

WELL WRITTEN, BUT YOU'RE
NOT FOLLOWING INSTRUCTIONS.

75

I Project Description

WHERE ARE THE COVER

& INDEX PAGES?

LIST OF FIGURES & TABLES?

1 Project Overview

National Park Map ++ is a fun and interactive national park exploration mobile application that allows any visitor to be a click away from obtaining more information about the park and everything in it. The app maintains a connection with a remote database which contains all the information about the national park the user is currently in or querying about. The user will have access to information like the park general information, animals and their statistics and food regimen, land, trees, water and its statistics, trails, etc.

The application will contain multiple ways of accessing this information so that users aren't limited to a single choice for utilizing the app. The user will be able to use the application with or without location services enabled. Likewise, they will also have the option to view the layout of the national park in a flat view (2 dimensional top view), depth view (3 dimensional lateral view for displaying the precise layout), and they will also have the option to use this application through their camera lens (AR view). This gives all the users a full spectrum of options that suits their needs and desires.

2 The Purpose of the Project

2a The User Business or Background of the Project Effort

WRITE ABOUT CLIENT BUSINESS & JUSTIFICATION

This application will be most useful for national park visitors who casually visit parks and are curious about the lay of the land, or for those who love observing and learning about nature. The application gives any kind of use the ability to view more information about something in the park with a single click.

FOR
APP.

The effort of this project is to give each national park visitor a better experience during their visit by allowing them to have all the information at the tip of their fingers. Likewise, this will also give those visitors who are trying to explore the park a better experience since the application can generate a path for them to walk through so they can go through the whole park.

2b Goals of the Project

The goal of this project is so that national park data can constantly be displayed to the users, as well as collected by the users so that the data can always be updated with the latest information about the park. This will allow current, and especially, future users to have all the previous data plus all new incoming data. This can also

lead to more thorough analysis by acting on that data to capture future behavior of the animals, trees, plants, etc. Ultimately, this can serve to improve our understanding of wildlife in these environments.

2c Measurement

PROVIDE
A
METRIC.
FOLLOW
THE
DOCS.

The collection of all the national park data will be able to be stored in a parcelable fashion. This is so that we can build trends and start to understand our data and how it shapes our real-world results. It would be positive reassurance to see our business practices and community efforts translate into enhanced experiences of our attendees. As users populate our database with activity and requests. These usage statistics will provide some insight to which of our application's tools are more popular. The parameters will provide context for how our tools are being utilized. Likewise, we will be able to contrast this data with data that is collected by National parks' environmental specialists. This is so that we can assure our tools have a positive influence on organisms' wellbeing.

