APPLICATION IDEA: COMMUNITY OF INTEREST – AMAEATUER CRICKETERS NEAR ME

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Application Concept

Overview of Key functionalities of the App

The application has been named "**Amateur Cricketers Near Me**". The key purpose of this application is to find fellow amateur cricketers in your locality (within City of Casey), connect with them and play cricket. The basic requirement to use the application would be to create an account, this has been made a basic requirement because any user will be able to search a locality via entering the pin code or provide location access and book a slot in an already existing game in that locality or can create a new game in a locality of their choice where other users can book a slot in the game.

When the user is creating a new game, the user will need to provide a location pin code or location access and the number of people they already have ready to join the game. Once the user provides the necessary information to create a new game, the application will retrieve all the playgrounds near the entered pin code. Once the user selects their preferred ground (via the embedded map), a game is created for that ground and when any other cricketer looks up for that pin code to find a game, they will be showed all the available games for that pin code, and they will be able to select any of the games.

The users who have booked a new game or have joined a new game will be able to see a table of their upcoming games. In this table each game will have a clickable link, which will open apple maps and lead them to the playground. Whenever a game is on that day the user will be alerted with a notification about their upcoming game(s) for the day.

Target Audience

The application is built to suit amateur cricketers who want to find other cricketers in a locality of their choice to play cricket. To be elaborate, the application suits a group of friends who want to play cricket but don't have enough cricketers on board to play the game of cricket but are willing to accept anyone else who is interested to play the game. The application will also benefit someone who is interested to play amateur cricket but doesn't know anyone who plays cricket, and they are willing to join any other group in their preferred locality.

Competition and Innovation

Find a Player

Find a Player is a cross platform application with motto of **find** players**, organize** games**, and play** sports. It consists of a web application, android, and iOS applications. The main market for this application is United Kingdom and Scotland.

Strengths	Weakness

1. The application is cross platform, which means that the application is accessible to a larger audience and hence will have a bigger market compared to our market. 2. The application allows the organizers to organize games and attract players to come and join them. 3. This application can also be used by sports clubs to look out for potential players for their club. 4. It allows players with similar interests and levels to connect.	1. The biggest weakness of this application is that it is currently not available to the Melbourne market. This weakness is a strength for my application as it doesn't have to compete with this established application. In this regard my application is better as it designed for Melbourne Market and caters for the need of Melbourne Consumer. 2. This application is available to a large audience, hence finding games can be a bit of hassle as demand will be huge for the available games.

GAMETREE

GAMETREE is a web application platform, where like-minded online gamers can match (like tinder) based on their preferences, play their choice of computer games. GAMETREE strives to help gamers who want to find other gamers to play with. It also allows the players to even start to start their own party (a group where other players can join if the party meets their gaming preferences).

Strengths	Weakness
1. The application makes use of machine learning to match with other gamers based on their preferences. 2. The application also allows the gamers to link their social media like Facebook and Instagram so that the matched gamers can stay connected in better way. 3. This application also provides personal game recommendations to user based on their activity.	1. Sometimes the match by ML software may not be so convincing and it would be better if the user could decide with whom they could match and play together. This makes my application better as it allows the user to select what game they want to be part of or if at all they want to select a game. 2. The application is only available as a web application. So not many people would have access to a computer. Hence my application being an iOS application will have edge at getting more audience.

Feasibility and Technology

The application will be built on iOS operating system with a dominant focus on iPhones. Some of the important frameworks, techniques and UI Elements that will be used to develop this application are explained in detail below.

1. **UI Elements:**
    1. **Text Fields**: In-order to capture important details from the users (Eg: email address, password, name, and other personal information).
    2. **Labels**: These labels will be used to identify different input fields.
    3. **Button**: Buttons are an important UI element for this application, as buttons will be used to kick-start a method or any other process.
    4. **Table View**: The Table View element will be a useful component to display all the upcoming booked games, as well as to see the list of all the playgrounds in the vicinity of the preferred pin code.
    5. **Map Kit View**: This UI element will be used to embed map interfaces into the application; this map interface will be used to show the list of grounds where the game can be held (each ground location on the map will have pin on the map). Also, this interface will be used by the users to reach the grounds instead of having to use the apple map separately to guide them to the ground's location.
    6. **Date Picker**: This element will be used to select the date and time (this date and time will the day when user would like to play the game).
    7. **Core Location Button**: This element will be used to obtain current location of the user. After obtaining the location, application will directly show the available grounds near the user instead of having the need to ask the user's location every time.

