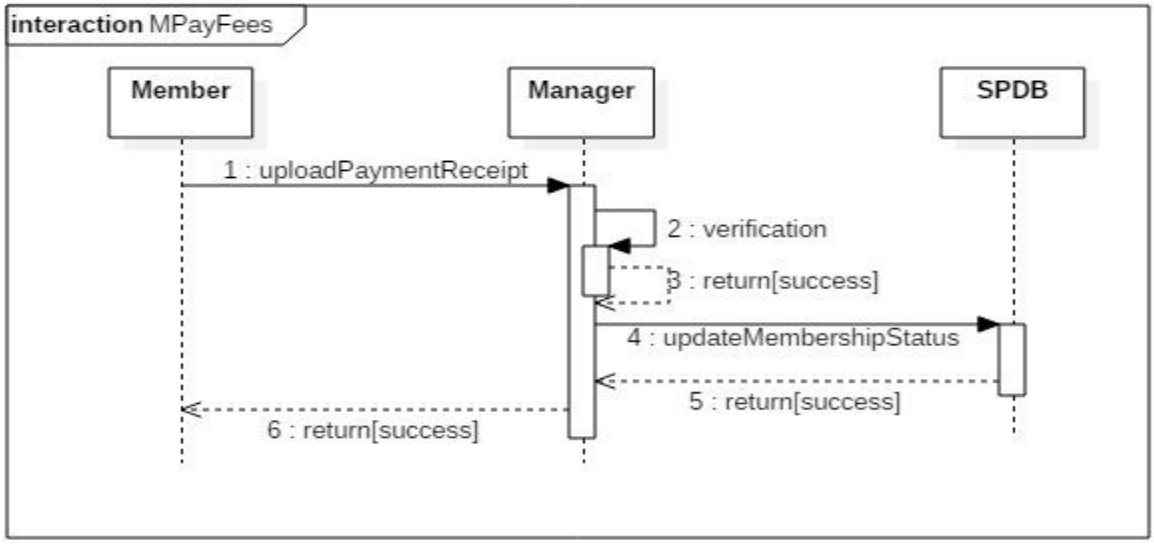

Figure 4: Member Fee Payment

COMMITTEE MEMBERS SEQUENCES

Committee Member Social Sequences

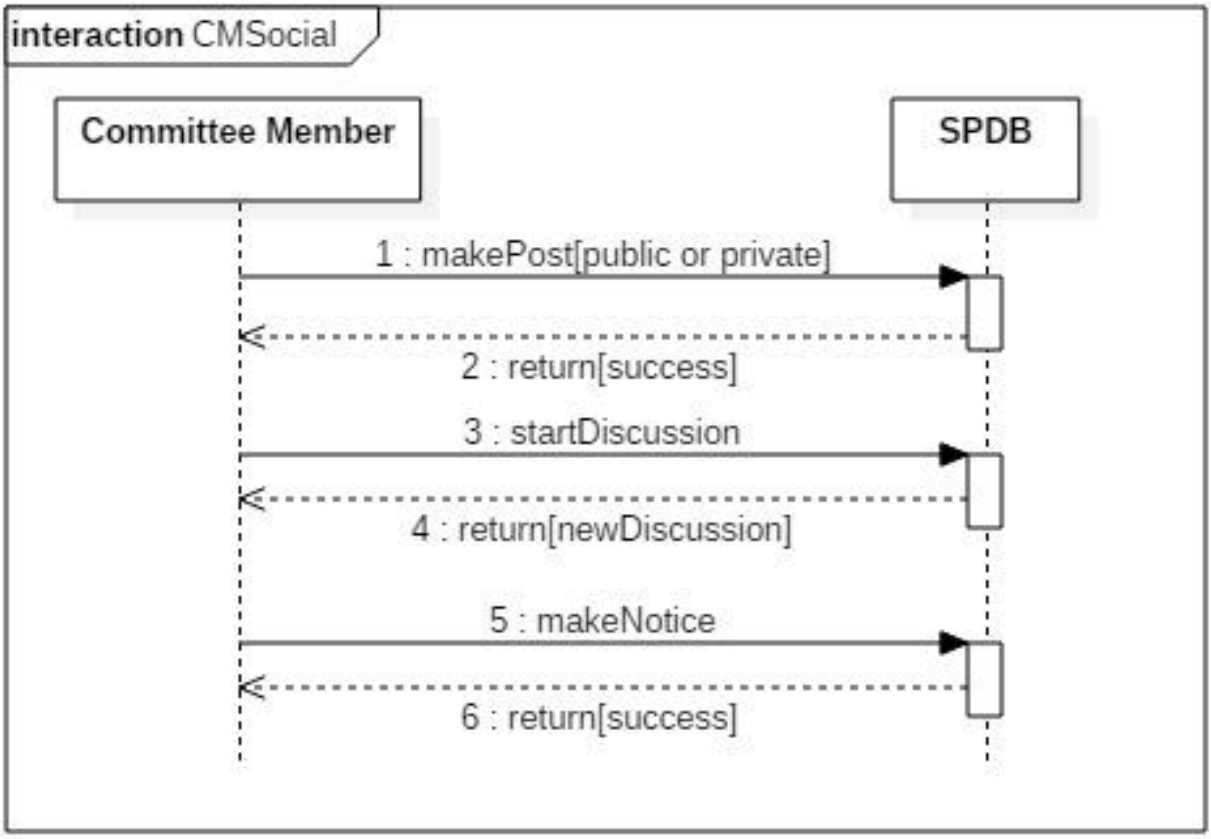

Figure 5: Committee Members social

MANAGER SEQUENCES

