Team[0] - Sprint 1 Deliverables

Vision Statement

executive summary

In Troy, there are many people who love skiing and enjoying the fantastic snow-covered landscape. However, they need to go through numerous websites of skiing mountains to find the one which fits them most. It is hard for them to have an overview of the distance, price, and rating of each mountain. Besides, they also need to know the weather of each mountain to wear proper clothes and keep warm. If they have to get the weather information from the mountains' websites or search on Google one by one, it will cost a lot of time. Another problem is that people in the same group may have different skiing skill levels, they will not always ski in the same trail. Thus, it can be difficult for them to find each other after finishing skiing from different trails. Sometimes, they also have a hard time to find good tutorials to make progress on skiing.

Thus, we proposed an application which can be accessed from an iOS devices to provide comprehensive information of each mountain, including temperature, conditions of trails, price. We also provide the review forum for each mountain, the function to locate the precise location of friends to help them find each other and the skiing tutorials.

This application has a promising prospect, since the winter in the northeastern area of the United States is long, especially in the adjacent areas of Troy. During the winter, skiing undoubtedly becomes the most popular activities in this area. As we discussed in the above paragraph, people need to prepare for skiing by searching for information about the weather, ticket price, quality of the mountain and other important features that will affect the experience of skiing. With this application, they do not need to go through each mountain’s website or even to search for each feature of each mountain one by one. The comprehensive and objective information offered by our application will become a reliable guide just like the “Le Guide Michelin“ for restaurants.

Problems & Solutions

Problems	Solutions
People want to know reviews and rating of each mountain. It is hard for them to find neutral reviews.	Creat a forum to record and display customers' reviews and rating.

People want to know the nearby mountains. It is hard for them to search mountain one by one.	Locate users' location and give them the nearby mountains sorted in distance.
People want to know the weather of mountains. It is hard for them to search for the weather information one by one.	Aggregate the weather information including humidity, temperatures and weather for each mountain.
People want to find each other after finishing skiing in different trails. This can be difficult without knowing the precise location of friends.	Provide a function to show the precise location of friends.
People want to use good tutorials to improve their skiing skills. It can takes a lot of time to find good tutorials.	Provide a list of recommended tutorials catagorized by skill levels.

Elevator summary

There are many skiers in North America and the world. Sometimes, they have a hard time to find the well-organized information including distance, price, weather information and reviews of nearby mountains. And they also need good tutorials and a function to find their friends after finishing skiing from different trials. Thus, we proposed an iOS app to provide well-organized information of each mountain, show review forums, recommend tutorials based on different skill levels and help them locate their friends. Our app is promising because the target user population is large and our functions are very practical.

Business Case for the Project (including a short analysis of the competition, market space or similar commercial off the shelf software, with links)

We will face competition from the mountains' official websites and similar commercial off the shelf softwares.

Some mountains' official websites including good information of its location, the weather, and the price. If users are loyal customers of one specific mountain, they may not need to use our app to have an overview of nearby mountains. However, they still want a neutral platform to share their reviews and they also need good tutorials to improve their skills. Besides, our app can help them find their friends after coming back from different trails. Thus, our app will stand out because of these functions.

Ski Tracks https://itunes.apple.com/us/app/ski-tracks/id365724094?mt=8

This app provides information of trails including altitudes, ski vertical, maximum speed and so on. This similar commercial off the shelf software mostly focuses on the experience of users on the slope. It will record the speed, altitude, and duration of skiing. The UI of this app shows a lot of data and numbers. Although they are useful for professional skiers, they can be hard to understand for beginners. Also, this app does not provide an overview of mountains information, such as price. Thus, our app will stand out because we are accessible for beginners to find the best mountain and learn how to ski.

Trace Snow http://www.traceup.com/trace-for-snow

This application has a beautiful UI. It focuses on drawing the exact trace of skiing and provide professional information like speed, slope, and length. It can even draw the trace with the bird's-eye view of the mountains. This app will be very helpful for professional skiers.

These two apps are typical commercial off the shelf software in skiing where most of softwares emphasize trace and data. As we discussed, we can compete with them for the accessibility for beginners.

Liftopia https://downloads.tomsguide.com/Liftopia,0301-58230.html

This application provides a list of nearby mountains and coupons for the ticket. Users can indeed know what mountains are near them and save money. But there is no way to view the review and know the weather information.

For a short analysis of market space, since the winter in the north of the US is long and there are a lot of big fans of skiing in the US and the world. The target users population of our app is large. We provide an online platform for users to find mountains and for mountains to attract users.

Compared with other softwares, our app will provide extra features which are very practical since our team has strong experience in skiing, knowing exactly what skiers want and need. For example, we will provide a positioning system to help skiers find precise locations of their friends and a review system to build an amiable community. These sweet functions will help our app stand out.