2. **Frameworks:**

    Out of the four layers of iOS architecture, the layer which will be predominantly used in the application will be CoCoa Touch. Under this layer following frameworks will be utilized.

    1. **UIKit:** This framework will power our application with basic and important features like touch-based input, and it will cover all other aspects related to user interface.
    2. **MapKit:** The MapKit framework will allow the application to embed maps directly into the view of the application and importantly it will give our application with a sense of place with maps and location information.

3. **APIs:**

    In-order to obtain the playgrounds (along with playground's information) near a location, the following dataset will be used via an API. The dataset can be relied on because the website on which data set was obtained is owned and maintained by the

City of Casey. Once dataset is obtained via an API, the application will perform a filtering operation to provide the list of the nearest playgrounds to the user, along with a brief description about the playground.
Dataset: https://data.casey.vic.gov.au/explore/dataset/playgrounds/api/

4. **Database Platform:**
   A database platform will be used to store the data related to the games which have been booked so that other users can look up and book the game if they are interested, this data can be accessed and retrieved from anywhere.

Interface Design and Storyboard Mock-ups

ACNM

WHAT A GREAT CHOICE YOU HAVE MADE!!! PLAY CRICKET WITH YOUR MATES OR FIND OTHER MATES TO PLAY WIITH. BUT FIRST WE NEED TO CREATE AN ACCOUNT OR LOGIN. PLEASE CHOOSE AN OPTION FROM BELOW

LOG IN | SIGN UP

LETS GET STARTED!!

WELCOME

Email: ONLY VALID EMAIL

Password: Enter you Password

Remeber my Email Address?

LOGIN

Don't Have Account? Create One!

SIGN UP

HELLO

Full Name: Your Fulll Legal Name

Email: Only Valid Emails

Passoword: More than 8 characters

Re-enter Passoword: More than 8 characters

Remeber my Email Address?

SIGN UP!

Your Profile

Full Name: Shakthi Prashanth Champaka

Email: shakthi@gmail.com

Password: ••••••••••

Re-Type New Password:

Save

WELCOME

You are in - Let's Play

PIN Code: ONLY VALID PIN CODE

Maximum Search Radius:

Let's Play!

OR

Go to your profile?

CLICK HERE!

Want to see you upcoming Games?

CLICK HERE!

Play Grounds

The Following Play Grounds meet your requirements. Go ahead selct your preferred Ground!!.

MKMapView

Selected Playground

PROTOTYPE CELLS

Game 1
Game Location: www.applemaps.com-clayton
Number of available spots: 6

Book Game

Table View
Prototype Content

Playground Information

The selected playground doesn't have any existing games to choose from.

Do you want to add a new game to this ground?

YES | NO

ENTER

List of Upcoming Games:

Prototype Cells

Game 1
The Game Location: www.applemaps.com-clayton. The mentioned Game's Date and Time is: 25/04/2022 at 11: AM

Game 2
The Game Location: www.applemaps.com-clayton. The mentioned Game's Date and Time is: 26/04/2022 at 11:00 AM

Game 3
The Game Location: www.applemaps.com-clayton. The mentioned Game's Date and Time is: 27/04/2022 at 12:00 PM

Game 4
The Game Location: www.applemaps.com-clayton. The mentioned Game's Date and Time is: 28/04/2022 at 3:00 PM

Game 5
The Game Location: www.applemaps.com-clayton. The mentioned Game's Date and Time is: 29/04/2022 at 5:00 PM

Table View
Prototype Content

Create A Game

Name of Game: Minimum of 6 Characters

Number of Players: <= 25

Date and Time of Game:

Fri Mar 25 2 11 AM
Today 3 12 PM
Sun Mar 27 4 13

Phone Number: Must be 10 digits

Create Game

In-addition to the interface design and storyboard provided above, the following steps will be taken to ensure Apple's Human Interface Guidelines (HIG) is followed and upheld.

Data Entry

When possible, present choices: To obtain the date and time from the user, a date picker object is used to make data entry efficient

Get information from the system whenever possible: The application will ask the user if they want their email address to be stored while logging in (Login Page). Whenever the user next logins, the email address will be prefilled.

Provide reasonable default values: Elements will be prefilled with most plausible values. For example: the date picker object in the **Create a Game** page will be initialised to current date and time to make it easier and more efficient for the user.

Enable advancement only after collecting required values: The button in a page will only proceed after all the required inputs for that page will be satisfied. For example: in the **Create a Game** page, all the required details need to be given to ensure the submit button on the page works.