Manager Work Sequences

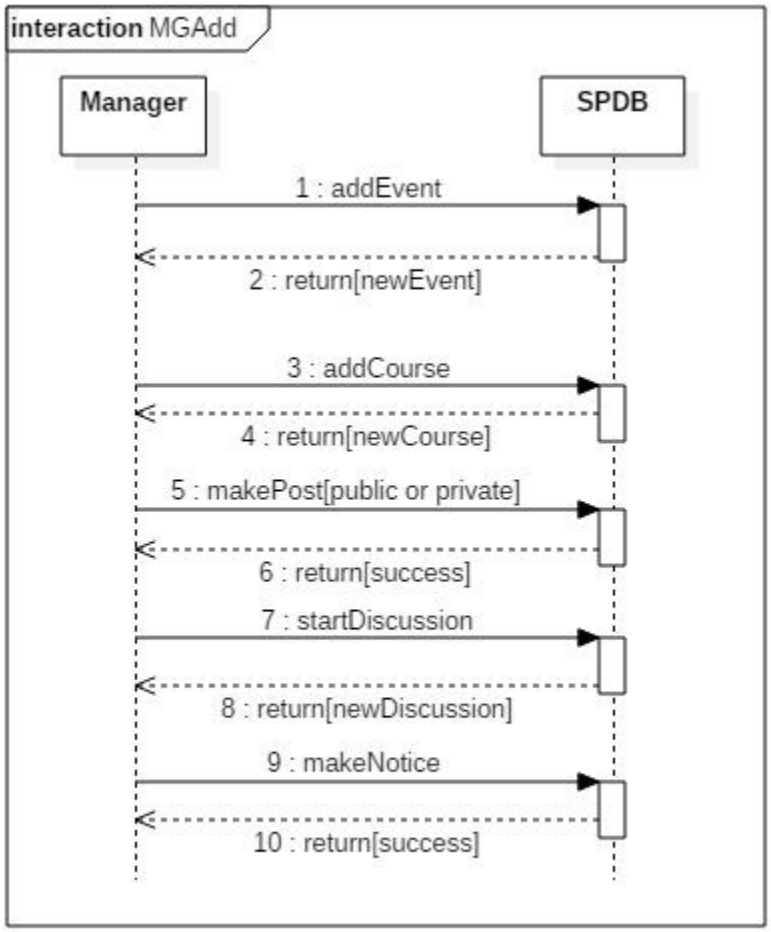

Figure 6: Manager Work Sequences

COURSE COORDINATOR SEQUENCES

Course Coordinator work sequences

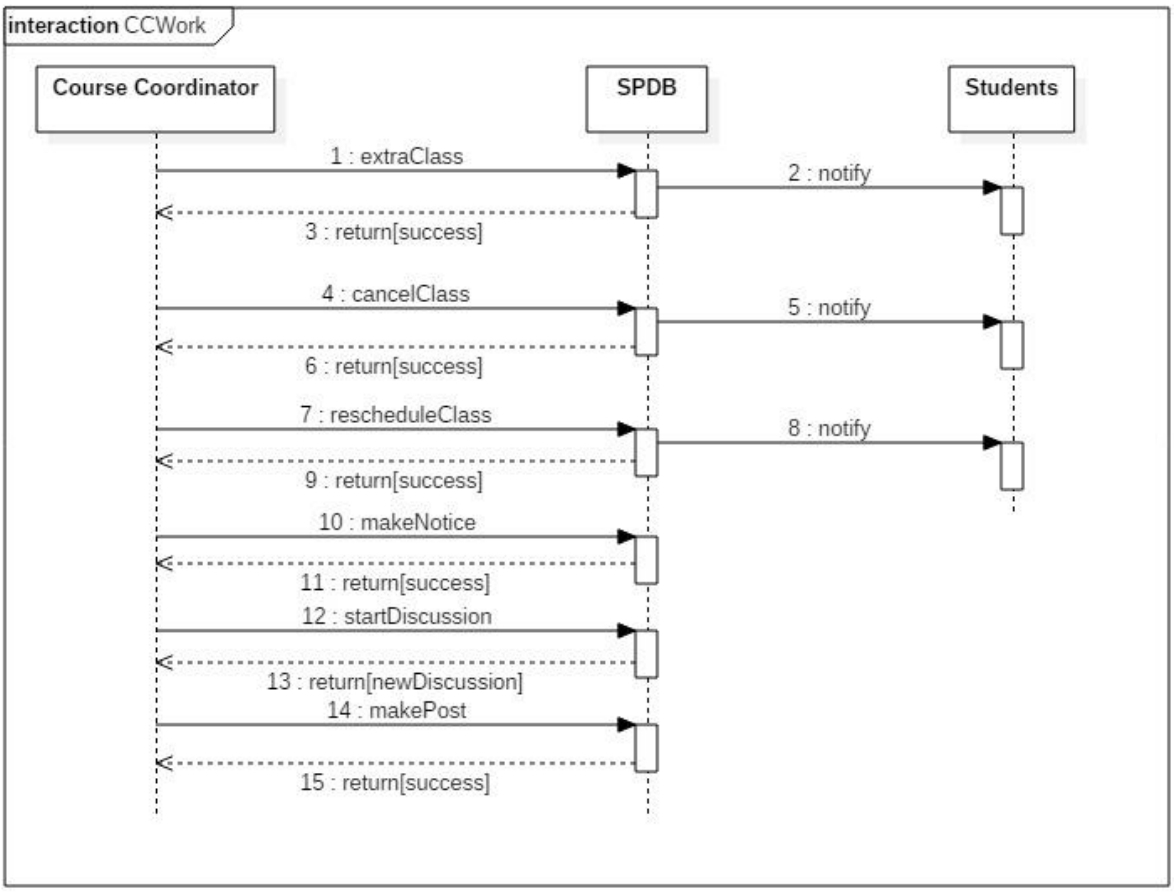

Figure 7: Course Coordinator Work

ACTIVITY DIAGRAMS

