MAPi

MAPi

Author: **Sagar Patel**

Creation Date: 02/16/2018

Last Updated Date: 05/06/2018

Contents

Scope

The goal of this project is to make a website that will gather all the images from google street view and turn them into a video. A person can input their current location and their destination. Then the website will get the google map API to find the route and gather pictures of the street view and turn them into a video. The user will get a video of their entire route, which they can view in the browser or download it.

Details

Terms Clarified:

API- Application Programming Interface- is a set of routines, protocols, and tools for building software applications. Basically, an API specifies how software components should interact.

Google Map- Web mapping service offered by the Google. Instead of paper maps, this is a web-based map which has almost every location mapped of the earth.

Street View- Inside the google map, there is a feature called street view, which allows users to view and navigate streets as if they were there in real life.

Location of Images- The images are stored on a google data storage. Each image has its own identification number. This ID will be stored in our data base in order for us to get that image when the user requests it.

Petabyte- A petabyte is 10^{15} or 1,000,000,000,000,000 bytes.

  ➢ To put this into a reference, a petabyte can store a little over 13 years of high definition (HD) TV video.

VR- Virtual Reality- an artificial environment which is experienced through sensory stimuli (such as sights and sounds) provided by a computer and in which one's actions partially determine what happens in the environment.

Version 1 (V1)

The website will have a google map with its functionality of picking locations. User will pick two points on the map, either by entering the address or by putting a pin on the map itself. The website will not store any images, but it will store the location of the images. By doing so, we can quickly refer to those images and create the video. This will eliminate the need of creating a petabyte of data storage. Users will have an option to save their routes by creating an account. Our database will store their information, which can only be seen by the administrative personal.

Version 2 (V2)

The V2 will improve the algorithm of the video player so the user can view their videos fast, lag free and in high quality. The V2 will add the feature of virtual reality(VR). The user will be asked if they would like their route to be made into a video, VR or both. Then the algorithm will generate their desired format of their route. Users with an account can share their routes with other registered users to see and experience virtual reality of beautiful locations. This information will be stored in the database and only the user who shared it or a person with high enough credentials can delete it.

Actors

Version 1

- o   Guest User
- o   Registered User
- o   Administration
- o   Website interface
- o   Google Map API
- o   Hosting Company

Actors

Version 2

- o   Video Formatter system
- o   Database System
- o   Administrators
- o   VR Algorithm Team

Use Cases

1. **Current Location**
    1.1.   Click the *My Location* button and check if the map gets the current location.
    1.2.   Enter a different location in the *Current Location* field and enter the *Destination Location* in the destination field. Route should start at the typed location.
    1.3.   Enter Symbols in the location fields
2. **Entering Location**
    2.1.   Enter starting and ending location the same
    2.2.   Pick the same starting and ending location on the google map itself by clicking on the map
    2.3.   Enter locations that are too far from each other.
3. **Format Option**
    3.1.   Choose either of the three options: *VIDEO* or *VR* or *Both*
    3.2.   Try to select the unselected format option while its processing the previously selected option.
    3.3.   Click *Generate* button without selecting any of the format option.
    3.4.   Try selecting all of the format option.

4. **Create Account**
    4.1. Fill out the form with symbols.
    4.2. Enter letters in the *Phone Number* field.
    4.3. Enter wrong email address in the *Email* field.
    4.4. Enter different data types then what is asked.
    4.5. Refresh the page after entering half of the information
    4.6. Click the Submit button without entering any information
5. **Logging In**
    5.1. Click the *Log In* button without any credential.
    5.2. Enter symbols into both *Username* and *Password* field.
    5.3. Enter null for username and password
    5.4. Don't Enter anything null.
    5.5. Enter "username" in the *Username* field and password in the *Password* field.
    5.6. Enter "admin" in the *Username* and the *Password* field.
    5.7. Log in with correct login information
    5.8. Log in with incorrect login information
    5.9. Log in with an administrator's credentials
    5.10. Log in with a user's credentials
    5.11. Open multiple tabs but only log in to one of the tab. It should log you in all of the other tabs once you try to change something.
    5.12. Open multiple tabs and log in with different users, it should log you out of the previous user once you try to login with another user in the different tab.
6. **Log Out of the Account**
    6.1 Click the *MAPi* icon to go to home page. You still should be logged in.
    6.2 Close the browser and reopen it. Still should be logged in.
    6.3 Click the Log Out button. It should log you out and bring to the home page.
    6.4 Open multiple tabs but only log out of one. It should log you out of all the tabs once you try to change something.
7. **Resetting Username and Password**
    7.1 Submit the prompt without entering any information.
    7.2 Click submit with only symbols entered
    7.3 Enter different email address to see if you still receive the password or username of a different user.
8. **Sharing Route**
    8.1 Click the *Share* button to open the prompt
    8.2 Must be logged in to be able to share routes
    8.3 Don't enter a name in the prompt and hit the *Share* button. Should give an error.
    8.4 Enter emojis and other symbols to check if it accepts them. It should not.
9. **Visitor Sharing and Saving Route**
    9.1 Without logging in click, the *Share R*oute button. It should bring you to the login screen.
    9.2 Click *Save Route* button without being logged in. It should ask you to log in.

