

Shawangunk Scenic Byway Project

Requirements Document

Problem

The Shawangunk Scenic Byway is being affected by a rise in tourism that will require them to adjust their local economic structure. In order to decide what needs to be done, students from SUNY New Paltz will be doing surveying so that they can get a better feel for what is happening. Our group is going to be responsible for finding a way to create and collect the survey data they will need.

Interview

We met with our client to get more information about the project and gather requirements for what we will be making. Our Questions and answers are as follows:

<u>Question</u>	<u>Answer</u>
When will you be available to do the Monday meetings?	12:30- 1PM every Monday
What is the background of the project?	SUNY New Paltz will collect data related to tourism passing through the areas and compile the data, to be used by towns/villages for tourist development. So that better solutions can be found for the need to increase taxes in the area.
What problem are we solving?	There is currently no way for the survey to be done or for the data to live in one area, so we need something to solve those problems
What does a solution to the problem look like to you?	A website (Mobile web) that will create surveys, allow for data collection, and then compile the information in a way that will allow them to prepare the proposal
What is the data that needs to be collected?	Survey answers from residents, town leadership, business owners
Do we know the sort of questions that will be asked?	Open ended, and some yes/ no

What are non-negotiables in the solution?	Needs to be scalable; Multi-Tier aggregate at levels and categories
Who will be interacting with our solution?	There will be levels of interaction for those that can read data, write data, and manipulate at any level
Who needs to see the data that the solution gathers?	The Readers (Municipal), The Surveyors, The Admins
Who needs access to the solution?	Those with cleared sign in rights. (We may make read only something you can sign up with an email for)
How often will data from the system need to be pulled?	Pretty regularly. After an interview has been saved and pushed, it should be viewable
How would you like the system to do reporting?	Not as focused on quantitative, the interviews need to be made available
How involved in the creation process would you like to be?	Update meetings, available for questions as needed
What level of security is going to be needed on the data?	Pretty high security, we don't want just anyone to be able to manipulate data
Are there language requirements? - Spanish access	Not just yet- would be nice to have but that is farther down the line
What are your overall expectations of us?	Keep open and clear communication
What are some extras that you may want to see?	The ability to audio and video record the interviews, charting ability if we get some form to what is needed- dashboard
NOTES	Our documentation needs to be on point because they won't be using this till next fall
	There will probably be cell service available, we can work as though we will have internet access

Table 2.1 User Requirements Gathering Session; Sept.4,2019

Systems Requirements

Our system will be made of a database that will house the stored data and a front-end web interface for interacting with that data. It will require sign in and have access levels to ensure that only those who need to get to the data can. There needs to be accessed to create questions, create surveys, fill surveys, and view previously filled surveys. Other

functionality to grow includes the ability to record surveys, view demographic information and other dashboarded points, and further scalability of project levels.

IT Requirements

The following has been outlined by Mike Macaluso for the technology requirements that we currently think the project has.

1. Server Platform

1.1.1 Storage Capacity we are looking at can vary but since this is a website with the capability to receive data we should use at least a 20 GB hard drive to start with.

1.1.2 Since this is a website speed is a big factor as well as response time to reaching the website and recording or viewing survey data.

1.1.3 Scalability is a point our client has already pointed out and we intend to make the project widely scalable.

1.2 Virtual System Requirements

1.2.1 We plan on supporting Windows 7, Windows 10 as well as Mac OS X and Linux because this is website based and based on the browser.

1.2.2 Number of images expected are between 1-3 depending

1.3 Connectivity

1.3.1 Network considerations are the capabilities of the router and switch we use we want to guarantee to our client that we can provide a 99% uptime.

1.3.2 Interconnection from the web server to the database server is crucial

2. Reliability

2.1 Service Level Agreements - Not too sure

2.1.1 The amount of uptime that we want to ensure is 99% of the time

3. Recoverability

3.1 We plan on having backups once a day between 9PM-12AM

3.2 Access to the backups include us and the client only just in case.

3.3 The data that doesn't need to be stored long term is login credentials after 7-14 days?

4. Security and Privacy

4.1 Database will be able to store login information and a kind of permissions to certain level individuals.

4.1.2 Behind the scenes the database will be able to update and reach information.

4.2 Account Information

We plan on saving user's username and password in the database by allowing them to register and we plan on having a type of permissions for certain users.

