

Dublin City University - School of Computing

BSc in Enterprise Computing
4th year project proposal (CA472)
Idea Proposal
2018/2019

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Project Title:

ClubKit – Sports Club Web Application

Date:

15th November 2018

Project Summary (1 page):

For our final year project, we have decided to create an admin application for local sports clubs and organizations. This online system will include player registration payments, a pitch booking system, a club shop and pitch and team scheduling.

These features will be available all together or individually, chosen by each club as a package. We chose this project because a problem was identified that local sports clubs have volunteers who can spend fifteen or more hours a week doing admin work for their club. This work includes, sorting players registrations, setting training and match schedules each week and taking bookings for the club's pitches and facilities.

The system we will create will allow for clubs to automate this work online making things easier for club volunteers. We plan to have packages available where clubs can choose the features, they need most for their club. This allows for each individual club to get the best price on what they need the most.

Player Registration: Removes the need for sports clubs to host registration nights each year where volunteers are required to stay at the club all evening taking in cash registrations from each player. Our system will be safe, secure and will ensure that each player is registered and fully payed up.

Rent-a-Pitch: Allows for users to go online and instantly book a slot on a pitch that's available in the club. This removes the need for volunteers to constantly be on the end of a phone call, booking the slots for users.

Club Shop: allows players and users to pay and reserve club gear online to collect at the club when its ready.

Training Rosters: Will allow club volunteers to easily setup a schedule and allow others to view it online.

All of these features together in one online platform for local sports clubs will make it the one place for all clubs to go to facilitate their administration needs. Time depending, we will hope to add additional features such as reporting, fixtures, referee platform and more.

Expected Technical Delivery (1 page):

Application Platform: Our application will be built as a web-app, but we will modify the front-end to be mobile friendly. We believe there is no need to develop a mobile application for our software as the main functionality is for admin work which is not suitable to be carried out on a smart phone, but we believe it is necessary for it to be compatible on smart phones for our features such as pitch rental and club shops.

Project Management Application: In order to manage our project, we decided to use Trello a web-based project management application. It is a collaboration tool which incorporates a scrum framework which will in turn help our project move along as productively as possible. We will use the dashboard to plan our iterations and tasks.

Database: MySQL is the database of our choice as it is faster, more reliable and cheaper than other database options out there. There is also a lot of documentation online to support our database needs. MySQL works well with many programming languages which is important and includes all the necessary features we need to develop our application system.

Git Repository: GitLab is our web-based git-repository of choice. GitLab allows us to collaborate on code, to help safely create and edit code on our project. It is free and open-source.

Back-End: Python is our preferred object orientated programming language which we have experiencing using. Using python, we will build our back-end functionality and API's. Using Django Rest as our framework of choice.

Front-End: To develop the front-end of our application we've decided to use Angular 6 as our framework over Reactjs due to its faster compilation, detailed documentation, two-way data binding that enables singular behaviour for apps and the MVVM (Model-View-View-Model) architecture that allows for separate work to be carried out by both of us on the same app section using the same set of data.

Testing Tools: Using Postman to test our API's and PyUnit to test our python code functionality.

Logging: Depending on time we will hope to incorporate ELK(Elasticsearch, Logstash, Kibana) stack to handle our logging. With the help of Kibana dashboard we can visualise our log data clearly and identify errors.

Market Rationale (1 page):

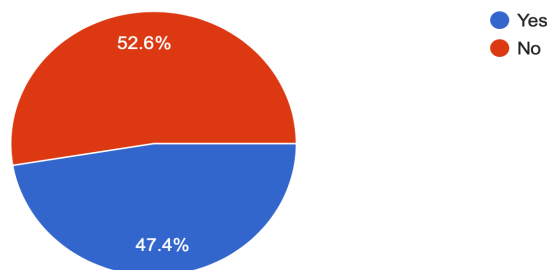
Our target market is based on local sports clubs that want to move towards a more modern and online approach to how they carry out their daily tasks. Every club has volunteers who carry out administration work for the club, including taking player registration, scheduling training rosters, handling in clubs purchases and more.

Our system is will be used to help automate this administration work. Most clubs still do things a more traditional and simple way, registration is taken in by cash or schedules are releases in a spreadsheet online, we are targeting these clubs that want to move onto a more modern way of doing things and freeing up time for volunteers.

Our first piece of market research involved sending a survey of questions to clubs around the Dublin, Meath, Wicklow and Kildare areas with questions on how their club works, what type of administration work they already do and if they would be interested in moving towards a more modern, online club system. We received a good response from the survey in which the users detailed if they were interested in the system.

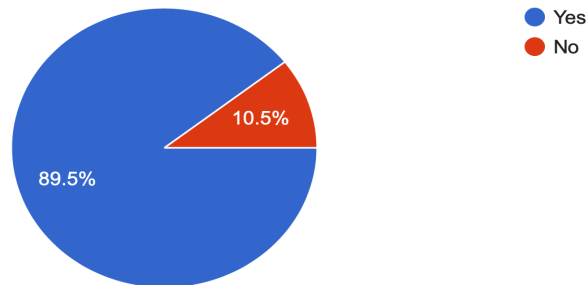
Does your club rent out facilities for others to use?

38 responses



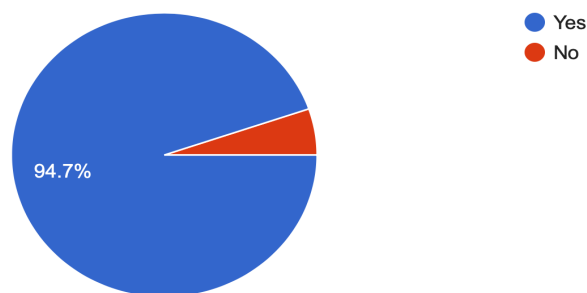
Would your club be interested in a system where players can pay their registration safely and securely online?

38 responses



Would your club be interested in a system where training rosters and pitch slots would be available to view online?

38 responses



The results of the survey show that clubs are interested in training rosters online and a safe registration system and not as many clubs are interested in renting out facilities. These results caused us to revamp our business plan and make the system available as packages where clubs can choose which features they want to pay for. The survey also includes a response from some of the clubs with suggestions on how to improve the system further. We will use the information gathered from the first survey with information from our secondary research to validate this market.

Proposed Timeline (1 page max):

[illegible][illegible]

Workload Distribution (for teams with 2 or more members):

Gavin Boyle:

- Marketing & Research (Contacting GAA & Tennis Clubs)
- Database Design
- Registration Back-End

Conor Ward:

- Marketing & Research (Contacting Football & Rugby Clubs)
- User Authentication Back-End
- Scheduling Back-End

Together:

- Design & Planning
- Rent-a-pitch Back-End
- Shop Back-End
- Website Design
- Registration Front-End
- Scheduling Front-End
- Rent-a-pitch Front-End
- Shop Front-End
- Additional Features
- Testing
- Documentation

Staff Consulted:

Andrew McCarran

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