National Parks Builder

Group 2: Ammar Idrees, Zaid Patel, Bryan Gutierrez, Maaz Ahmed

The idea we decided was to create a national parks builder application. This application would be a game. The objective of this game is to have a user build and run a national park. They would get to develop a national park from scratch. They would choose undeveloped land from an existing park. So for example, if they wanted to build Sequoia National Park then their location would be California. Then they would have the options of where to place certain features of the park such as benches, campsites, trees, welcome center, etc. This game also gives you exposure to how much effort goes into managing and maintaining a national park. They would be in charge of tasks such as fixing issues, ticket prices, business decisions, keeping employees happy, etc. The end goal of the game is to try to have the most visitors to your park along with the highest revenue and highest employee morale. There is a chance of your park shutting down if you don't meet certain standards. One idea we had was to implement a leaderboard where users can see how they are faring compared to other users.

The purpose of this idea is to give awareness to national parks. It's to show people how much effort and time goes into building a national park. Also it makes you aware of the organizations and agencies that are involved in the process. At the same time, we want this to be an entertaining process for the user. We want them to get excited when they log in to play this game. We hope that an application like this would encourage more users to attend national parks and be appreciative of the beauty. Furthermore, it would create an environment where people are respectful to the national parks and to the management. Our application is most useful for National Parks. This game is to help their business value increase by creating an informative and entertaining game for users. From the point of the client, they would invest in their application so they can get more funds and visitors to their national parks. We can measure this goal easily by checking monthly visitor averages and funds monthly. There should be a steady increase in numbers. Also, there should be more donations to the National Parks organizations. One idea we had was to include microtransactions and a portion of that go to the National Parks Foundation.

In the case of this application, the business involved would be the actual National parks but the work involves awareness of the struggles and difficulties that come with maintaining a safe and clean environment for all the life in a National Park. Currently, the major ways for providing awareness of complications is to view articles and online videos or visiting their website at nps.gov. The park builder will include financial struggles using a currency system for expanding or improving the park as well as natural disasters. Competing applications include games such as the Sims but there is no application quite like this one, focusing on National Parks.

The client in the case of our project can vary from private land owners of the National Parks to the different investors who are interested in the long term health and livelihood of the parks. This app should give them the opportunity to spread awareness in a form of entertainment

which should be able to adhere to the general public. Furthermore, some other stakeholders would be technology experts/testers and the strategic analysts. Both of these parties will put a large investment in time, effort, and money to be able to develop this product. These parties will be in charge of gathering analytics, and having to constantly publish new sprints which would only be worth it if the product ends up being successful. The users in this case will be a pivotal part of the process, having the ability to voice their opinions on updates or new features that they could possibly want within the game. This would be than informed to the developers who would have the positions to read and write with the application, enabling any new updates to the app.

The overall interface of the application, will be a giant map which will feature different areas of the parks. There is not a sophisticated algorithm needed, as everyone is based on action events being done at the click of a button. The user will have the ability to simply click within the screen at certain spots, to be able to service the National Park and complete the duties within the game. The game is done in a real time strategy and the majority of the gameplay will be dragging, which can be done using GUI's. The applications could utilize a widget toolkit which will be able to combine the user interface and the software. The common desktop environment to help build it would be on Microsoft Windows interface which is Metro for windows. The overall budget going into this game, may depend on how popular the marketing gets for different investors. A few non profit organizations who believe in the idea could be pivotal in the overall creation of the application.

There are some terms that should be defined to avoid any misunderstanding. "Park" is what the user will commit to building over time. The "Center" will be the main hub of the park. In the application, this will be the main source of organization for the entire map. The center will be a required building to start the game, similar to how town hall is required in Clash of Clans. "Land" will refer to the unused area around the national park. It will be limited, but any extra space can be used for a variety of units. Lastly, a "unit" is some sort of object, building, or piece of nature that the user can place on the land. These can be used to expand the national park, increase popularity, and other benefits. Any of the UMLs or notations that will be made in this project will be made based on the descriptions and diagrams throughout the project. The project will require a server for a user to work on their national park. This "user" will be the one in control of the game and as a result will contain any necessary data in order to play the game. This data includes things such as currency, overall employee morale, and average visits. There is other data that would be included as well. The currency would be an integer that updates over time depending on challenges completed, units placed, etc. The currency at a minimum would be zero and would have a max depending on the user's level. The employee morale will also contain an integer that would update depending on the user's actions. The integer will be visualized to the user as a meter. The average visits will be calculated depending on the visitors over time. It will contain multiple integers which contain the number of visitors for each day. It will also contain the number of days the user has been playing. The user will be shown the average by adding all the visitors of each day and dividing it by the number of days.