4.3 We plan on having Admin access controls either for the client and the ability to add new users and delete old users.

5. Maintenance

5.1 Planned down time requirements will be conducted and done in off hours after 6PM. IT will do routine maintenance maybe once a month all depending. The times of year where the systems are not available should happen during major holiday off time like Thanksgiving or Christmas.

Interface Requirements

Interface requirements are outlined in the use case diagram.

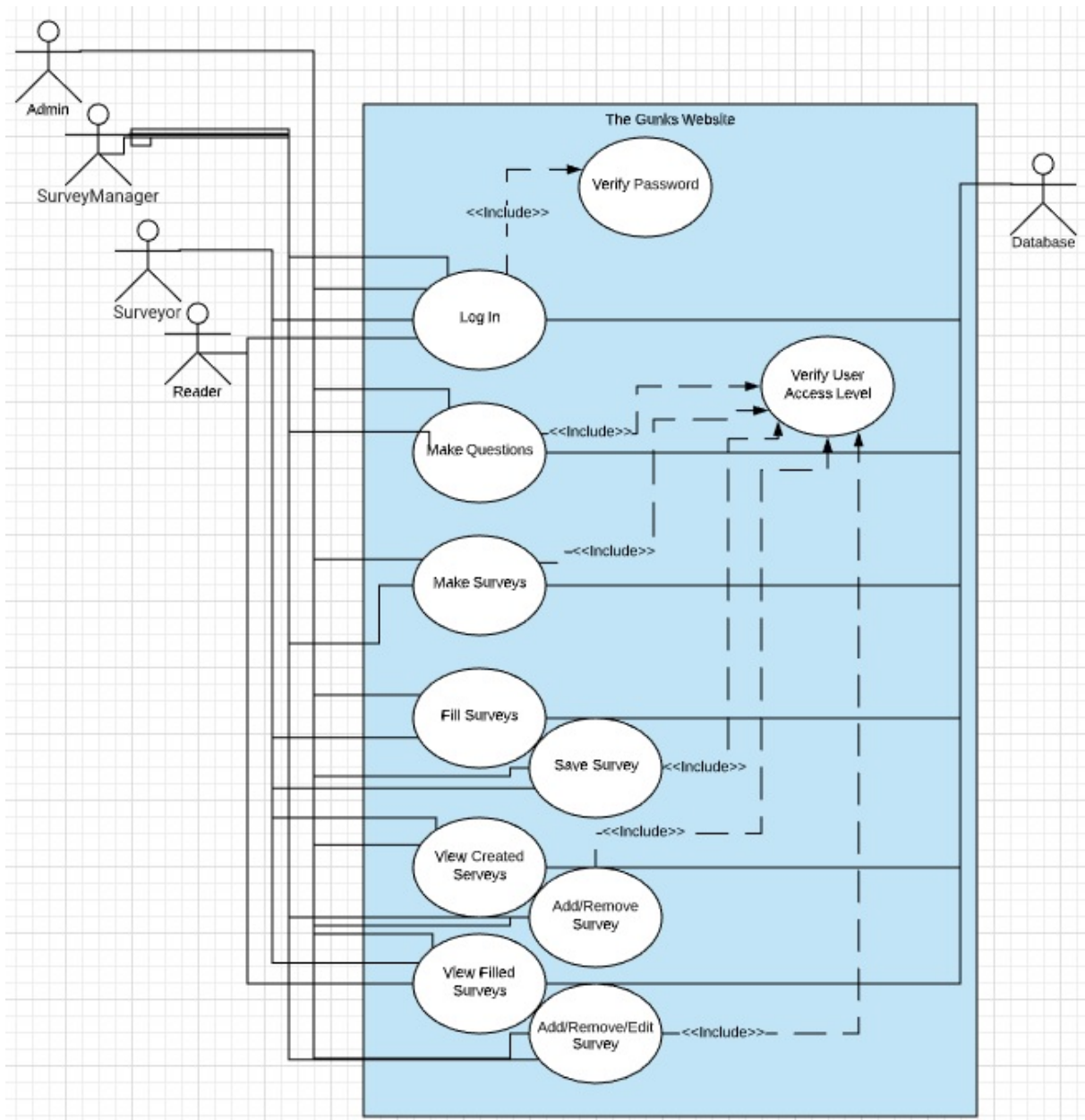


Diagram 5.1 UML Use Case Diagram

Project Constraints

While a full risk register has not yet been made, we have already identified the main places that we can see strain rising.

- Time; less gets done in the 12 weeks than we intend
- Lack of available data; we do not provide all of the features needed to gather surveys
- Database; we have to grow out our database beyond the scope that we currently see it
- Team; we run into creative differences and have to rework

Cost

There is currently no foreseen reason as to what would increase cost up to the end of the scope of our project. We are prepared to find alternative solutions before costs increase and will communicate with our client and professor should this change.

Scheduling

We have defined a schedule of meetings for the project plan that pairs with a work breakdown of the major tasks that need to be fulfilled for timely and organized completion of the project. Both of which are as follows:

Date	Milestone	Tasks	Responsible	Priority Reached
8/28/2019	Project Start; Homework 1 assigned	Form team: make introductions; inventory skill strengths and weaknesses; formulate and document initial roles and responsibilities (to be modified as needed later).	All	
8/28/2019	Project Start	Schedule 1st team meeting - and attempt to choose recurring team meeting times that work for everyone (can be established later); establish a communications plan (i.e. share emails, cell #'s, and establish how you will stay in touch)	All	
9/1/2019	Project Start	Further develop this project plan (it is part of	All	

		HW1) - THINK through your time management and what you will accomplish as the weeks progress.		
