DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
THE UNIVERSITY OF TEXAS AT ARLINGTON

PROJECT CHARTER
CSE 4316: SENIOR DESIGN I
SPRING 2021

VOYAGER
EXPLORE TEXAS

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REVISION HISTORY

Revision	Date	Author(s)	Description
0.1	03/01/21	AY, GK, MP, NS	document creation
0.2	03/03/21	AY, GK, MP	complete draft
0.3	03/05/21	NS	section 1,2,4,7
1.0	03/07/21	NS	section 8,9,10,11,12
1.0	03/09/21	AY, GK, MP, NS	section 3,5,6,13
1.1	03/10/21	AY, GK, MP, NS	editing and review

CONTENTS

LIST OF FIGURES

-Sprint burn down chart

1 VISION

Recently, I travelled to Florida and during the process of travelling I found that there is not a free website that can help us to organize our tour. Either one has to be a premium member or take monthly membership to fully excess all the features of any travelling website. So, we want to create website which focuses on the top travelling and camping sights in Texas. A website where a person can book a hotel near his destination sight, navigate the popular restaurant and bar, share his experience and stories which ultimately helps a traveler to manage his trip in economic and planned way.

2 MISSION

Our project is focused on building a traveling website which is user friendly and accessible to everyone. The website will use the geo location tracking API service to navigate the user and notify him about the places to visit. The mission of our website is to help a customer to schedule his trip from beginning to the end by giving him detail information regarding his trip and how can he fully excess all the feature of our website. The main target of our project is to help a traveler to save his time and money.

3 SUCCESS CRITERIA

Upon completion of the system, we expect to have the following success:

- A 5-10% increase in the flow of the visitor
- Around 5-10% increase in the income for the hotels, camping sites
- Promotes public health

Within a 1 year, we expect the following success indicators to be observed:

- Additional 15-20% increase in the flow of the visitor.
- 15-20% increase in the income for the home stay,camping sites, lodge near the location

The success criteria are enumerated effects outside of the development of the solution (i.e., NOT specific project requirements) that can be observed and measured to quantify "what success looks like". The key is to focus on specific expected benefits beginning immediately after the project is delivered and projecting forward into the future. Bullet lists should be used to itemize each success criterion, and each item should have a time frame and some sort of quantifiable measurement.

One way to list the success criteria is to use lists for different time frames. Here is a short example:

Upon completion of the prototype system, we expect the following success indicators to be observed on kiosk stations implementing the new GUI software:

- A 10% reduction in operating costs
- 30% reduction in average transaction time
- 20% increase in mean time to failure (MTTF)

Within 6 months after the prototype delivery date, we expect the following success indicators to be observed:

- An additional 10% reduction in operating costs

- An additional 10% reduction in average transaction time

- An additional 5% increase in mean time to failure (MTTF)

Within 12 months after the prototype delivery date, we expect the following success indicators to be observed:

- Expansion of the system to 3 additional deployment sites

- Porting of the system to additional hardware platforms, such as Super Kiosk and Alpha Pay

- An additional 15% reduction in operating costs

4 BACKGROUND

People travel out of TEXAS to Florida, California, Oklahoma, Colorado thinking that there is not much hiking and camping near DFW area. But the truth is there are more than 45 beautiful lakes with in an hours drive from DFW. Texans are missing the beautiful things that are in front of their eyes. Moreover, talking about the traveling expenses, Texas is far more affordable and economic in compared to other states. So, a person who travels inside TEXAS can save few extra bucks which he can use in future expenses. The customer and sponsor want to work with us because out website will provide updated information about the visiting places including hotel recommendation, recreation and outdoor activities, deals, discount and prices which helps a person to travel on ease. In addition to it, the website is user friendly and accessible to everyone.

5 RELATED WORK

During our research we were able to find multiple traveling website which were available to a visitor. Some of the sites were commercially available while other were free to use. Here is a list of some similar website:
1. traveltexas.com [4]
2. txdot.gov [6]
3. tourtexas.com [3]
4. tripadvisor.com [5]
5. lonelyplanet.com [1]
6. texastraveltalk.com [2]

Our website will have amazing speciality and feature which can attract large number of customer. It can help a customer to link their their account to social media so that they can share their experiences and stories. It will give you the information regarding the important personal items that you need to carry before traveling to the destination site to save time and money. It will provide you the latest news and updates regarding the visiting site such as opening hours, price and deals and COVID 19-guidance and regulation. Therefore, these are the main features and specifications that will support our website to stand out among the crowd.

