

Software Requirements Analysis and Design Assignment

Capstone Project - 1 Park & Recreation Web App

COMP3059

Version 1.3

Revision History

| Date | Description | Author | Comments |
|------|-------------|-------------|---------------------------------|
| 1.0 | 11/06/2022 | All member | Competing Section 1 through 3 |
| 1.2 | 11/07/2022 | All members | Completing all parts in 3,4,5,6 |
| 1.3 | 11/08/2022 | All members | Final Review |

Document Approval

| Signature | Printed Name | Date |
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1.0 Introduction

The George Brown Company(GBC) is a computer software company and our current task for our development team is to build a web application that provided information on park & recreation facilities for anyone to use. Our goal for this project is to have a platform to be used by anyone and to have a simple and easy experience on the web app.

1.1 Purpose

The purpose of this document of Software Requirement Analysis and Design is to provide information and our plan for the web application for park and recreation facilities. This documentation will provide information and plans for this web application and features that are unique to our web app compared to other platforms.

1.2 Scope

- The web application is only available on computer desktops/laptops.
- The web application is available to anyone to use.
- The web application will have an option for users to create accounts.
- The web application will have an Event management feature that is only accessible to Admin and Event Manager to update, edit or delete events on the web app.
- The web application will have the option to sign up for a newsletter feature to get information about our park & recreation facilities sent to you on our web app and/or to your email.
- The web application will have a feedback feature that the user can send to the admin if they experience any problem with the app.
- The web application will have a chat/forum where users can interact with others and share their experiences at the park/recreation facilities.
- As of the current event, the platform will have one park and/or recreation facilities but if other owners of their park are interested, their parks and/or recreation facilities can be on the platform.

2.0 System Overview

Our Park & Recreation web app is a platform that provides information to users about parks or recreation facilities with quick and easy access to the platform. Another plan for our web application is to help park owners who don't have a platform to provide information on parks or recreation facilities can have one of our platforms with the necessary tools to edit or add information for people to go to their parks.

2.1 Project Perspective

The Park & Recreation Web app is a platform that is available for anyone to use with tools for users to have an easy experience when viewing the web app. With this web app, we want a platform that interacts more with the user than the web app.

2.2 System Context

Currently the Web Application of Parks & Recreation app that is out right now has a cluster of information that are unnecessary sometimes and some platforms only have one of a few in the selected areas. The platform that GBC is developing is show information that users need and if users want to they can a notification or email sent to them to up to date on the parks they are interested in and park owners who have the parks on our platform who need to update, add or delete they can do so by edit on their device and will update as quicking as possible on the platform doing so will help user to information of parks they are interested in.

2.3 General Constraints

- The Web Application will be available in English.
- Future features that might be present in the web application are considered not part of our scope.
- Technologies that we have not mentioned yet might be used in our project.
- The tools and programs that we as a group decide on will be the same(M.E.R.N Stack and VScode).

2.4 Assumptions and Dependencies

Assumptions:

- All tools and resources are available to all team members to complete this project..
- The Parks owner that decided to use our platform to display their park needs to verify that they are the owner.
- The Parks owner that needs more assistance can contact the admin for help through the platform.
- All Members of this team are required to have the necessary skill and tools to complete this project.
- The project scope will have a minor change in the final version if required to do so.
- The feature that we as decided to do for our web application is our main focus.

Dependencies:

- **Project Dependencies**
 - The web application depends on users for the project to succeed.
 - The Park owner must show proof of their ownership of their parks or recreation facilities to be displayed on the platform.
 - The Web application will be using a cloud database to store data for the project.
- **Tools and Programs Dependencies**
 - MongoDB
 - NodeJS
 - ReactJS
 - ExpressJS
 - VsCode

3.0 Functional Requirements**3.1 Functional Requirement or Feature**

- Introduction
 - If the Parks owner has any issue on the platform, they are required to send a report of their issue to the admin or maintenance team to help resolve the issue.
 - Park Owners are aware of how many users visit their page on the web app and it is available for only them to see.
 - Park owners must register for a profile if they want a page for their park or recreation facilities on the platform.
- Inputs
 - User Login Information(username, password, email and etc).
 - Park Owner Login Information(username, password, email, etc)
 - Admin Login Information(username, password)
 - Park Owner Proof of Ownership of Park or Recreation Facilities
 - Park Owner Providing information on their park and/or recreation facilities.
- Processing
 - Park Owner logging in will allow them to edit, add or delete something on their page.
 - User logging in allows them to edit, add or view their profile
 - Admin logging into the web app will allow them to supervise and manage the web application

- o Confirming Park Owner proof of ownership.

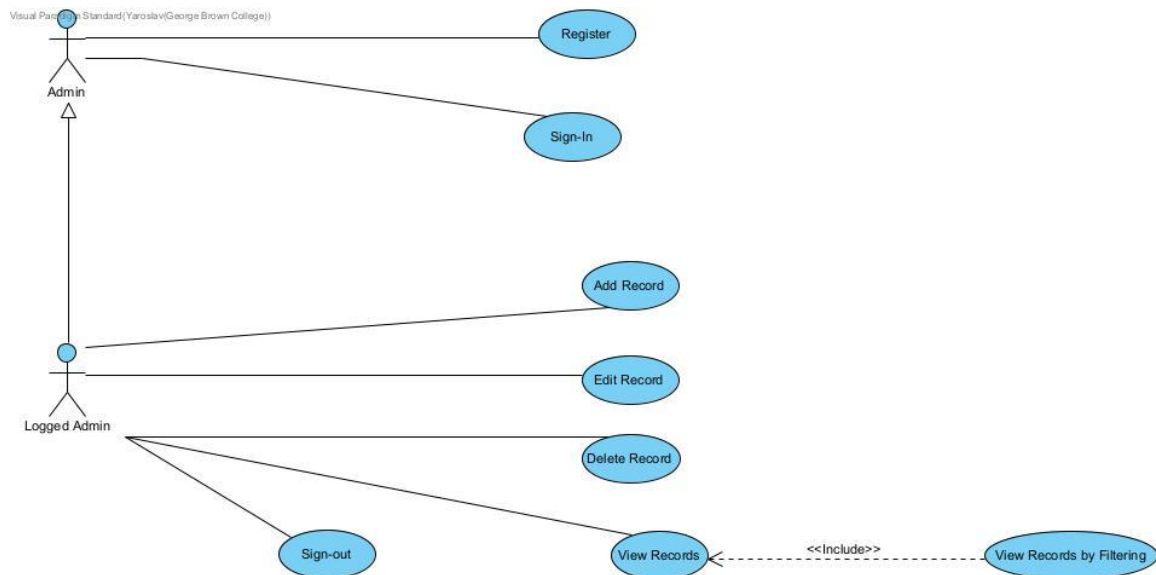
- Outputs

- o User Login Confirmation
- o Admin Login Confirmation
- o Confirmation of proof ownership of the park and/or recreation facilities
- o Saving edit, update of deleting from Park owner
- o Saving edit, update of deleting from Admin

...

