GoPlay - Sports Facility Reservation Application

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Abstract— Sri Lanka has many sports enthusiasts and sports venues which are being used daily. Most popular venues which are being used are cricket pitches/nets, football/futsal and badminton courts. There are many sports enthusiasts who are willing to play sports but unfortunately due to difficulties in making reservations, most of them are getting lazy. There are many problems which have been encountered such as checking availability, real time booking and cancellations, payment methods etc. The aim of this project is to provide an application to provide benefits for users and venue owners by having an automated reservation system and to overcome all the obstacles faced. The use of data mining to obtain recommendations of previous booking routines, nearby venues based on preference, business intelligence to obtain analytics of each user through graphs and augmented reality to show a graphical view of the venue are being used in this application. In addition, a points system is provided for users to obtain discounts or promotions. The application is being built through Flutter, Google API which will help to find venues in Colombo. Further expansions will be done in the future which will expand across the country.

Keywords— Data Mining, Business Intelligence, Booking System, Mobile Technology, Augmented Reality, API, Flutter, Cloud Computing

I. INTRODUCTION

Sports play a vital role in the modern era and are being played all over the world as careers, hobbies or as a part of fitness routines. There are several venues around our neighborhood which aren't being used much often due to difficulties in making reservations which leads most people avoid playing sports in their available time [1].

An online reservation system could tackle all your problems by having the ability to check the availability and easily book and pay through cashless payment methods with a mobile device. Research shows that mobile booking has risen by 60% at the end of the 4th quarter of 2017 and automating this problem through a mobile platform helps the users to make convenient reservations and venue owners to avoid the need of answering calls and having a convenient approach to view all the reservations in one platform.

II. PROBLEM STATEMENT

A. Several calls taken to book a venue -

Reservations through a manual process could be time consuming and difficult because people should call the relevant person in charge or if unavailable, then people should give several calls till the phone has been answered, search for another venue or visit the facility to make the reservation [2].

B. Unable to check nearby and availability of venues -

People being unaware of the sports facilities around their neighborhood is one of the major problems which people are not playing their relevant sport. When an individual need to make a reservation, he needs to personally ask whether there are available courts to be booked [3] and people who live far away from the facility will face difficulties to travel to check for availability [1].

C. No cashless payment methods -

Along with mobile payment, consumers are benefitting the easiness of paying [4] and according to the statistics which Worldpay's 2018 Global Payment Report shows that use of mobile payment is rising in an extraordinary way and has become the second common payment method.

D. Difficult to split among others -

The normal procedure when booking is one person is forced to pay the entire amount and then others will pay him individually or collecting money from everyone and making the reservation. Most people don't have change so it would be a hassle to pay the exact amount and which would cause for some to pay more or even less which would be unreasonable.

E. Difficulty in knowing available facilities -

Sports facilities may vary according to the facilities which they offer. It is difficult to find the availability of parking spaces, changing rooms, equipment store, canteens, toilets, hygiene level as it would be important to certain individuals [5].

F. Unaware of nearby tournaments -

There are many talented sports enthusiasts who are interested in participating in tournaments but are unable in doing so as they are unaware of the events which are happening around them [6]. They will never be able to show their talent if there aren't any sources for them to know it.

G. Difficulty in finding physiotherapists -

Choosing a physiotherapist isn't easy, it must be someone who can be trusted and should be valuable for the money which will be paid. Most athletes get various types of injuries and when it is a serious situation, getting access to a sports physiotherapist will be limited or difficult [7].

H. Unable to find professional coaches -

Research shows that a coach is the key in changing an athlete to a positive perspective. Finding a coach who has the proper expertise in the relevant sport is crucial for athletes [8]. If not, players will go in a wrong direction which would be an utter waste of their talent.

I. No proper online store to purchase -