9/4/2019	Initial Client Meeting; Client Specifications	Spend time defining the project further, getting Client expectations of our team; Work with Pablo to define our comms plan fully; Homework 1 assigned	Tori	
9/6/2019	Team Meeting #1	Have met at least once by the end of the day on 9/6	All	
9/9/2019	First Client Meeting	Meet with the client to ask all of our requirements gathering questions and define the true scope of the assignment; Completion of Assignment 1	All	
9/11/2019	Breakout SMEs	Have met at least twice; Homework #1 Due; Homework #2 assigned	All	0.3
9/13/2019	Team Meeting #2	Work on Project design; Figure out our code stack	All	
9/16/2019	Second Client Meeting	Project Plan Complete	All	
9/18/2019	Breakout SMEs; Class #4	SME: "Project management and Design Tooling" By Chris A.; Homework #4 assigned; Homework #2 Due	All	1.0
9/20/2019	Team Meeting #3	Backend Definition; Database definition, How will we make the tool work offline?; Wireframes started	All	
9/23/2019	Third Client Meeting	Database Signoff	All	
9/25/2019	Breakout SMEs; Class #5	SME: "Database design" by Alan L.? Complete mock-ups (i.e. wireframes) of your user interface. Homework #3 Due	All	2.4
9/27/2019	Team Meeting #4	Front End Mockup; Update on server-side connections: what is available to connect?;	All	

		Draft IT requirements, including network design		
9/30/2019	Fourth Client Meeting	Update Client	All	
10/2/2019	Class #6	Database Systems Completed; final Project Plan, All UML diagrams/ Project Docs Complete	All	
10/4/2019	Team Meeting #5	Have connections started; Front end cuteish	All	
10/7/2019	Fifth Client Meeting	Update Client	All	
10/9/2019	Class #7	Group Work in Class	All	
10/11/2019	Team Meeting #6	Something is officially running	All	
10/14/2019	Sixth Client Meeting	Update Client	All	
10/16/2019	Mid-semester peer reviews due; Class #8	Group Work in Class; Midterm checkpoint: teams must have something running; Homework #4 Due	All	2.7
10/18/2019	Team Meeting #7	Refining our front end, new tasks for all	All	2.8
10/21/2019	Seventh Client Meeting	Update Client	All	
10/23/2019	Class #9	Group Work in Class	All	
10/25/2019	Team Meeting #8	Refining	All	
10/28/2019	Eighth Client Meeting	Update Client	All	
10/30/2019	Class #10	Group Work in Class	All	