3 The Scope of the Work

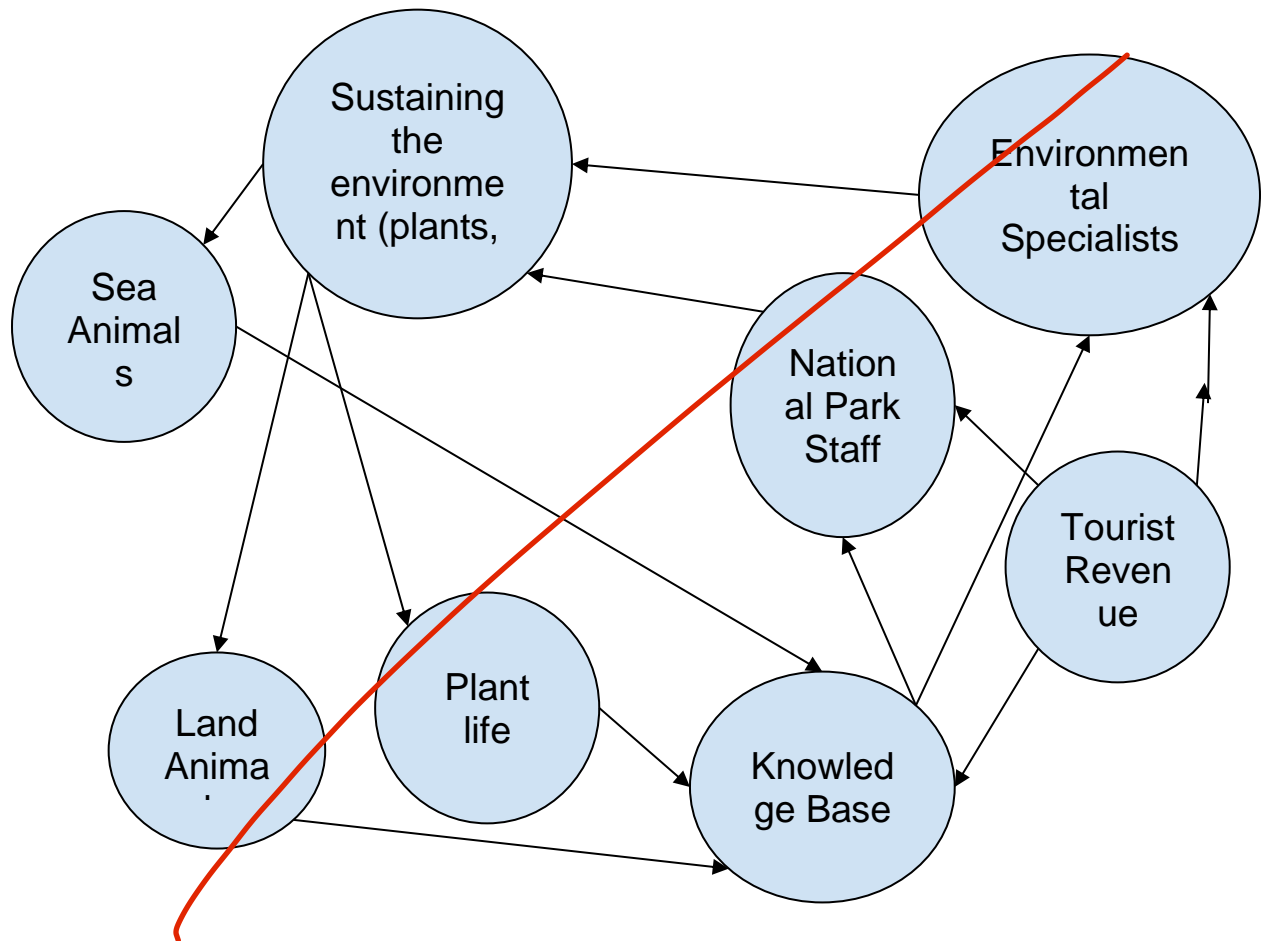
Communities are at times put in scenarios where a species needs a dedicated effort to help stimulate their procreation. There are arguments that suggest that humans have contributed to disparities in wildlife populations. This initiative would like to see a reversal of that narrative, with the goal of sustaining our world's natural inhabitants.

3a The Current Situation

There are more than likely a fair number of individuals who could navigate the National Parks without the assistance of our described companion application. Nevertheless, our application serves purposes that could benefit tourists, as well as end-users. Without the proposed application, users would be subject to paper guides and their own memory to navigate the park. In addition, the National Park themselves would have less data to work with. This long-form data can reveal trends that simple week by week, or even month by month reporting may not indicate.