6 SYSTEM OVERVIEW

Website will open the homepage when entered into the URL address section. A designed and navigated page will be displayed in homepage with all the animations and design. Menu Section, search bar, contact us, link to social media and help section will be on the Homepage as a navigation bar. A detailed map, highly rated lake, house and current news regarding the weather will be displayed in the homepage and will also help for faster checkout.

Menu Bar will have the following navigation bar:

Tour to Texas: This Navigation will display all the information and contains the navigation tools for why visit Texas, Historical sites, State Local fair, local Foods, Videos of the some Famous place, Safety, Weather. Visit Texas will provide all the information about Texas. It will explain the information about the historic place and their importance.Historical sites will explain the and display the information about some ancient buildings, unique architecture, important places that have values related to native Texans. State local fairs will provide the details of local fair and link to buy the ticket of the fair. It will also display some picture of previous fair and their important arts. It will have a link to book reservation for upcoming fair and all the information related to the events will be in this section.

Plan Before: This section of menu will give an idea about what should you buy before leaving vacation. It will give all the information about important personal and useful items that will be needed at the lake. For example, if someone is going to Texas lake for camping, it will have suggestion to take tent, grill, clothes according to weather, insecticides or repellent.

Nearby Stores: This will have all the information about stores and gas station within the 5-10 miles radius with their name and opening hours. It will also have information about some of the useful items of the store that will needed for lake in short note by the name of the stores.For example if someone is looking for fishing baits, then there will be note by the store name where it is available.

Travel Guide: This section will have the information about the local guide if there is any available. The guide will help to provide necessary information about the places. It will also have information about the top attractions nearby and provide transportation if needed by mutual understanding.

County: It will display the local lakes and top attractions by county name. For example, if some one is in Dallas they can simply go to county navigation bar which will have the information of white rock lake, trinity river etc.

Available place: It will display the information about the available places to stay. This will be one of the important navigation bar for our website. It will help visitors to book available room nearby the lakes and parks. Some cabins available by the state park will also be available to book within this website if Texas state park will allow us to link it. A visitor can books nearby houses, camping site and tents in this section.

Fishing and Camping: This section of the menu will provide the rules and regulations for fishing and camping. Camping sites management information will be in this section. It will provide the necessary precaution before going to campsites. It will list all the available danger if there is any by the lake. For example, if there is alligators in any lake listed in the website, it will be explained in this section. Available kind of fishes will listed in this section and their limit to take home. Any kind of fishes that are unhealthy to eat will also be listed in this section.

7 ROLES & RESPONSIBILITIES

The stake holders in this project are:

1. Internal Stakeholders: Team Voyager

2. External Stakeholders: Parties affected by our Project such as a traveler, visitor, tourist and a person who uses our website.

Member	Role
Professor Chris Conly	Project Sponsor
Abhinandan Yadav	TBD
Govinda KC	TBD
Mahesh Poudyal	TBD
Nabin Shrestha	TBD

TBD: to be decided

Table1 : Internal Stakeholders

Yes, our team will maintain the product owner and scrum master for the whole project. We have decided that our group leader will be the point of contact from the sponsor and customer side.

8 COST PROPOSAL

For this Project the total budget is around 800 dollars and the sum will be provided by the University of Texas at Arlington's Computer Science and Engineering Department.

8.1 PRELIMINARY BUDGET

Below is our Preliminary Budget estimate:

Item	Cost ($)
Cloud hosting platform	$99
Domain name	$12.99
Geo location tracking API service	$100
SMS API Service	$100
SEO and Marketing	$100
Template and Theme	$100
Content and Creation	$100

Table 2: Overview of Preliminary Budget

8.2 CURRENT & PENDING SUPPORT

As of now, this project is supported by the University of Texas at Arlington's Computer Science and Engineering Department with a budget of $800.

9 FACILITIES & EQUIPMENT

No facilities or Equipment will be required for this project.

10 ASSUMPTIONS

An assumption is a belief of what you assume to be true in the future. You make assumptions based on your knowledge, experience or the information available on hand. These are anticipated events or circumstances that are expected to occur during your project's life cycle. Assumptions are supposed to be true but do not necessarily end up being true. Sometimes they may turn out to be false, which can affect your project significantly. They add risks to the project because they may or may not be true.