11/1/2019	Team Meeting #8	Have a working Prototype; what features will we be Demoing	All	
11/6/2019	First Demo of Prototype; Class #11	Complete project prototype first-pass demo ready; Draft presentations due. (including final UI screenshots/demo)	All	3.0
11/13/2019	User Validation & Test plan finalized; Class #12	Test plan for all aspects of the prototype complete User validation tests to be performed by client documented; Project portfolio assigned.	All	
11/15/2019	Team Meeting	PowerPoint Creation, team presentation practice	All	5.0
11/17/2019	Client Visit	See the site in person	All	
11/20/2019	Class #13	Updates to user validation complete (as required) One key question to ask the client documented; Peer Evaluations Assigned	All	
11/25/2019	THANKSGIVING WEEK	<u>EVERYTHING POSSIBLE COMPLETE BEFORE THIS POINT!!!</u>	All	
12/2/2019	EMERGENCY WORK SESSION	In the case that we need to have more things finished; practice presentation	All	5.5
12/4/2019	FINAL PRESENTATION!	Portfolio, all documentation, video pitch, peer evaluations due.	All	
12/11/2019	Finals Week	Git er dun! -Optional Group presentation	All	

Table 8.1 Project Plan

Source	Program	Project	Priority	Task
Rivas	Project Flow	Design/Setup	0.0	Connect full team to our Project Repo
Rivas	Project	Design/Setup	0.1	Creation of UML Use Case Diagram

	Flow			
Rivas	Technical	Design/Setup	0.1	Define the full IT requirements
Rivas	Database	Design/Setup	0.3	Create the ER Diagram
Team	Front End	Design/Setup	1.0	Make a mockup of the UI
	Database	Database Foundation	1.1	Code the database
Rivas	Front End	Design/Setup	1.1	Final UI Design Review
	Technical	Database Foundation	1.2	Fully host database
	Front End	Database Connection	2.0	Create connection between front end and the database
	Front End	Coding I	2.1	Code the Question Generator
	Front End	Coding I	2.1	Code the Survey Generator
	Front End	Coding I	2.1	Code the Survey Filler
	Front End	Coding I	2.1	Code the Records Page
Tori	Project Flow	Clean Up	2.2	Review functionality of first 3 pages
	Front End	Coding II	2.3	Code the Launch Page
	Project Flow	Database Connection	2.3	Link account sign in to access levels
	Front End	Coding II	2.4	Code the Log in page
Rivas	Project Flow	Testing	2.4	Have demo of project
Team	Front End	Kinks	2.5	Write the About Page

Team	Front End	Kinks	2.5	Write the Help Page
Team	Front End	Kinks	2.5	Verify info in Help and About Pages
	Front End	Coding II	2.6	Code the About Us
	Front End	Coding II	2.6	Code the Help Page
Tori	Project Flow	Clean Up	2.7	Review functionality of last pages
	Project Flow	Clean Up	2.8	Improve design of functioning pages
Rivas	Project Flow	Testing	3.0	Have mature demo of project
Team	Database	Follow Up	4.0	Populate set of surveyor questions
	Project Flow	Connection	4.2	Domain and host site for all to access
	Front End	Nice to have	4.9	Find API to transcribe Survey Records
Client	Project Flow	Follow Up	5.0	Create system documentation
Client	Project Flow	Testing	5.0	Have working site
	Project Flow	Follow Up	5.5	Deliver Project to Client

Table 8.2 Work Breakdown Structure

Conclusion

The project, now being fully outlined, is free to proceed with a steady foundation. We will make updates, create, and have useful and real conversation with this document being the baseline for agreed work.