3b The Context of the Work

REDO ACC- TO DOCS



3c Work Partitioning

ALL INPUTS & OUTPUTS TO BE

Event Name	Input / Output	Summary
Weather station	Weather station readings (in)	Summary
Plant life station	Check the well-being of plants. Water and supply nutrients to all key areas.	Record the health checks on all identified plants in the specified environment
Sea life station	Check the well-being of all sea life and ensure integrity of water habitat(s). Bacteria and microbes need to be kept at a consistent level.	Record the health checks on all identified sea life in the specified environment
Land life station	Check well-being of all	Record the health checks

MARKET

	land animals and ensure prosperity of their offspring. Focus on mothers and babies.	on all identified animals in the specified environment
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3d Competing Products

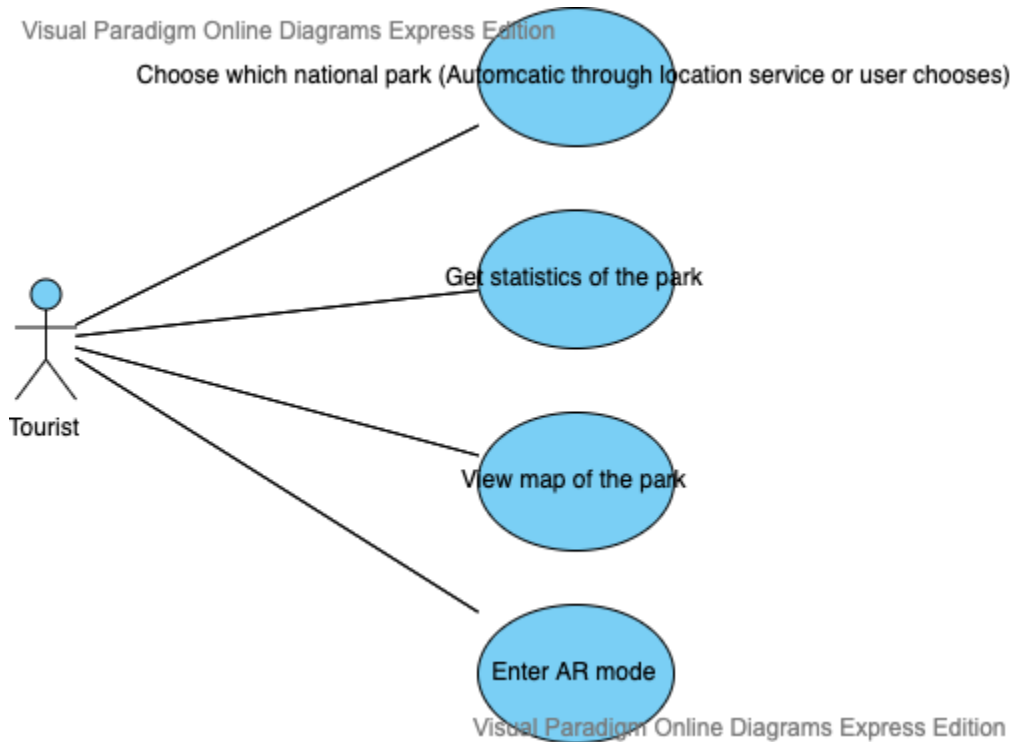
There is no industry standard for a National Park application as described above. This would require an immense amount of data and time/effort; therefore, nobody has seemingly produced a functioning solution. We would be the first ones to break through the niche. Nevertheless, if there were a competing product to ever surface, we would have already established a precedent in regard to this application. Having amassed all our historical data, we would have a strong market advantage and a credible standing in our field.

4 The Scope of the Product

The scope of the project includes all tourists of national parks. The point of this project is to create an easy to use application to view information pertaining to a specific park. The application will contain an easy to use interface; therefore, every tourist/user will be able to use the application.

The user of the application will be able to pick which park they would like to get more information on. They can either have location services enabled to make this process easier or disable the feature entirely. From there it will show a variety of statistics; such as, but not limited to, animals, trails, weather etc. On top it will also show a map of the park. The user can choose either a 2d view or a 3d view. Finally, the user will then have the option to use AR mode which will give them even more capabilities through the app.

4a Scenario Diagram(s)



ARE
THERE
NO
OTHER
USERS ?