Stakeholders of this Project

Stakeholders' Name	Role	Level	Reason of Interest
Eric Partridge	Team member	Developer. Take care of the whole developing process.	Designing and developing this application.
Shuze Liu	Team member	Developer. Take care of the whole developing process.	Designing and developing this application.
Haoran Hu	Team member	Developer. Take care of the whole developing process.	Designing and developing this application.
Damin Xu	Team member	Developer. Take care of the whole developing process.	Designing and developing this application.
Huiming Cheng	Team member	Developer. Take care of the whole developing process.	Designing and developing this application.
John Sturman	Project supervisor	Supervisor. Give feedback and guide of the project.	Guiding the project.
John Angel	Project supervisor	Supervisor. Give feedback and guide of the project.	Guiding the project.
Elizabeth Kyei	Project supervisor	Supervisor. Give feedback and guide of the project.	Guiding the project.

Features:

Introduction:

Users can register an account and login to add mountains to their favorites and share comments about the mountains they are/were at.

In the main menu, They can search for a mountain or get information about mountains sorted by distance. They can use the "Precise Location" feature to find their friends while skiing. Also, they can watch recommended tutorials to learn to ski. Furthermore, they can find nearby skiers to ski together and share the best moment in a forum.

For a specific mountain, they can know the distance, altitude and advanced information including, weather, price, conditions of trails and rating.

Account	Sign up	Users can use this function along with their emails to register an account to get customized service.
	Log in	Users can log in with a registered account.
	Guest Login	Users can log in as a guest without an account.
Main Menu	Search bar	A function used to search specific mountains and get information.
	Nearby mountains	Display nearby mountains on a map along with the user's current location.
	Favorites	Users can save their favorite mountains here.
	Precise location	Users can see the location of their friends on a map which will be updated timely. This will help them find their friends on different trails.
	Instructional videos	Providing some links to good tutorials catagorized by skill levels.
	Add Friends	Add friends to the current account.
	Discussion Forum	A forum provided for users to share their information.
Specific Mountain Interface	Basic Information	Name of the mountain, distance, postcode.

	Weather	A bar contained in the mountain interface, including weather, temperature.
	Price	Ticket price for the mountain.
	Condition of trails	Including the number of available trails.
	Rating	A forum which allows customers to rate and add comments for a specific mountain.

Risks in the Project

1. Software Testing

We lack experience in designing strong and complete test cases. Also, we do not have enough users to test the reliability of our software. We will try our best to develop robust software. However, potential bugs may be detected. If we do not put enough time to test our application, this risk could cause unexpected errors or the program to crash while using it.

2. Time Span

We only have one semester to develop this project. Although we have 9 sprints to develop the whole software. Time is still pretty limited. We need to work hard to ensure the quality and completeness of this project. Because of limited time, more attractive features may not be added to this software this semester. If we do not put effort to minimize this risk, it could result in incomplete implementation.

3. Communication

Since we are all full-time students and have many courses, we may have conflicts and a busy schedule. Thus, we can only have one or two meetings per week. A solution is that we are using Messenger to communicate with each other. However, online chat may inevitably cause inconvenience. This risk could result in a discrepancy in implemented functionality and increase the time needed to understand each other.

4. Lack of Experience

This is our first time to cooperate as five. We also do not have adequate experience in website development or iOS application development. Thus, we need to start everything from scratch. If we do not try to minimize this risk, it risk may cause a potential decrease in quality and delay of commitment.

5. Seasonal Application

Since our application is providing information about skiing mountains and skiing is most popular and available during the winter, the users and profit of our application will reduce during the summer. If we do not try to minimize the impact brought by the season, it may cause a potential loss of users and profit in the summer.

User Scenarios

Persona 1:

Alex is a freshman at RPI who grew up in Colorado skiing since the age of 4. When he was growing up he always went wherever his parents were going as they were the ones with a car. For getting into his dream college, his parents bought him a car and now he has the option of skiing wherever his heart desires. His parents support his life in college and hope he can have a wonderful college life. Thus, he has extra money to pursue his interest in skiing. And since this is his first year, he has free time to enjoy his college life. On Saturday morning, he wakes up and decides to invite his new roommates to ski together. There's only one problem, they don't know anything about the mountains near Troy. Also, he and his roommates have different skiing levels. Thus, they will not always stay on the same trail, rather they will ski together for a couple runs and then some may verge off to more challenging trails. Later, they will meet back up to take photos and finish the day with a couple more runs together. They want to find each other easily when skiing to ensure the safety of each other and to easily locate each other when needed.
Thus, he has 5 goals.

1. He wants to find a mountain to ski with his friends.
2. He wants to know the price of the ticket to make sure the price is affordable for students.
3. He is looking for the reviews and comments from skiers on the mountains to decide the quality of the service.
4. He needs to know the weather and the temperature to get prepared.
5. He wants an app to locate his roommates and stay connected with them while skiing.