MEMBERSHIP REQUEST ACTIVITY

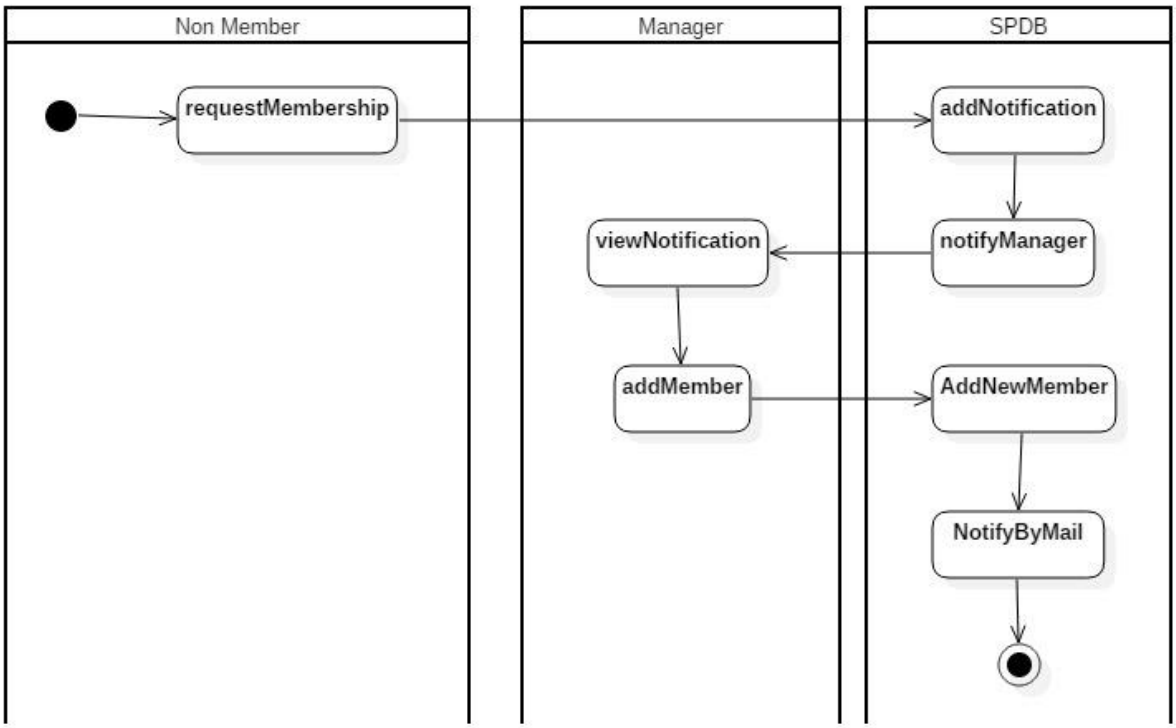

Figure 8: Membership Request Activity Diagram

BOOKING ACTIVITY

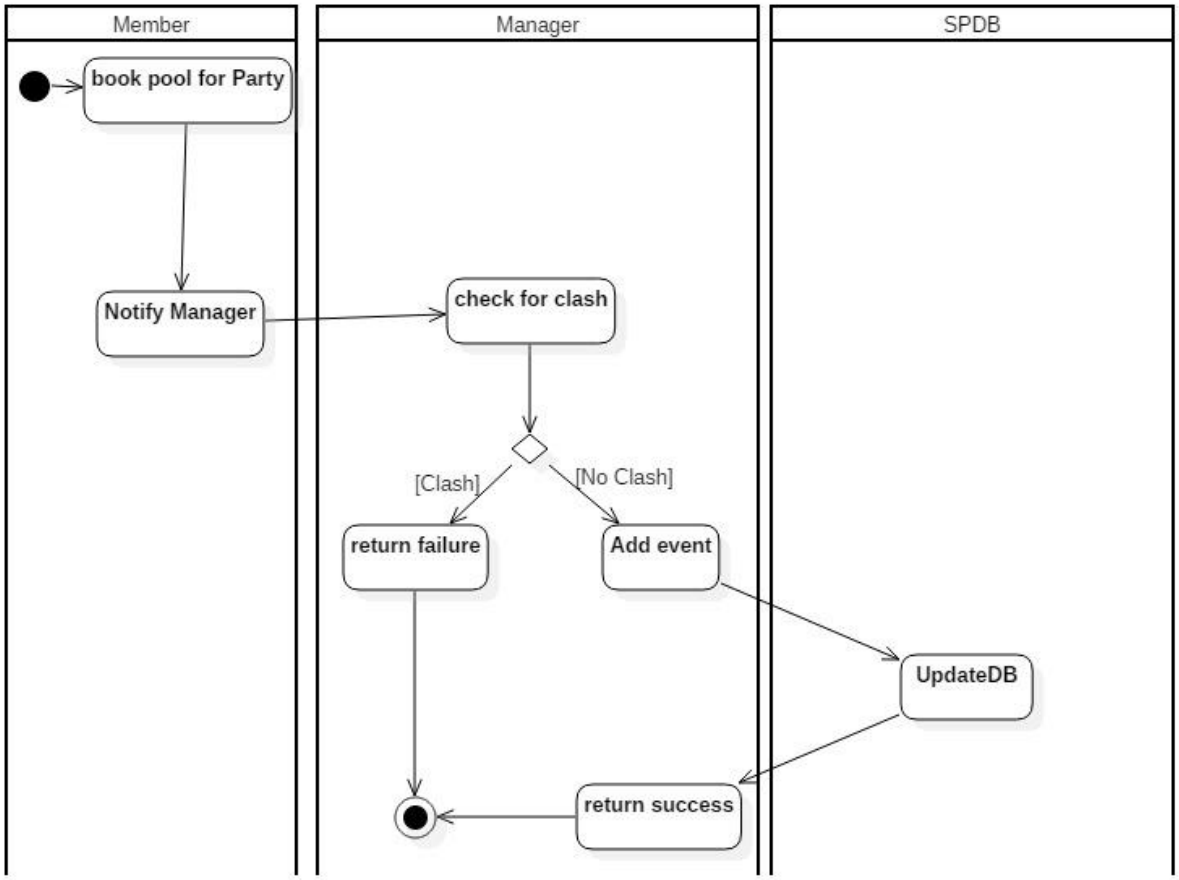

Figure 9: Booking Activity

MEMBERSHIP CANCELLATION