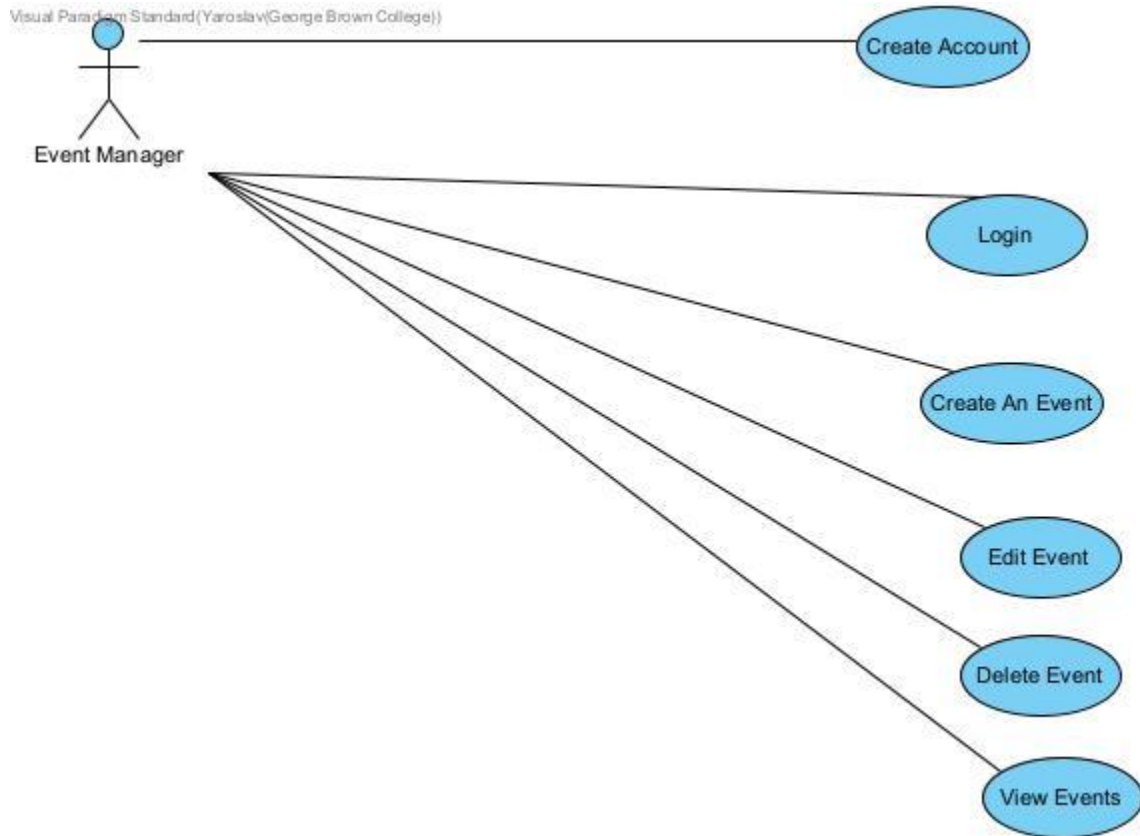
3.2 Use Cases

3.2.1 Use Case #1 Admin



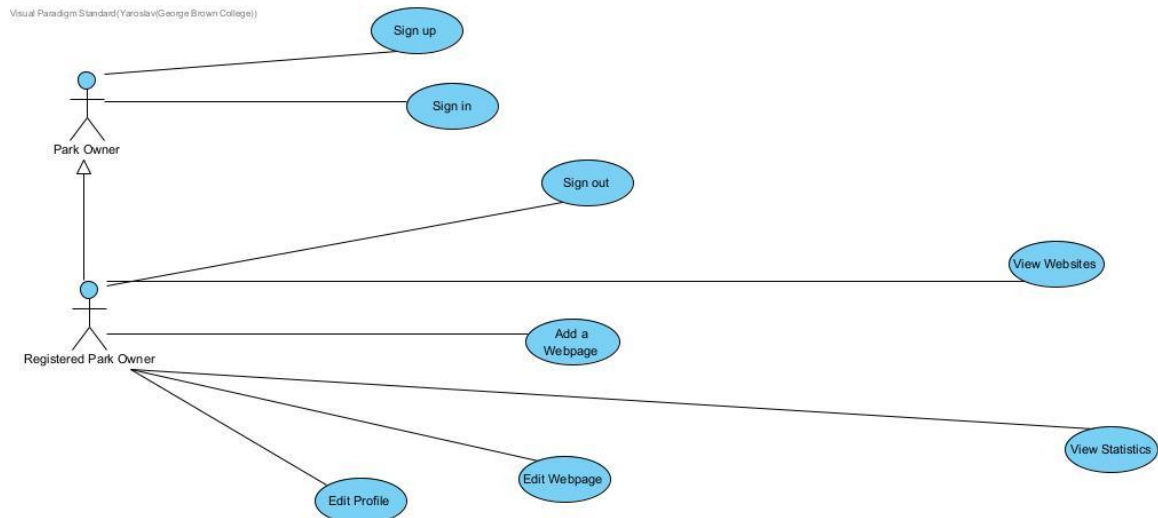
3.2.2 Use Case #2 Event Manager

Visual Paradigm Standard (Yaroslav(George Brown College))

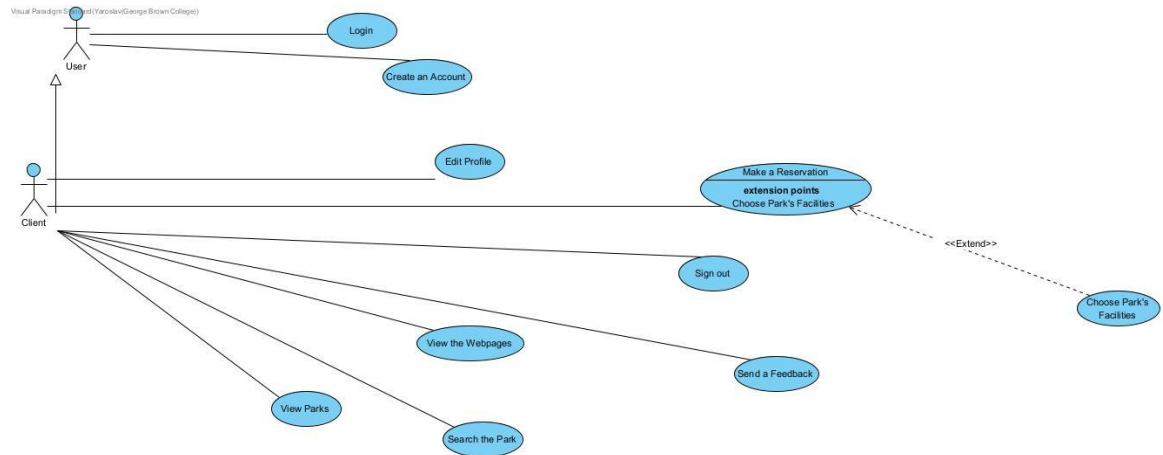


3.2.3 Use Case #3 Park Owner

Visual Paradigm Standard (Yaroslav(George Brown College))

