# 4th Year Software Development

## Loyalty System

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### Project Scope

The project we propose undertaking is to create an automated customer base system for adventure sports companies. The project will include an administration web application for the company where they can store information about each client and from which they can gather information which can help them to gather trends and other analytic information to target and generate greater business and sales.

For the client side, the project will include a mobile phone app which each user can sign into, receive a unique generated member QR code which they can use to check into their activities and cut out the paperwork usually included (e.g. indemnity forms). It will also provide an SOS feature which can be used in case of emergency to alert the company of their location.

### The Database – NEO4J

#### Info stored in the database



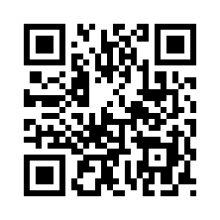
### Web Application - C# .NET

The web app will allow the company to:

* Add/Update/Delete new users
* View a user profiles
* Push Notifications
* Data Analytics
* Create Unique QR Barcodes for users
* See all current Members still on the premises.
* Google Map showing location of all members currently on the premises – Via google API

The purpose of the web app is to allow the company to add new customers to their loyalty system, generate a username/temporary password for them to log into the cross platform Mobile App.

#### Barcodes

The unique QR codes will be generated when a new user is added to the company’s database, based on their unique ID.

This barcode will allow the company to scan the customers phone upon arrival, checking them in.

#### Data Analytics

It also allows the company to do data analytics e.g.:

* Display location where most clients live
* Spending habits
* Busiest time of year
* Total income from member/s

### Mobile App – IONIC

The mobile app is the customer’s loyalty card. It contains info like:

* QR barcode(unique)
* Name /DOB/Location
* Emergency contact number
* Contact number
* SOS Button

Customers can update password/emergency contact number/location.

SOS button sends the company a message/GPS coordinates/calls them or alerts all others within a certain radius that a person needs help. Using Google Map API it could display a map location of where the user is located.

### System Architecture



### Database Layout – Neo4j