The following list contains critical assumptions related to the implementation and testing of the project.

- The customer needs to have reliable and updated web browser to run the website.

- The customer's device needs to have internet connection and GPS signal.

- The customer needs to allow tracking feature in the application.

- The customer's device needs to meet minimum hardware requirement.

- The customer needs to have basic skills(add, upload, search, edit and delete) to fully excess the website features.

11 CONSTRAINTS

Constraints are limitations imposed on the project, such as the limitation of cost, schedule, or resources, and you have to work within the boundaries restricted by these constraints. All projects have constraints, which are defined and identified at the beginning of the project. Constraints are outside of your control. They are imposed upon you by your client, organization, government regulations, availability of resources, etc. Occasionally, identified constraints turn out to be false. This is often beneficial to the development team, since it removes items that could potentially affect progress.This section should contain a list of at least 5 of the most critical constraints related to your project. For example:

The following list contains key constraints related to the implementation and testing of the project.

- Final prototype demonstration must be completed by August 18 2021

- Customer dissatisfaction consequences

- Customer installation site will only be accessible by development team.

- Total development costs must not exceed $800

- All data obtained from customer site must be reviewed and approved for release by the Information Security Office prior to being copied to any internet connected storage medium

12 RISKS

This section should contain a list of at least 5 of the most critical risks related to your project. Additionally, the probability of occurrence, size of loss, and risk exposure should be listed. For size of loss, express units as the number of days by which the project schedule would be delayed. For risk exposure, multiply the size of loss by the probability of occurrence to obtain the exposure in days. For example: The following high-level risk census contains identified project risks with the highest exposure. Mitigation strategies will be discussed in future planning sessions.

Risk description	Probability	Loss (days)	Exposure (days)
Availability of team members due to class and work schedule	0.50	20	10
Social distancing due to COVID 19	0.20	14	2.8
Unable to integrate the Project Feature within the given time frame	0.30	9	2.7
Finding a real world client to test the system	0.30	20	6.0
Lack of team coordination as we will be working virtually via teams	0.15	10	1.5
Health issue and other uncontrollable situations	0.15	16	2.4
Beginner level in React(JavaScript) language	0.3	30	9.0

Table 1: Overview of highest exposure project risks

13 DOCUMENTATION & REPORTING

13.1 MAJOR DOCUMENTATION DELIVERABLES

13.1.1 PROJECT CHARTER

Project Charter will be maintained and updated for each individual sprints if any changes are made to existing project charter.
Project Charter initial version delivery date: March 10, 2021.
Project Charter final version delivery date : May 12, 2021.

13.1.2 SYSTEM REQUIREMENTS SPECIFICATION

System requirements will be maintained and updated after a new specification of feature is requested by the Sponsor or customer.
System Requirements Specification initial version delivery date: late March 2021(after spring break)
System Requirement Specification final version delivery date : May 12, 2021

13.1.3 ARCHITECTURAL DESIGN SPECIFICATION

Architectural Design Specification will be maintained and updated if any changes are made in the initial Architectural Design.
Architectural Design Specification initial version delivery date: mid April, 2021
Architectural Design Specification final version delivery date: May 12, 2021

13.1.4   DETAILED DESIGN SPECIFICATION

Detail Design Specification will be maintained and updated only after getting the design changes approved by the Client or Sponsor.
Initial version delivery date: mid June, 2021
Final version delivery date: May 12, 2021

13.2   RECURRING SPRINT ITEMS

13.2.1   PRODUCT BACKLOG

Item from SRS will be added to product backlog according to the priority and the group vote. The product backlog will be maintained and shared using the GitHub.
https://github.com/nabin1996/TeamVoyage

13.2.2   SPRINT PLANNING

The sprint plan will be planned by our group members.
4 sprint plan for senior design 1
5 sprint plan for senior design 2

13.2.3   SPRINT GOAL

The Sprint Goal will be decided by the group members by following the suggestions and feedback of the customer.

13.2.4   SPRINT BACKLOG

Our group will decide which product backlog items can make their way into the sprint backlog. The product backlog will be maintained and shared via GitHub.
https://github.com/nabin1996/TeamVoyage

13.2.5   TASK BREAKDOWN

Product owner will assign the individual task in agreement with team members. Team member will document their time spent in a shared excel file.

13.2.6   SPRINT BURN DOWN CHARTS

One of the team member will be responsible for generating the burn down charts for each sprint. They will be able to access the total amount of effort expended by each individual team member from the shared excel file.