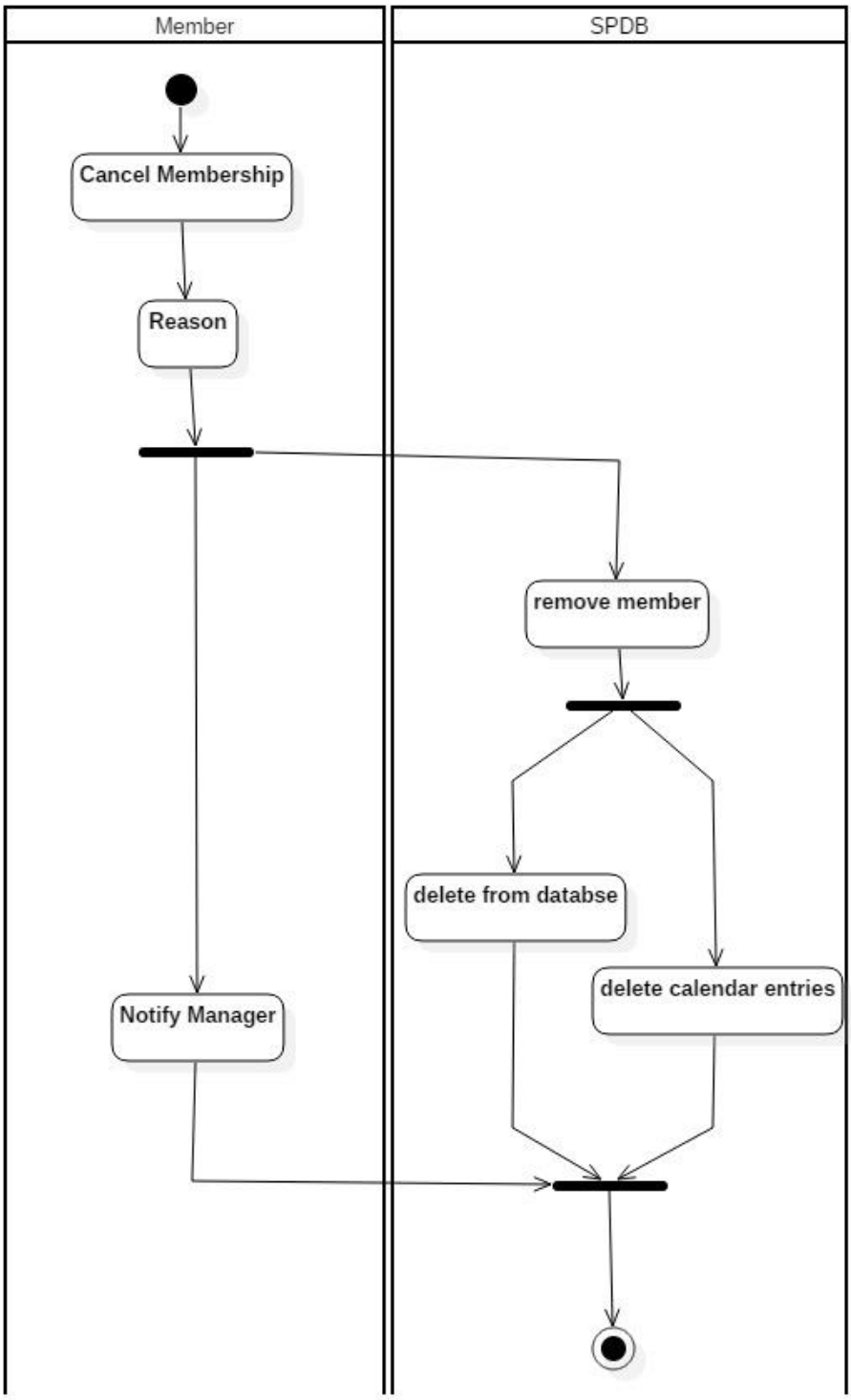

Figure 10: Cancel Membership

FEE PAYMENT ACTIVITY

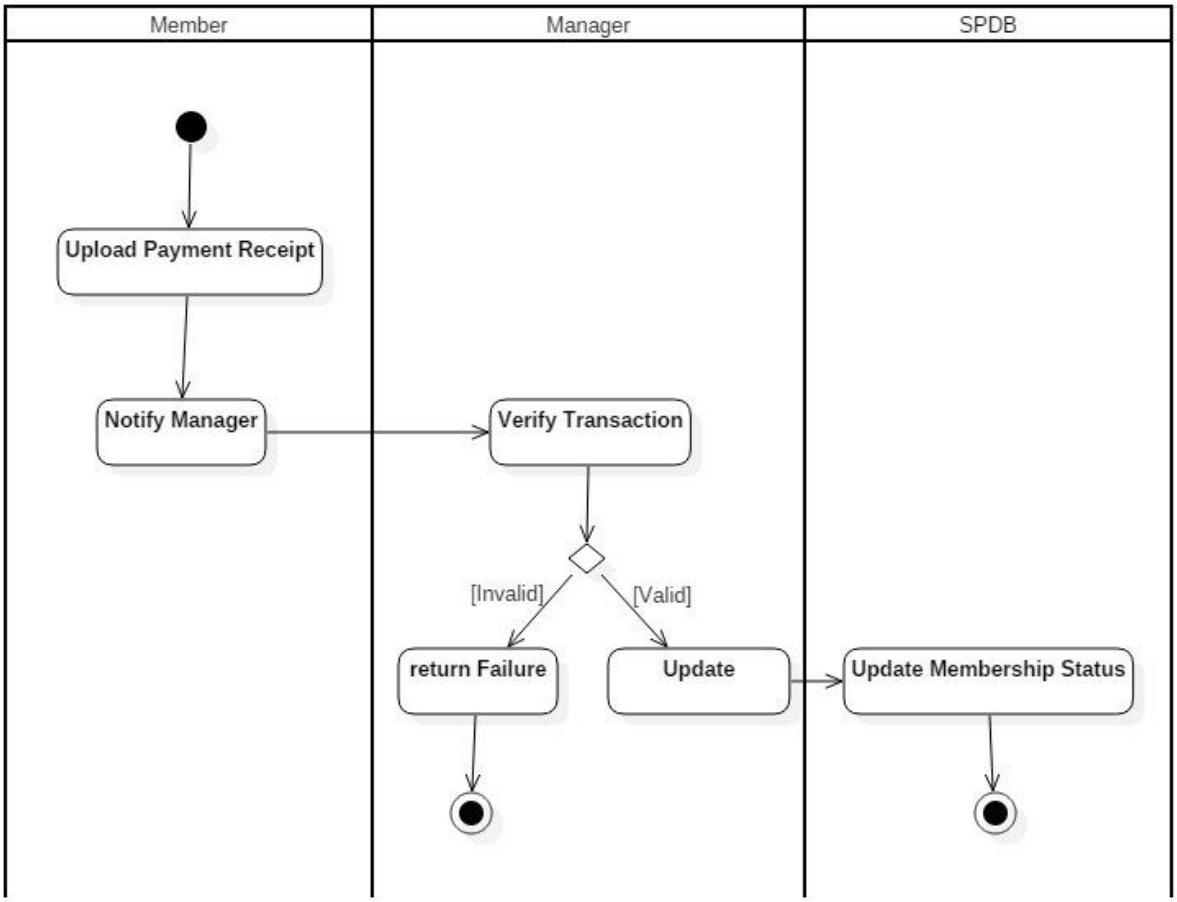

Figure 11: Fee Payment

CLASS DIAGRAMS

APPLICATION PACKAGE

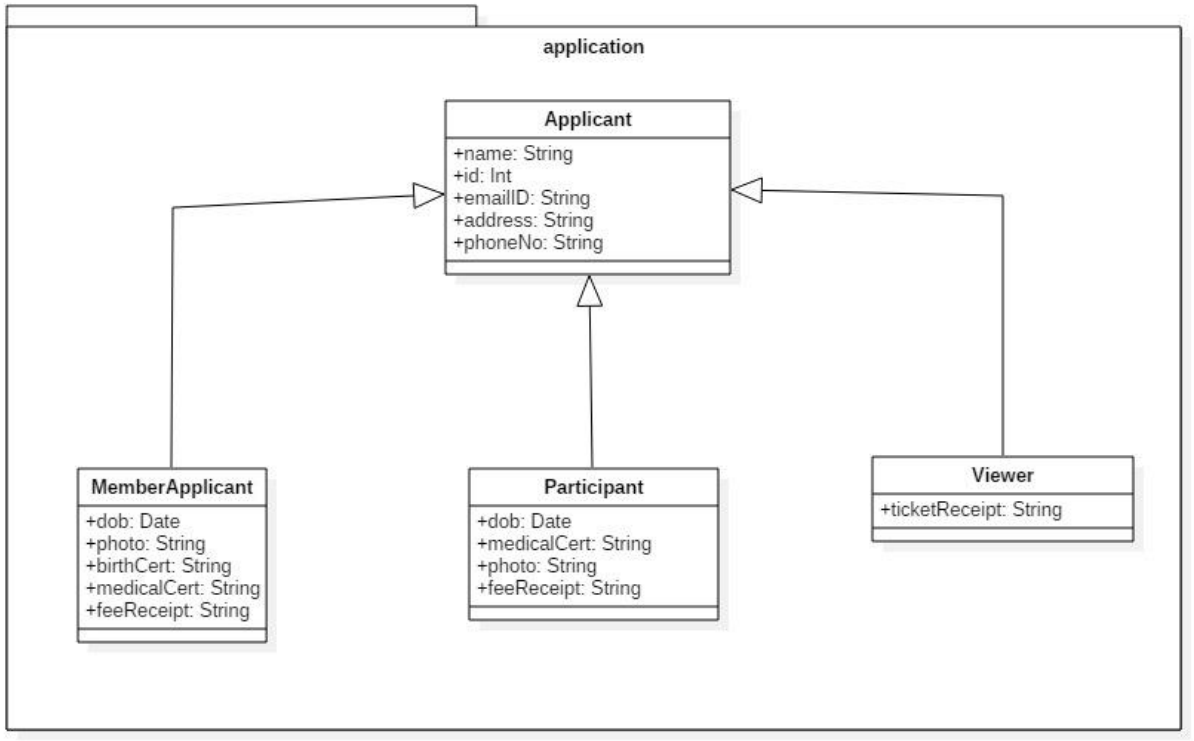