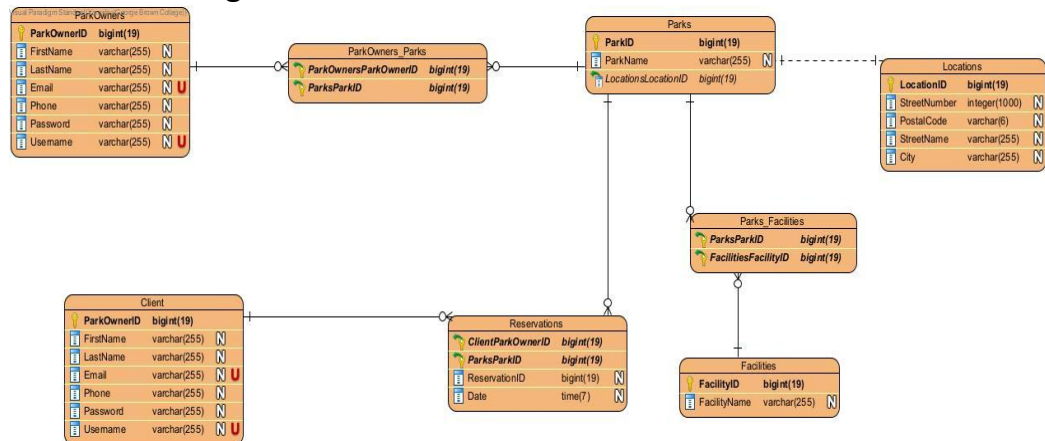


3.2.4 Use Case #4 Client



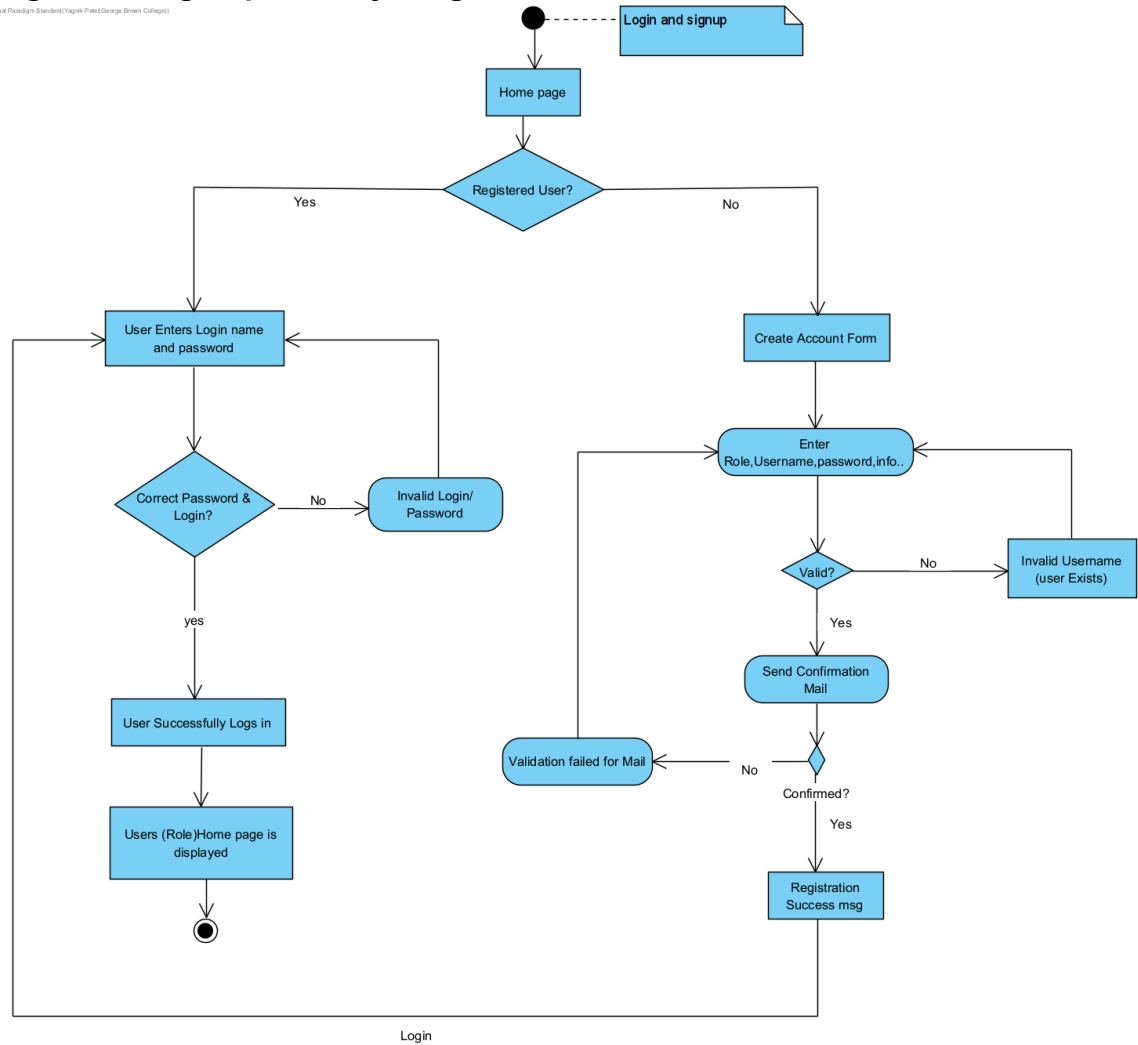
3.3 Data Modelling and Analysis

Normalized Data Model Diagram