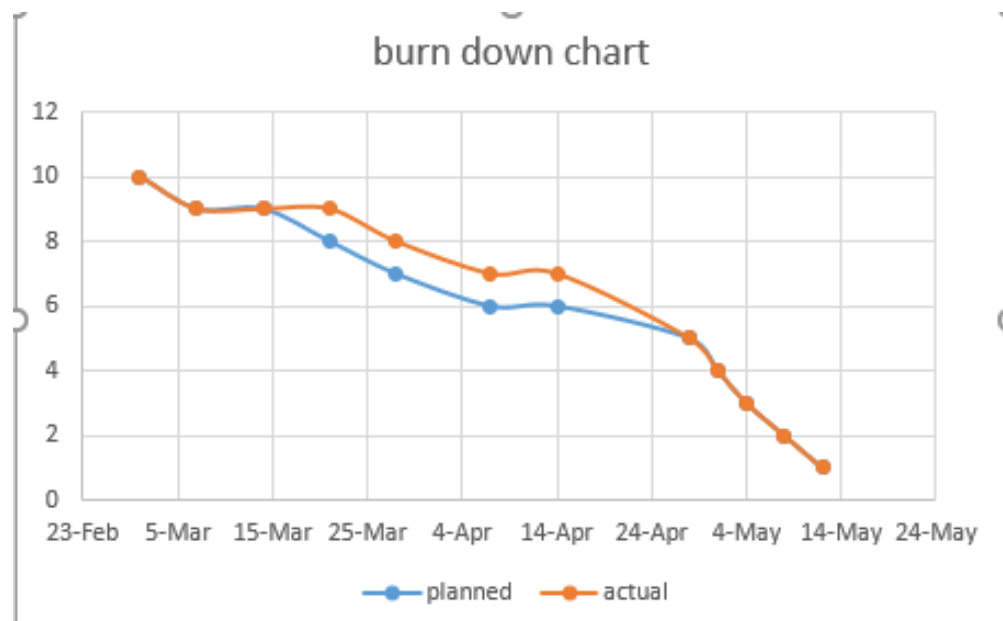### 13.2.7 Sprint Retrospective

figure: Sprint burn down chart

Our team will conduct Sprint Retrospective after each sprint is completed by each team member. The objective of the sprint retrospective is to go over the challenges and product backlog of the last sprint and plan on how to overcome the difficulties and make progress in the future sprints.

13.2.8 Individual Status Reports

The status reported will be completed, ongoing and incomplete. An individual should report a status at least once in a week. An individual will be assigned a specific task to complete through team plan and coordination with in a given time frame.

13.2.9 Engineering Notebooks

Engineering note book will be updated once in a week. Our team does not have requirement for minimum pages, but we do require the team member to note down the important point discussed in the meeting and update their individual work. Since our team is working online, we will not be able to sign of as a witness for each ENB page but our team will be updating their individual work online via teams to maintain accountability.

13.3 Closeout Materials

13.3.1 System Prototype

Project will be demonstrated online via teams by May 12, 2021.
To be decided (TBD)

13.3.2 PROJECT POSTER

Project will be delivered by May 12, 2021
To be decided (TBD)

13.3.3 WEB PAGE

The information will be updated at every Sprint of the project. Yes, it will be accessible to the public and it will be delivered by May 12, 2021

13.3.4 DEMO VIDEO

Final demo will be done in 1st week of August 2021.
To be decided (TBD)

13.3.5 SOURCE CODE

Our team member is responsible to maintain source code. GitHub will be used as a version control system. To be decided (TBD)

13.3.6 SOURCE CODE DOCUMENTATION

Final documentation will be delivered in 1st week of August 2021.
To be decided (TBD)

13.3.7 INSTALLATION SCRIPTS

To be decided (TBD)

13.3.8 USER MANUAL

Yes, the customer will be provided with a printed or digital user manual along with a short video so that a customer can fully excess all the features of the website.

REFERENCES

[1] lonelyplanet. Website. https://www.lonelyplanet.com/.

[2] texastraveltalk. Website. https://www.texastraveltalk.com/.

[3] tourtexas. Website. https://www.tourtexas.com/.

[4] traveltexas. Website. https://www.traveltexas.com/.

[5] tripadvisor. Website. https://www.tripadvisor.com/.

[6] txdot. Website. https://www.txdot.com/.