4b Product Scenario List

- User (tourist) choosing which national park to view
- User (tourist) choosing to view statistics for the previously chosen national park
- User (tourist) choosing to view map of the park
- User (tourist) choosing to enter AR mode

4c Individual Product Scenarios

The user (tourist) begins by choosing which national park to get information on. Either through location services or automatically. The user can then choose to get statistics on that specific park which will display all the information on that specific park. Then the user can view a map of the national park. Finally, the user can choose to interact with the park in AR mode.

5 Stakeholders

5a The Client

Because we are not creating the application for a specific business, the clients are the tourists of national parks. This app enables them to get information about a specific park conveniently.

5b The Customer

The customer is also a tourist since the app is being designed for their use. The app will be tailored to their use. Such as the easy to understand interface.

5c Hands-On Users of the Product

The hands-on users are the tourists. These are primarily the people who are accessing the application and all the information it stores. The tourist will be able to access the application whenever they would like.

5d Maintenance Users and Service Technicians

The maintenance users will be the developers or others who created the app. The app needs to be available with current information regarding each park. If there is a new attraction for a specific park, the maintainers need to update the application with that data. The users then continue to maintain this information by confirming whether a specific animal, attraction etc. is actually there through the application.

5e Other Stakeholders

Software Developers: Software developers are also going to be in charge of the software architecture along with maintaining the stability of the application.

App functionalities are going to rely on all of the teams coming together to make this functional project.

Marketing needs to ensure people are aware of the application so that it is more widely used. On top of this, the more people who use the application the more accurate it will be because users are the ones who confirm whether specific data pertaining to a park is actually true when they visit per se park.

Researchers are needed to provide initial accurate information for each park. These can be the developers or others within the company.

5f User Participation

The user would be expected to use the application through the development process to listen to their concerns what they want changed, what they want implemented, what works, what does not, and any other important key features that might benefit them. The users would be allowed to talk with the developers in order to get the best system delivered to them. We plan on sending out surveys to see if they are interested in participating in a beta visit to a few parks, before the scheduled release. This will be essential in getting feedback on the user interface, and if the algorithms are helpful enough.

5g Priorities Assigned to Users

The users would be responsible to report and act to any of the actions that are not functioning properly. The workers for the park will report to their supervisors and supervisors to keep a log of any errors that are occurring in the use of the application while the user is in their park which can then be taken care of as soon as possible by the developing team.

6 Mandated Constraints

6a Solution Constraints

The product is being developed to support a fully functional application to provide to information like the park general information, animals and their statistics and food regimen, land, trees, water and its statistics, trails, etc. We need to make sure that the applications are updated recently with all the updated information otherwise the apps would be outdated. There would be an algorithm which would sync any new map updates, provide 3D views, water spots, recreational spots, and many other amenities.

The system will also need access to location and if that is not provided the application would not be able to function to its full potential. The other main requirement is space on the device since the data would be the backbone of the application it would only be fit to provide the application with all these permissions.

The algorithm will provide the users the nearest National Parks and then the users would select the one they want information on. They can also search for the National Parks and pull out information on the same.

6b Implementation Environment of the Current System

The user would have a seamless and perfect experience with full internet capabilities and having a device with these capabilities would give the users an experience which the goal of the application. As developers, we will make sure to provide as much information as possible for the emergency response teams to make the trip as safe as possible.

goes
here



6c Partner or Collaborative Applications

As developers combining functionality with different applications are an advantage when combined like for example adding a functionality of restaurants chains nearby would be a great addition to the application. Another great integration would be a compass which would make following the map easier.

6d Off-the-Shelf Software

We made this application to be a cross platform application; one can use framework like flutter, which is a Google's UI toolkit for crafting beautiful, natively compiled applications for mobile, web, and desktop from a single codebase. For using the application, the user needs either an iOS or android device and access the application. We can also use other different framework like ionic to develop the application. This is a JavaScript framework that allows for app development for cross-platform application.

6e Anticipated Workplace Environment

The devices should have an active internet connection, the application also gives 3D view of the national park hence you need to have a device with ample RAM and storage space to use the offline functionality. The device should also be a smartphone, preferably a tablet if the users want amazing experience with the application. The tablets would also be best if it was shock/crack resistant since you might drop it while in the park and you don't want to be stuck there without the application.