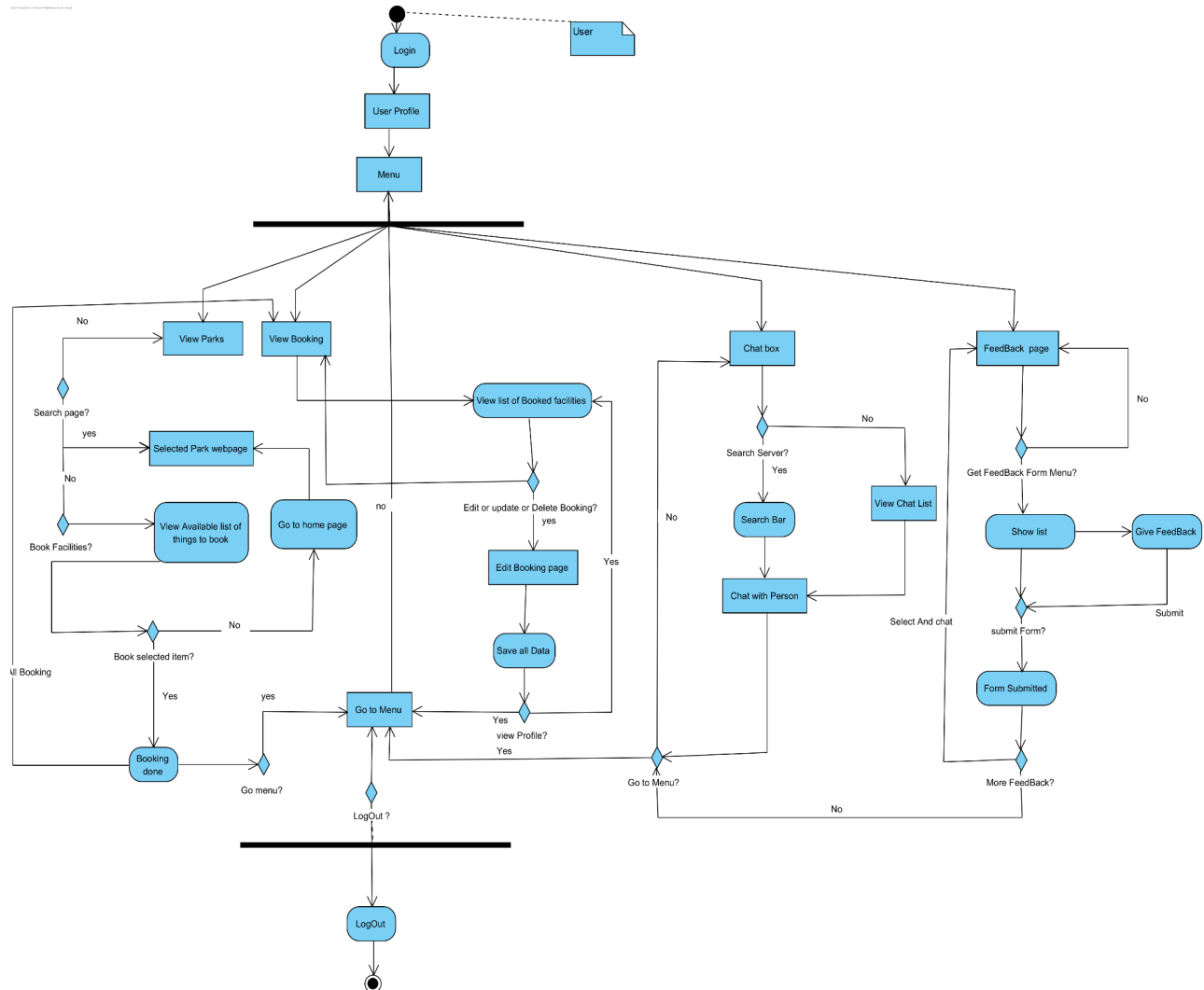


Activity Diagrams

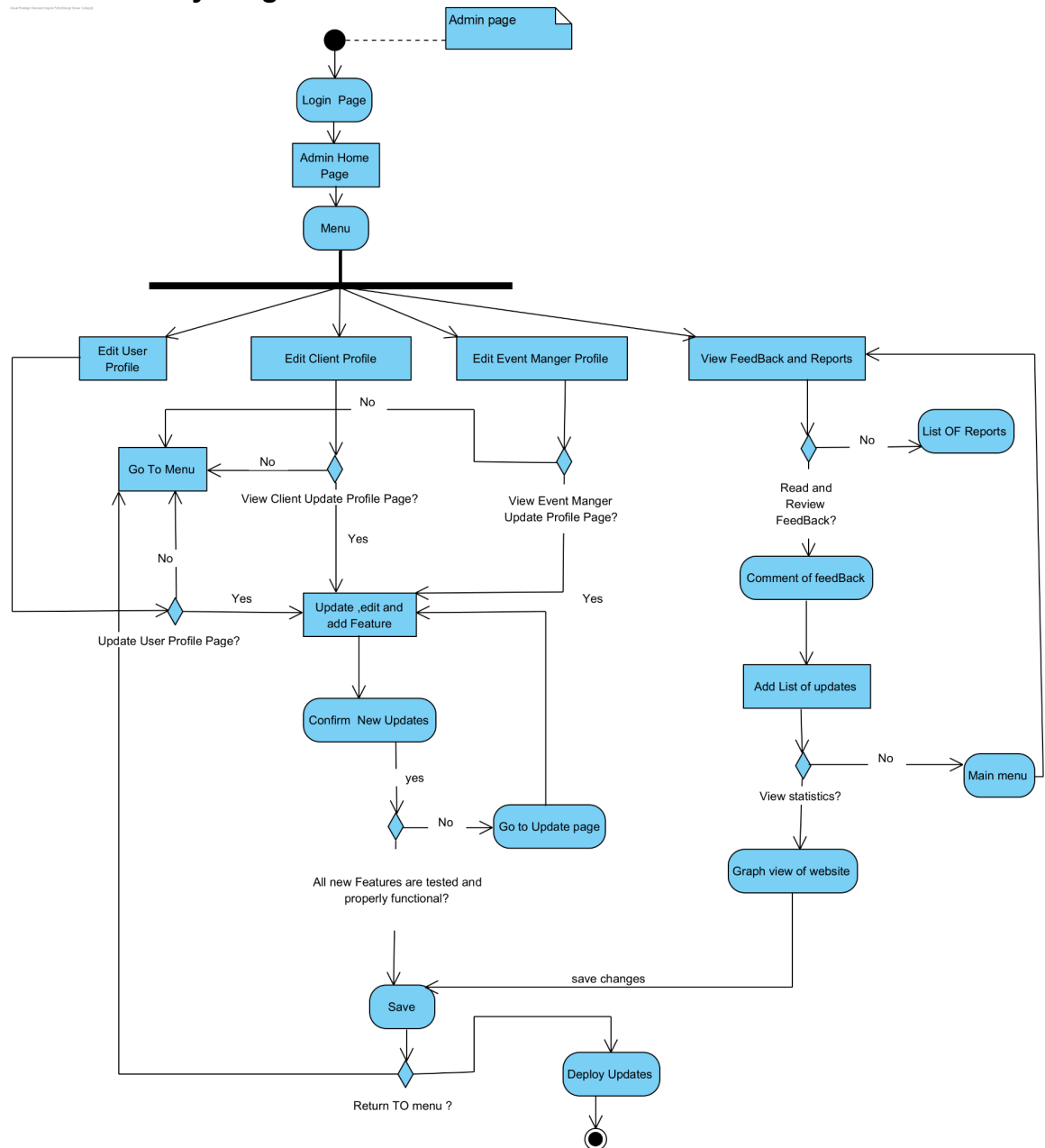
1. Login and Sign up Activity Diagram

Visual Paradigm Standard (Yagni Patel (George Brown College))