10 Viewing Saved Routes

10.1   Click *My Routes* button displayed on the top navigation bar.

10.2   Check if it opens up with that user's previously saved routes.

10.3   See if the selected route opens up the with the correct address.

10.4   Select either of the three Format option to check if it creates the asked format of the saved route.

11 View Shared Routes

11.1   Click MAPi *Routes* button on the navigation bar

11.2   Select any of the routes shown

11.3   Click the *View* button to bring up that route

11.4   Select either *Video*, *VR* or *Both* option to generate that format of the route

11.5   Click the Back arrow to go back

11.6   Click *MAPi* icon to go back to the home page
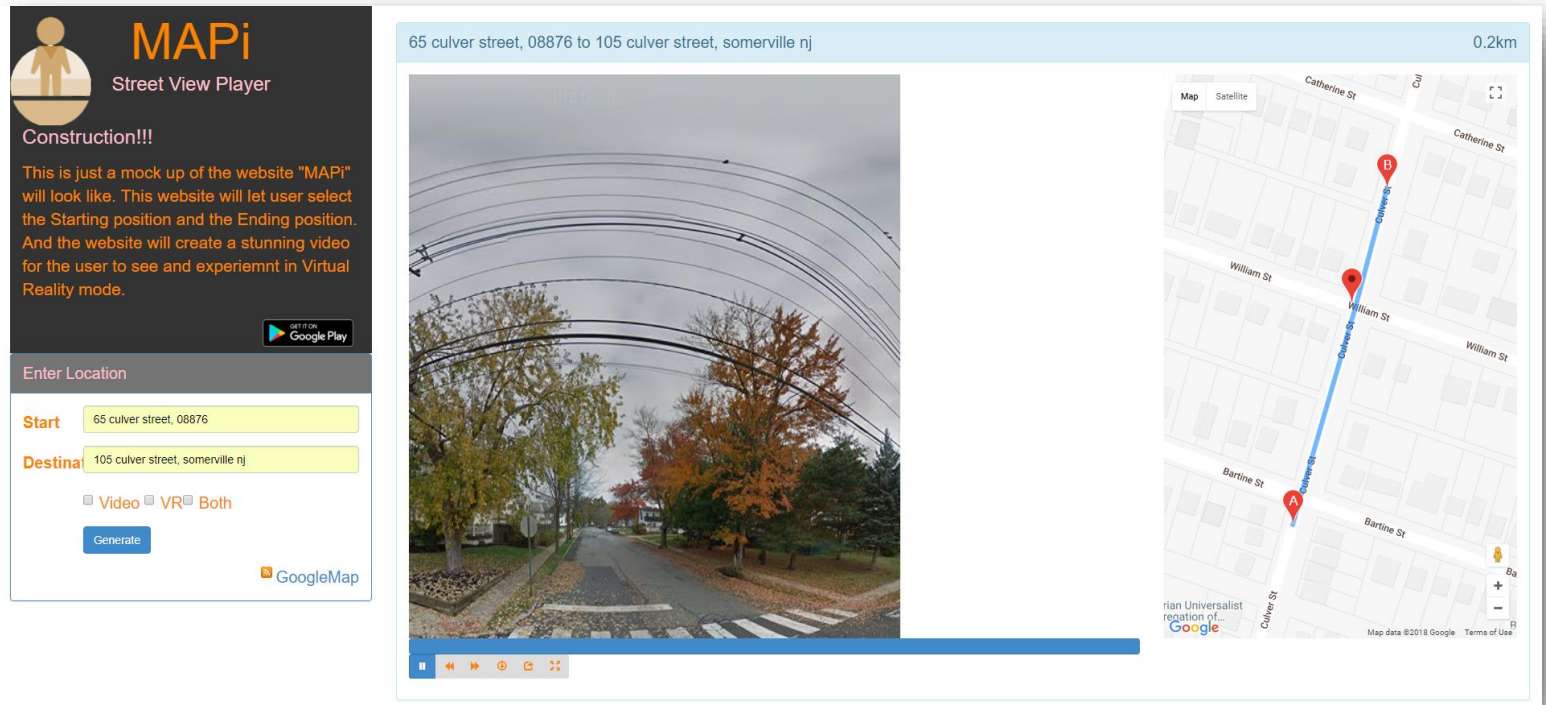
12 Test it in different systems

12.1   Open the website in different browsers.

12.2   Open the website on different smartphones.

12.3   Load the website on a slower computer with slower internet speed.

Appendix A

Section	Description	Updated By	Updated Date
Full Document	Initial creation of Document	S Patel	02/16/2018
Scope	Created Scope	S Patel	02/16/2018
Scope, Details	Reworded the Scope added more details to the detail section	S Patel	02/23/2018
Actors	Added some explanation and reworked the paragraphs to use V1/V2	S Patel	03/18/2018
Use Case	Added details of the use cases and how the website should be tested	S Patel	04/07/2018
Aesthetics	Added cover page along with contents page	S Patel	04/22/2018
Details and Grammar	Changed and added few details based on feedback	S Patel	05/01/2018
Mockup	Created a mockup of the website	S Patel	05/04/2018
Feedback	Added a feedback section of what I will not be changing from the received feedback	S Patel	05/06/2018

Mockup of the Website

Feedback

2nd person's Feedback

A reviewer told me that everything I wrote is too complicated and is too specific and has too much specs. But he also said that I shouldn't explain what petabyte is and that I don't need to explain those small words. I did not change anything he said because he didn't give me any good feedback to change to improve my work. I believe he did not know what he was talking about because he basically contradicted himself. However, I have changed the feedback given by the other two reviewers.