6f Schedule Constraints

There aren't any short-term schedule constraints since each component of the application is built together and will have them all once the product is finished. Overall, having all the components ready and base data collected, this should take no more than a year. For better data, that will eventually be collected over time. This way the full functionality can be delivered with basic data which will be expanded on as more people visit parks.

6g Budget Constraints

THE MAIN FUNDS THAT MUST BE TAKEN CARE OF IS THE CLOUD SERVICES THAT WILL BE USED FOR THE PROJECT. THIS IS PRIMARILY THE CASE FOR THE DATABASE(S) THAT WILL BE STORING ALL THE INFORMATION. THE COST TO HAVE THE DATABASE(S) CAN BE HIGH SINCE THE PROJECT WILL BE MANAGING, POTENTIALLY, A DATABASE FOR EACH NATIONAL PARK, WITHIN EACH NATIONAL PARK THERE WILL BE ANIMALS (AND STATS), LAND (AND STATS), ETC. SO, THERE WILL BE A LOT OF DATABASE SPACE TO BE PURCHASED FOR THE PROJECT. LIKewise, THE DATA MUST BE ACCESSED VERY QUICKLY SINCE EACH VISITOR WILL WANT TO HAVE THE INFORMATION ABOUT SOMETHING INSTANTLY. LIKewise, ANY SORT OF AUTOMATED MACHINE LEARNING SERVICES MAY BE REQUIRED SINCE THERE WILL BE DATA ANALYSIS HAPPENING AS THE SERVERS CONSTANTLY COLLECT DATA.

SPECIFY A
BUDGET
(IN NUMBERS)

7 Naming Conventions and Definitions

7a Definitions of Key Terms

Attendee: A person visiting the national park.

Depth View (or Lateral View): Map layout in the application that represents the layout of the national park as if you were standing on the ground and being able to see all the hills and bumps on the ground, heights of trees, depths of the water, etc.

Flat View (or Top View): Map layout in the application that represents the layout of the national park as if you were in the air looking down.

Augmented Reality (AG): Seeing the objects in front of you through the lens of your camera.

Unified Modeling Language (UML): General purpose programming diagrams used for modeling class and how they are related to each other.

Entity-Relationship Diagram (E-R Diagram): General purpose database diagrams used to show different entity sets that will be stored in the database and the relationships that each one has.

7b UML and Other Notation Used in This Document

There will be many UML diagrams that will contain information on class structures and relationships between objects. Likewise, there will be Entity-Relationship diagrams that will help encapsulate all the data being stored on the database and how they are related to one another. Every diagram used will be labeled with their proper name.

7c Data Dictionary for Any Included Models

Animal: a single living entity that lives within a national park

The database entry for an animal's dangerous level ranges from 1 to 5 which correspond to friendly to harmful respectively.

The database entry for an animal's location ranges from 1 to n where n is the number of sections the park is partitioned into and that range corresponds to a specific zone.

Tree: a single tree entity that is within the national park

The database entry for a tree contains a numeric value corresponding to the type of wood composes that tree.

8 Relevant Facts and Assumptions

8a Facts SV: Factual information relevant to the project, such as census data

The data that will initially be used is provided by public knowledge; this includes the national park locations themselves, number of visitors, map of the land, animals, etc.

Once the data is populated, then the data will start expanding and also begin to grow much more.

All the data that is collected is done through the application while visitors are using it, no data will be recorded in the background.

**THIS IS NOT
FACTUAL INFO**

8b Assumptions

User's won't be using a location spoofing 3rd party application so that they aren't skewing the data for future users. Likewise, there is the assumption that the park is in operation and not closed for the day or forever. Finally, in order to collect data, there is the assumption that the users must be connected to the internet so that new data can constantly be uploaded to the database.