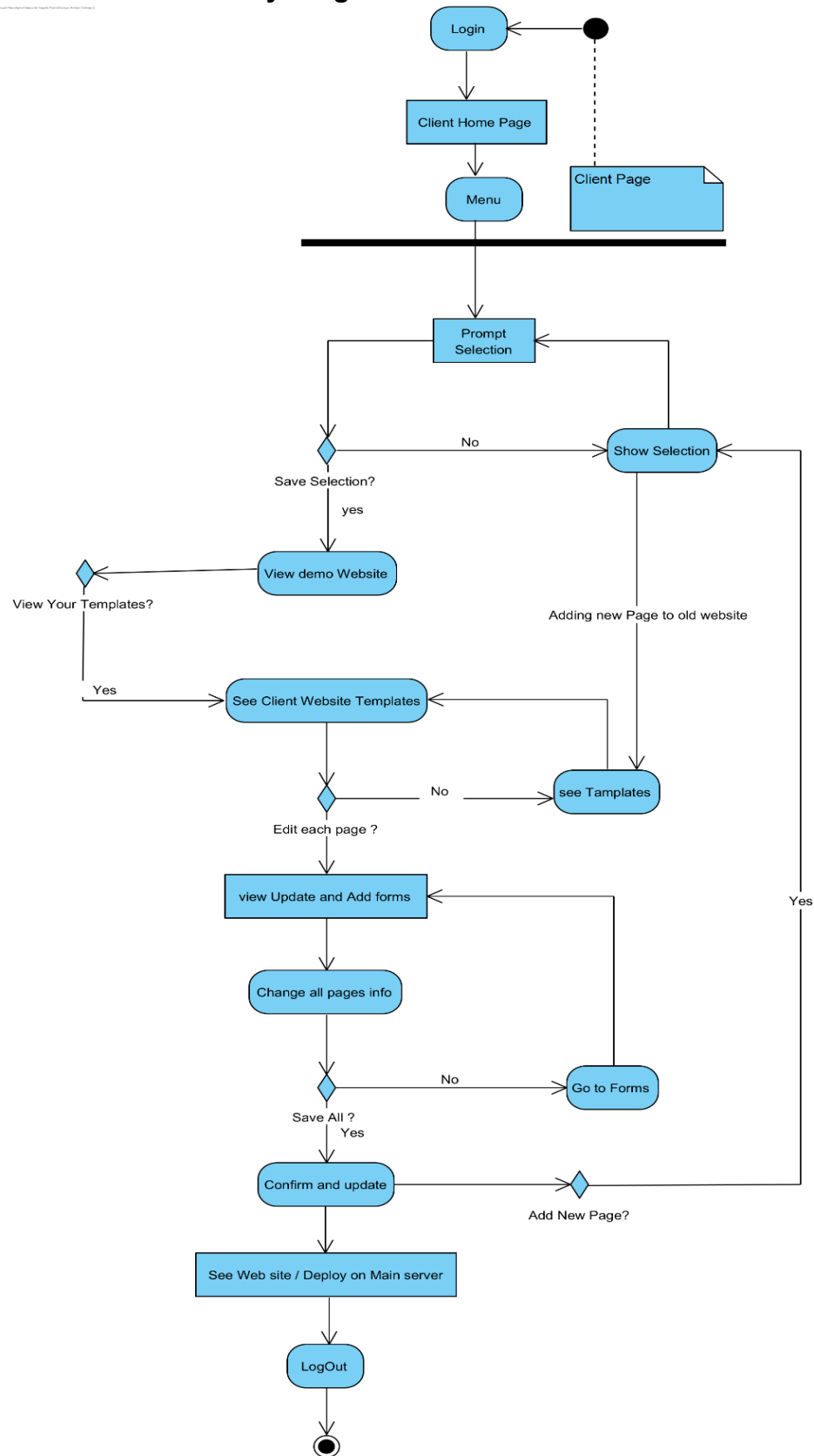
2. User profile Activity diagram



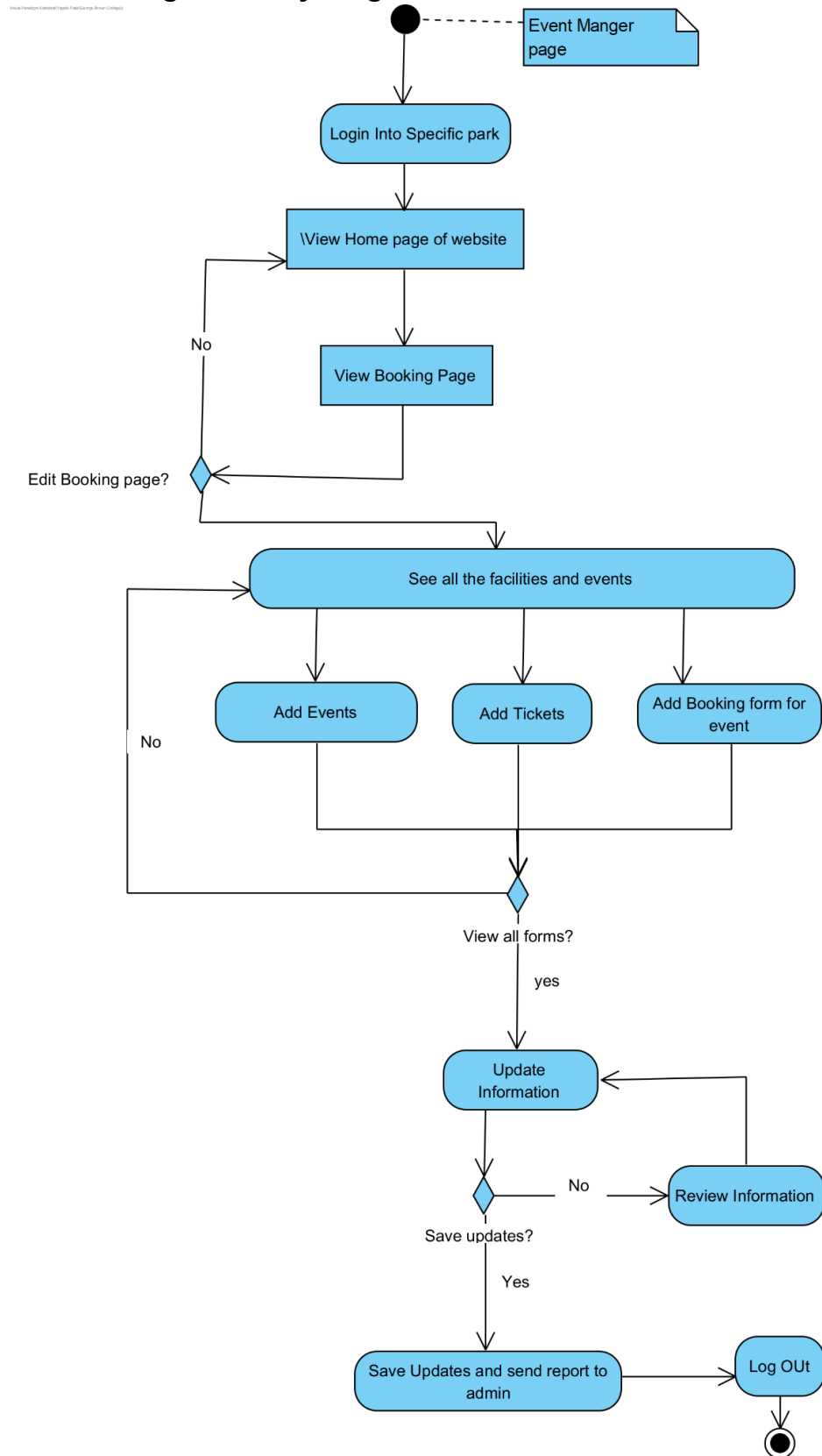
3. Admin Activity Diagram



4. Client Profile Activity Diagram

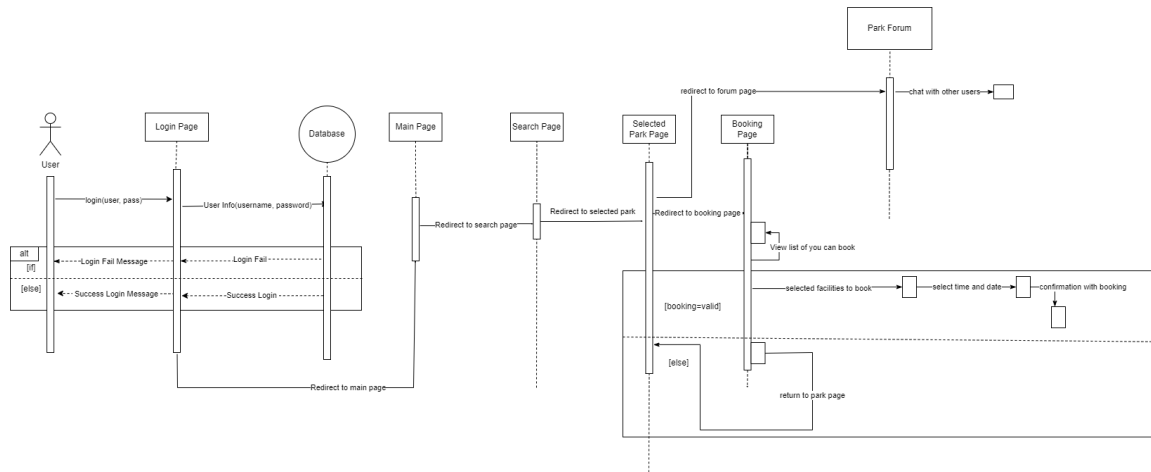