Figure 12: Application Package Class Diagram

USER PACKAGE

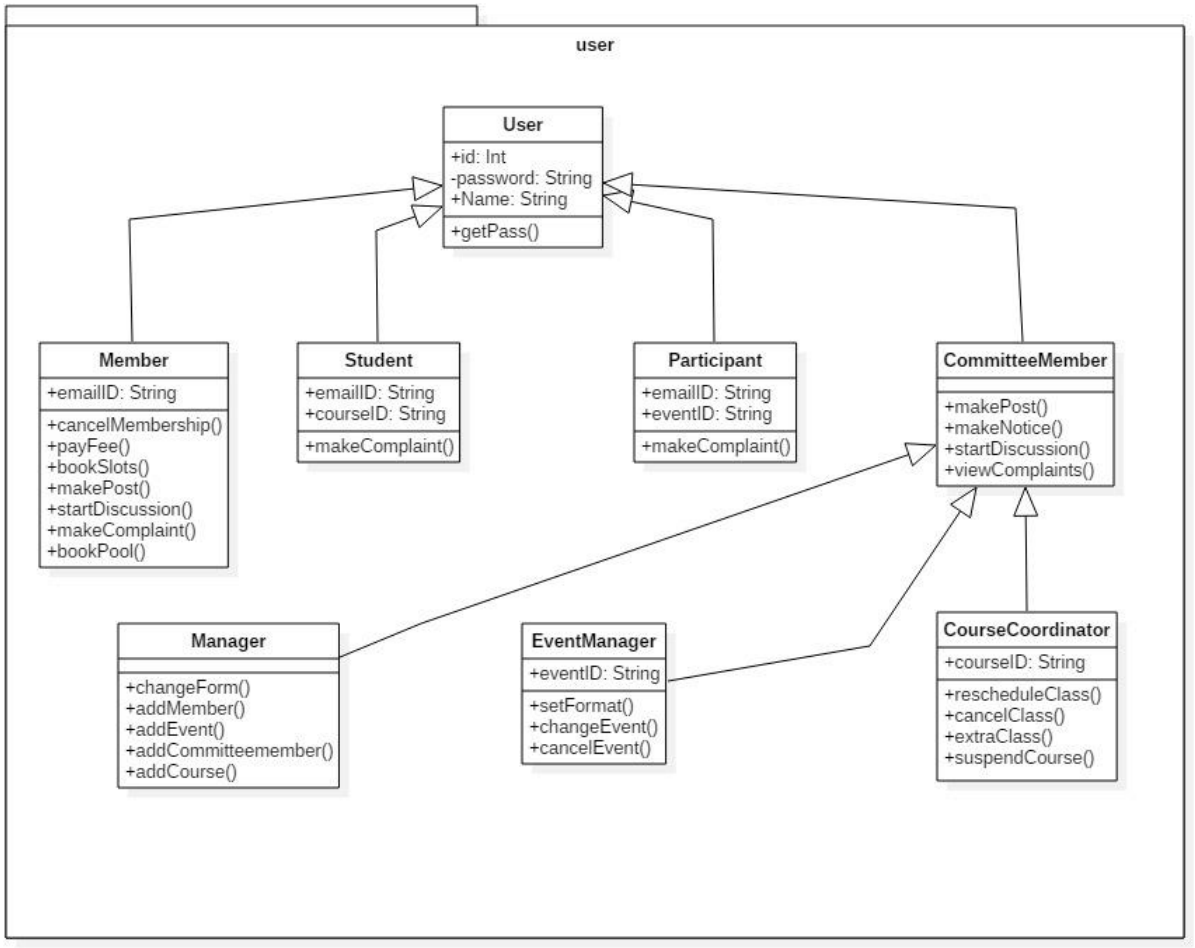

Figure 13: User package class Diagram

SPMS PACKAGE

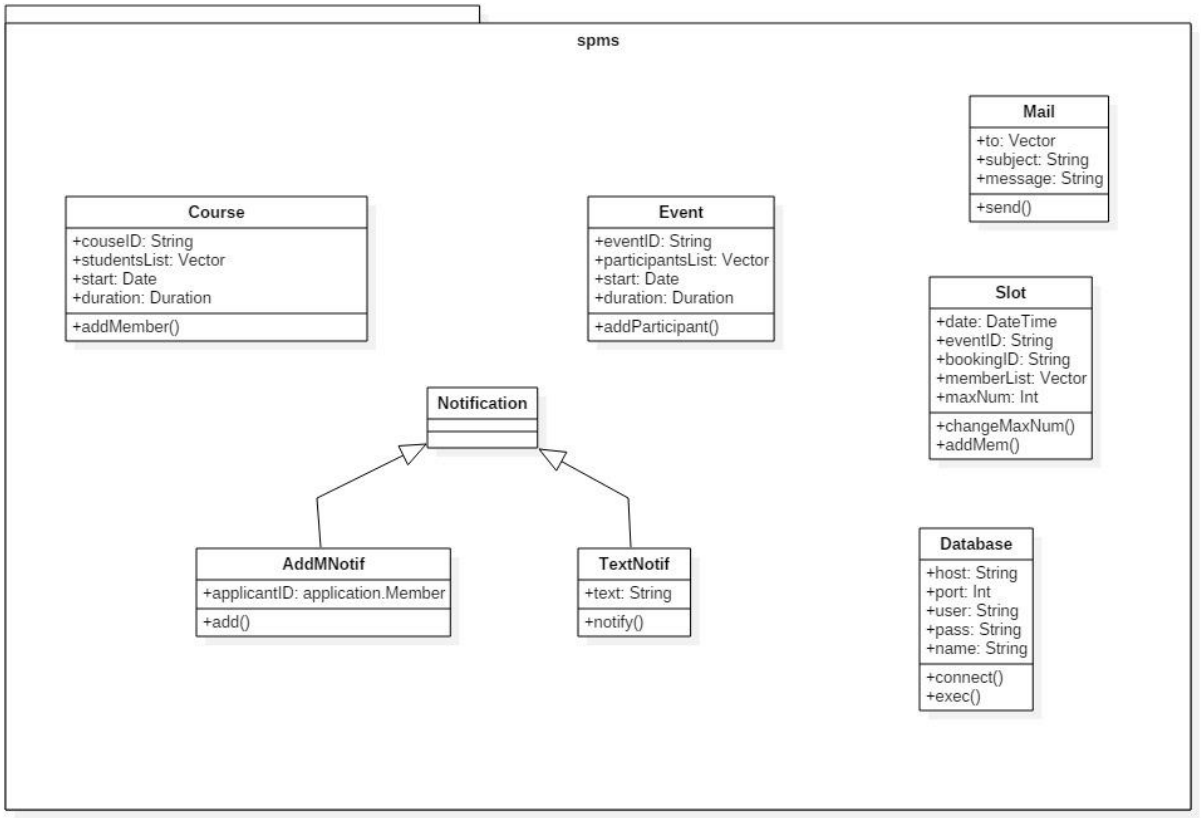

Figure 14: SPMS package class Diagram

DESIGN/REQUIREMENTS

The Internet connection is a constraint for the application. Since the application fetches data from the database over the Internet, it is crucial that there is an Internet connection for the application to function.

The software will be constrained by the capacity of the database. Since the database is shared between both application it may be forced to queue incoming requests and therefor increase the time it takes to fetch data. In terms of implementation, it is mostly done on Java platform. Java should be the language preferred in case of updating the software.

Java Virtual Machine must be present to use this software and access its functions. Java Development Kit must be present to do modifications in the software.