Dynamically validate field values: The text fields will be checked and evaluated dynamically. For example: In the **Create a Game** page, the number of players text field will be dynamically validated to check if the number meets our requirement.

Ease navigation through value lists: The table in the List of Upcoming Games page will contain all the upcoming booked games of the user. This table will be sorted based on the earliest game being first and most late game being at the last.

Notification

Build trust by accurately representing the urgency of each notification: Relevant interruption levels will be used based on the time remaining for their next game to notify the user of their upcoming games. This will be given high priority to win the trust of the user, do that they rely on the importance of these notifications.

Use the Time Sensitive interruption level only for notifications that are relevant in the moment: Time sensitive interruption will be only used to notify the user when they have an upcoming game in <= 1 hour. For all other notifications relevant interruption levels will be adopted.

Accounts

Explain the benefits of creating an account and how to sign up. When the user launches the application for the first time, the application will provide a brief description of reasons why creating/log-in is mandatory.

Scope and Limitations

The following functionalities need to be present in the Minimum Viable Product (MVP) of the application:

1. The **Login-In** and **Sign-Up** feature are the most basic and essential. They need to be present in the MVP to create or access a user account.
2. Accessing dataset of Playgrounds via an API is a core feature needed. The plan is to pin all the locations of Playgrounds in a location selected by user in a map and embed the map into the view. In the Minimum Viable Product (MVP) it will be sufficient if all the playgrounds are showed in a table view.
3. The plan is to sort the table containing the upcoming games in the **Upcoming Games** page based on the earliest date first. But for MVP, the table just needs to contain the upcoming games without any sorting required.
4. For the MVP, the features that will be responsible for making data entry efficient and smoother are not required. For example: The dynamic validation of **Number of Players** Input is not required and hence won't be needed in the MVP
5. Also in the MVP, a clickable address feature in the **Upcoming Games page** is not required (this clickable address would open apple maps to guide the user to that specific playground). Instead of this an address will be provided and the user needs to open maps on their own and type in the address.
6. The use of database to store game information is essential as it is accessed by other users (in **Selected Playground Page**) in-order to book existing games (games created by other users).

The limitation of the application is predominantly because of the dataset obtained via API. Although the website from where the dataset is obtained is reliable, the data sometimes cannot be accessed via API if there some issues with the website. The second limitation is that the current dataset can only accommodate the playgrounds present in Australia, this means a person will be able to create a game for playgrounds present in Australia. In future if the application performs well, this feature will be extended to include playgrounds from other countries as well.

One of the other limitations is that the current dataset (obtained via API) is limited to the playgrounds in the City of Casey Council. So, the number of playgrounds available to select from is limited. This is one of the options that will be kept in mind in case of any future expansions, to include more playgrounds around Australia.

The other limitation is associated to the database. Some of our data will be stored and accessed remotely, accessing the data can be interrupted or delayed if the database is down or under DDoS attack (Directly Denial of Service).

Estimated Project Timeline

Tasks	Timeline
1. Set a standard format for naming files and variables. 2. Set up the base code with git lab and provide access to the tutor. 3. Implement the view controllers and add required UI elements for the initial, login, signup, and profile page. 4. Set constraints for the UI elements in the above-mentioned pages and create segues to link the view controllers. 5. Set up the database in the required format to store game details. 6. Setup the view controllers with UI elements and constraints for Welcome page (searching playground page). 7. To make some of the profile data persistent via the use of Core Data.	Week 5-6
1. Setup the view controllers with UI elements and constraints for Play Grounds page. 2. Set up the API to retrieve the playground dataset based on user's preference. 3. Set up a filtering system to select top 5 playgrounds near the user. 4. Embed the map into the Play Grounds View controller and pin the location of playgrounds retrieved based on user input. 5. Setup the view controllers with UI elements and constraints for Selected Playground and Playground information page.	Week 7-8
1. Link the database to the application and any games created will be from now on stored in a database and	Week 9-10

retrieved whenever a change happens. 2. Create the view controller for Create A Game, Playground Information and List of Upcoming games. 3. Make the game details of the user persistent storage. And make use of tables to show the persistent game data of the user.	
1. Work on notification. 2. Work on some NFRs like password security and storing password. 3. Enhance the quality of the product produced till now.	Week 11-12
1. Thorough testing of the application. 2. Any setbacks from previous week that needs a change can be done now. 3. If possible, deploy the application. 4. Submit the final application.	Week 13-14

References

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GameTree – Gamer Discovery Network. (n.d.). GameTree. Retrieved March 26, 2022, from https://gametree.me/

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