5. Event Manager Activity Diagram

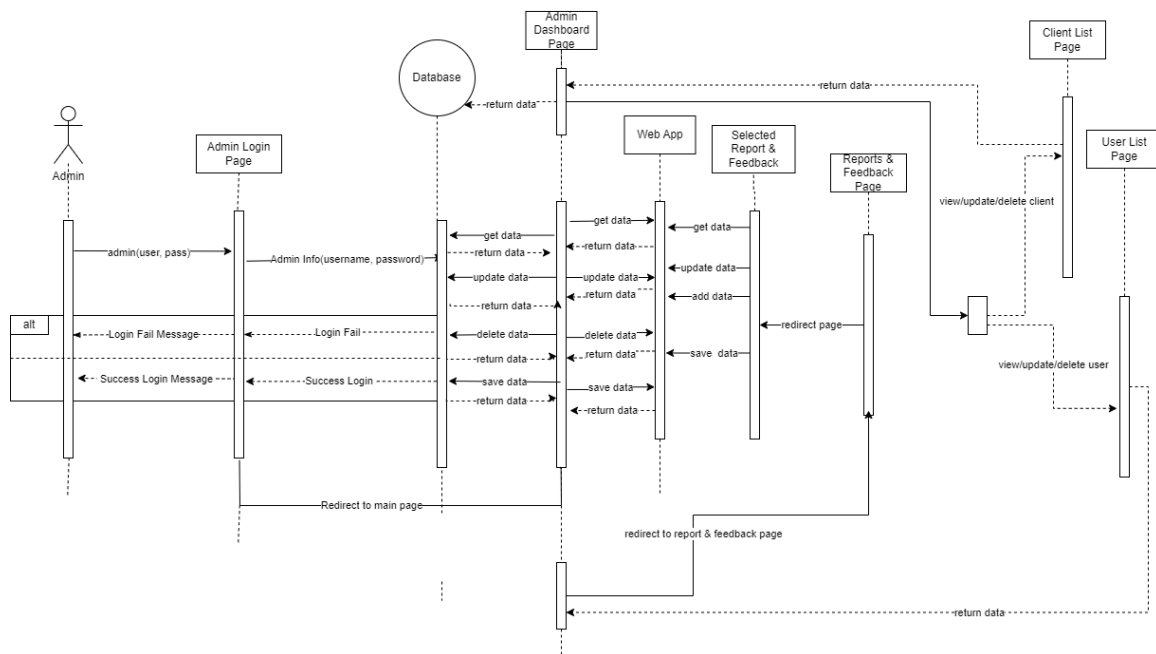


Sequence Diagrams

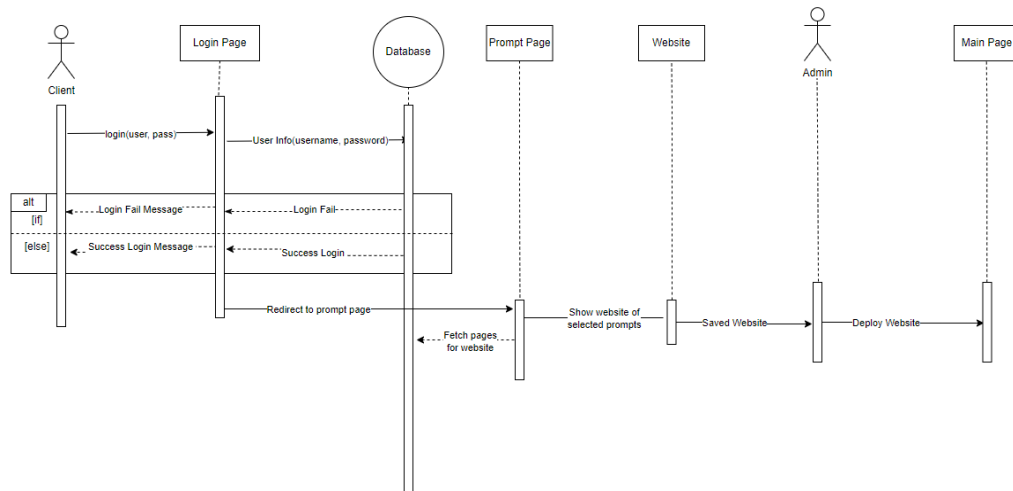
1. User Sequence Diagram



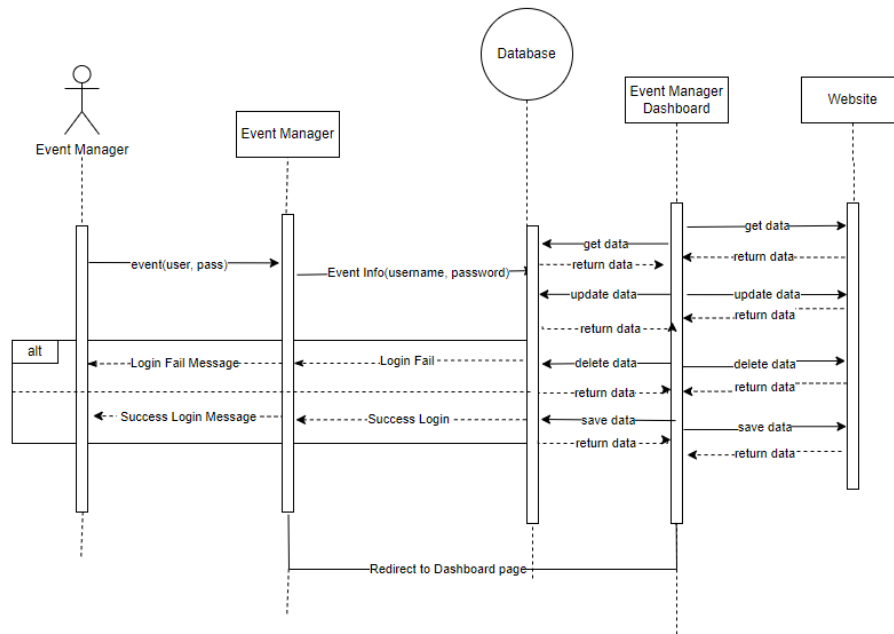
2. Admin Sequence Diagram



3. Client Sequence Diagram

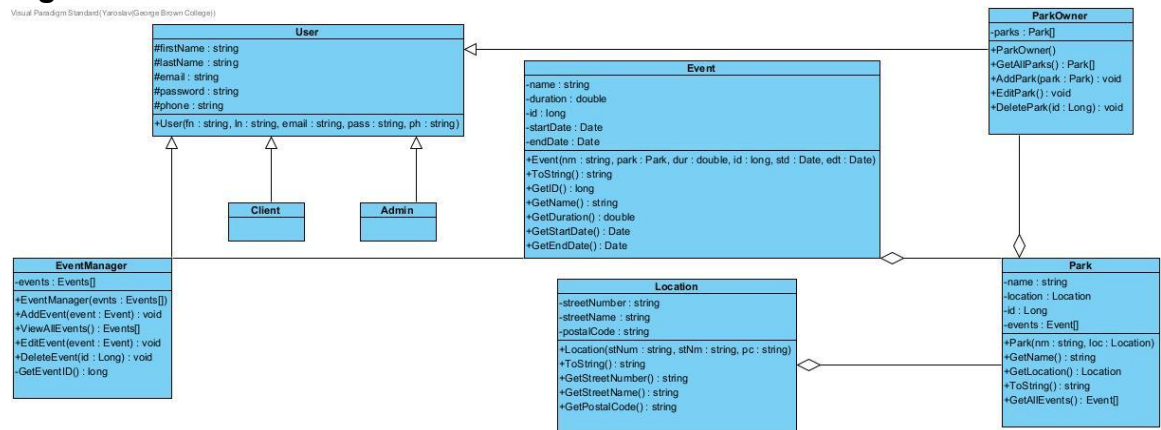


4. Event Manager Sequence Diagram



UML Class Diagram

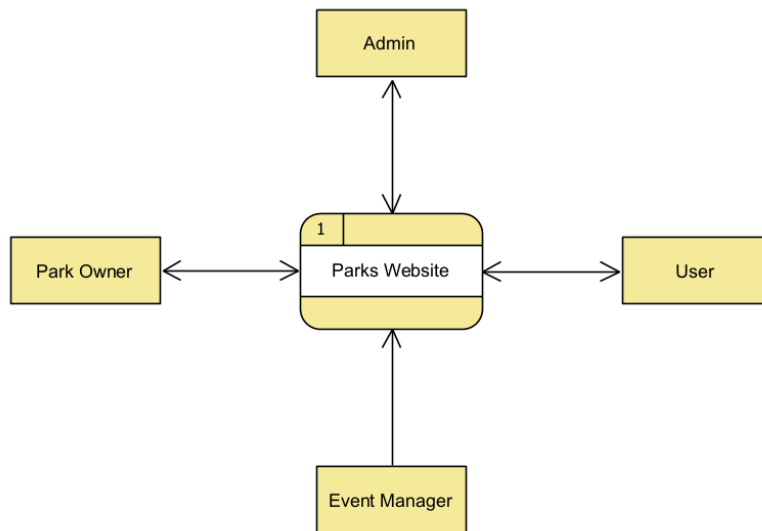
Visual Paradigm Standard (Yarnsley/George Brown College)



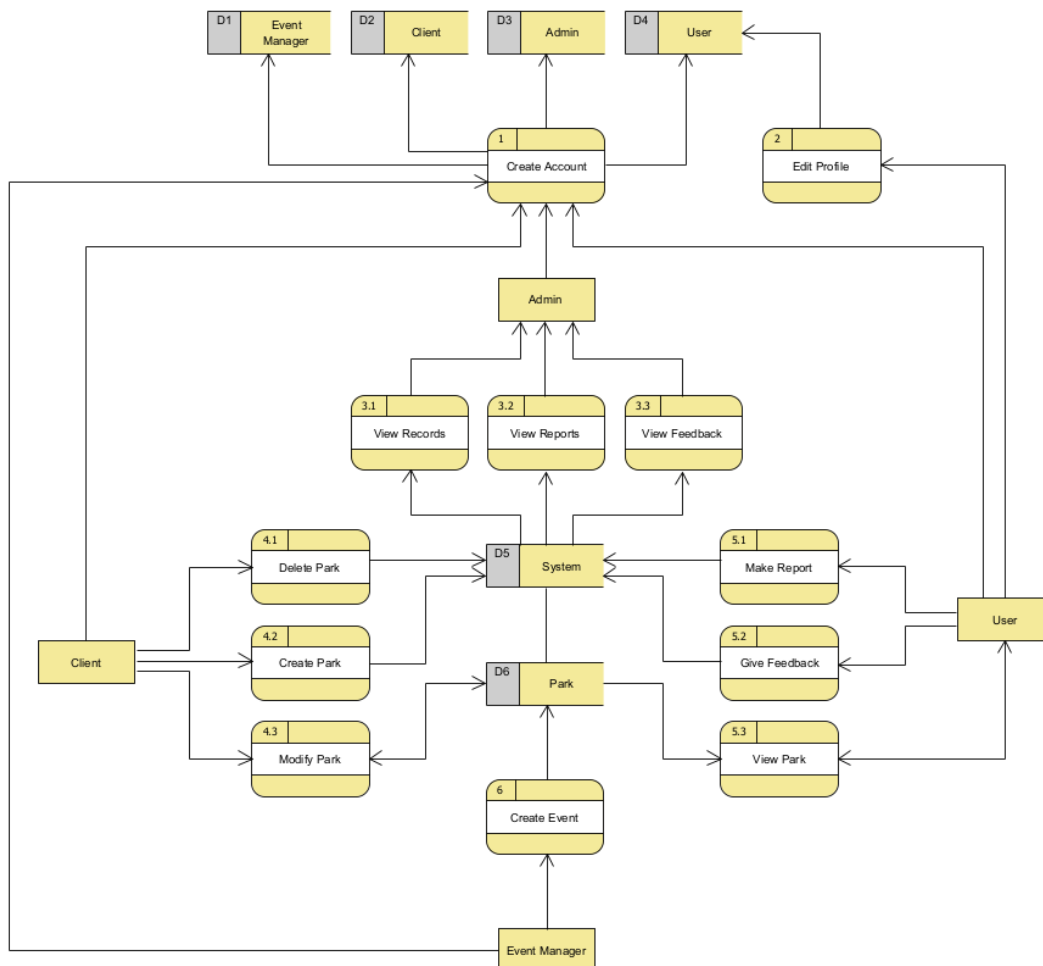
3.4 Process Modelling

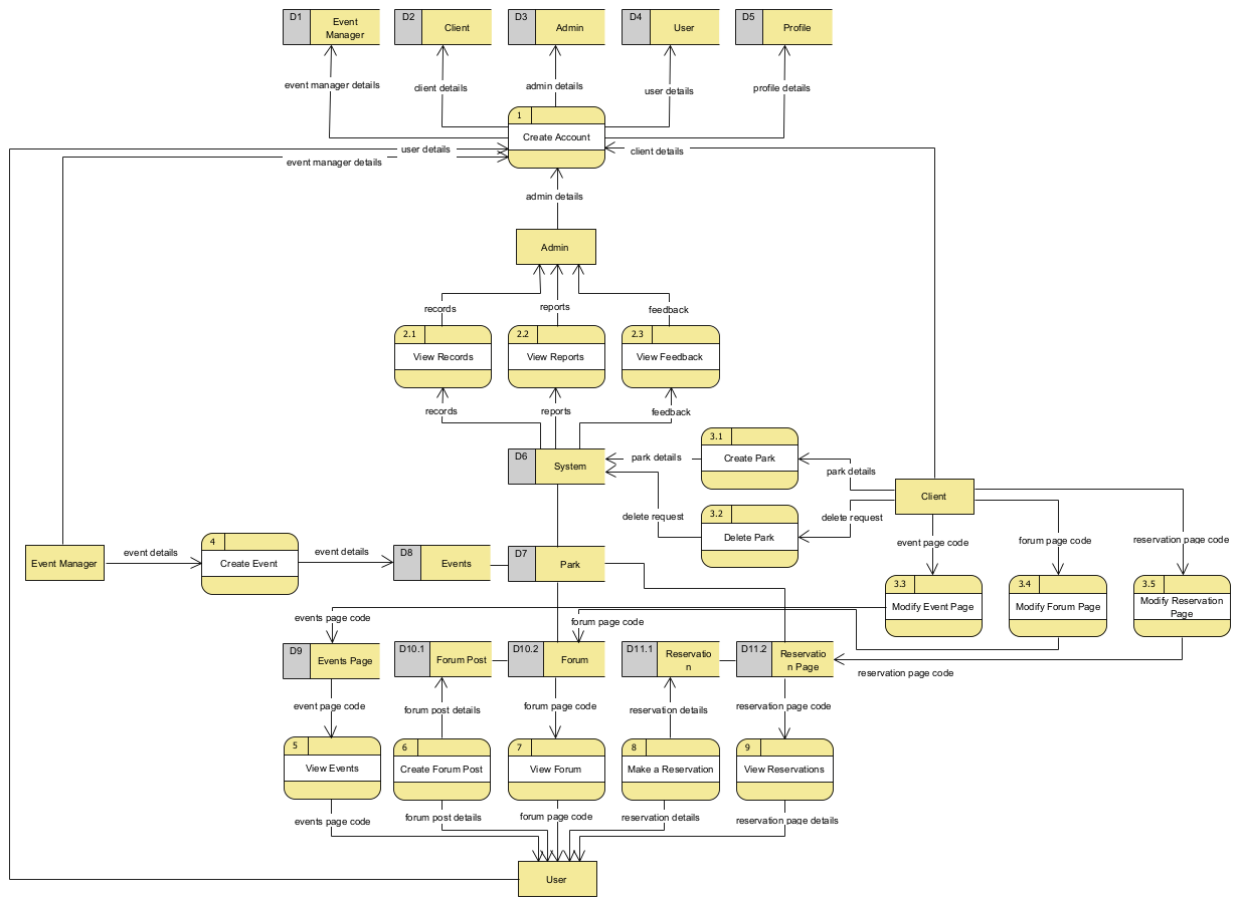
- Data Flow Diagram

DFD Level 0



DFD Level 1



DFD Level 2

4.0 Non-Functional Requirements

- **Performance**
 - The web app time it takes to respond will be approximately around five seconds and no longer than that.
- **Reliability**
 - The web application will run without any bugs occurring while using the application and the information provided on the platform are up to date and precise.
- **Availability**
 - The web application is available only on desktop and is to be used 24/7.
- **Security**
 - The web application will be secure and safe as it stores data and information of the user and park owner account. It will not collect more data than the data user and park owner already provided.
- **Maintainability**
 - Any Issues or bugs that the users reported. As soon as possible the admin or maintenance team will fix it.
- **Portability**
 - The web application must only be used on a computer desktop/laptop and not on mobile devices.

5.0 Logical Database Requirements

- **Data Formats**
 - The database using this web application to store users will be through MongoDB.
 - The web application will store data in the JSON format for changes to need to be done.
- **Storage Capabilities**
 - All data collected from the web application will be stored in the web system and as more users input their information the storage capabilities will increase if necessary.
- **Data Retention**
 - Data input from the user and client(park owner) are not removed least if need to make any changes to the information provided on the platform
- **Data Integrity**
 - The web application will maintain secure data integrity but by if something were to happen the users on the platform will have their data backup.

6.0 Other Requirements

- The web application will be open to a new update during the completion of this project if necessary we as a team choose to do so.

7.0 Approval

The signatures below indicate their approval of the contents of this document.

| Project Role | Name | Signature | Date |
|-------------------------|--------------------------|--------------------------|------------|
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| Project Manager | Yagnik Patel | Yagnik Patel | 11/08/2022 |