User Scenario 1:

Alex gets information from the Student Union that we developed an application called GoSki which provides comprehensive information about skiing. Thus, he downloads GoSki and clicks the "Nearby Mountain" bar in the interface. It gives him numerous ski mountains around

him. This interface also provides a price and the distance of each mountain. He has a preference over Windham due to its price. Thus, he clicks the bar of this mountain. Upon his selection, it shows him the weather, the snow report for the day, the comments, and how much a ticket will cost him for the day. He likes the overview of this mountain and finds that today is a good day to ski. With his mind made up, he gets directions from GoSki and is on his way to a day on the slopes. While skiing, he clicks back to the menu, clicks the Precise Location and connects his account with his friends'. Now, they can find each other easily and they are free to go to different trails and meet back up at any time to take photos and ski together again.

Persona 2:

Sarah is 35-year-old married mother with one son. She just moved from Los Angeles to Albany because her workplace as her to transfer to a different location. She is a product manager of Dell. Having a promising career future, she is a middle class. She loves trying new things. For example, after she received a Bachelor of Arts in Economics at UCLA. She decided to go to a Master's program in Management at UCSD. Now, winter is coming, she wants to try skiing and enjoy the beautiful snow-covered landscape in New York. However, she has never been skiing before and knows very little about the sport. Therefore, she needs a good guide to teach her how to ski and help her decide where to go. Also, she wants to share this great moment with others.
So, she has 5 goals.

1. She needs to learn the basics of skiing by watching good tutorials online.
2. She wants to know the distance of nearby mountains.
3. She wants to review the comments and rating of each mountain to ensure a high quality of service.
4. She needs to know the weather and the temperature to get prepared.
5. She wants a forum to post her memories and pictures from her first day.

User Scenario 2:

She knows there is a great website "GoSki" from her colleagues. Thus, by checking out this website, she clicks the tutorials button on the top of the website and finds great recommendations of tutorials for beginner level skiers. Also, this website provides some interesting videos of skiing which attract her to experience the magic of skiing by herself. Then, she clicks back to the main menu and clicks near mountains. She sorts the mountains by distance since she doesn't want to waste too much time on travel. She finds that the second closest mountain, "Willard Mountain" is great with a five star rating. She clicks the bar of this mountain and enters an interface which includes weather, humidity, price, and comments. By

viewing the comments, she decides to go to this mountain right now because of the fantastic snow and trail conditions on top of the professional service offered by this mountain. She also knows that today is cold and dry from the GoSki website. Thus, she wears an overcoat to stay warm and brings two bottles of water. When she begins skiing, she uses the techniques taught in the videos and finds they are practical. She gets some excellent photos from her camera and others' phones and decides to share them in the forum of the GoSki website by clicking the "Best Moments" button on the main menu and then uploading her photos in this forum.

Project Schedule

High Level Project Schedule:

	Goals
Sprint 1 (01/28 - 02/11) (Sprint 1 Deliverables on 02/11)	Decide the website's layouts. Implement sign up and log in. Implement the function to get locations of Users. Write a document.
Sprint 2: (02/11 - 02/19)	Implement main menu of iOS application. Implement scripts to get altitude and weather information of mountains.
Sprint 3: (02/19 - 02/25)	Display mountains sorted by distance. Implement basic information and weather feature in iOS and website.
Sprint 4: (02/25 - 03/11) (Sprint 4 Deliverables on 03/11)	Implement the "Nearby Skiers" feature. Summarize and connect each other's work. Write a document.
Sprint 5: (03/11 - 03/18)	Implement the "Search" feature. Implement scripts to get conditions of trails information.
Sprint 6: (03/18 - 03/25) (Interim Release on 03/25)	Implement the "Comment Forum". Implement the "Price" features. Implement scripts to get conditions of trails information. Release a demo.
Sprint 7: (03/25 - 04/01)	Implement the "Rating" feature. Implement ability to favorite a mountain to save it
Sprint 8: (04/01 - 04/08)	Implement the "Precise Location" feature. Implement tutorial recommendation feature.
Sprint 9: (Beta Release) (04/08 - 04/15) (Beta Release on 04/15)	Implement the "Best Moments" feature. Test and release a demo.

Final Release (04/15 - 04/25) (Final Release on 04/25)	Fix bugs and do further improvement.

Features that will be included in interim release:

Account	Sign up
	Log in
Main Menu	Search bar
	Nearby mountains
	Near skiers
Specific Mountain Interface	Basic Information
	Weather
	Price
	Condition of trails

Specific Project Schedule:

	Eric	Shuze	Haoran	Damin	Huiming
Sprint 1 (01/28 - 02/11) Sprint 1 Deliverables on 02/11	Determine the user's current location.	Write documents. Connect each member.	Implement Sign up and Login Functions.	Write scripts to connect mountains' websites.	Decide the layouts of the website.
Sprint 2: (02/11 - 02/19)	Find ski mountains near users.	Design domain model, user stories.	Implement the main menu.	Get altitude, temperatures, humidity, and weather.	Finish the basic design of the website.

Sprint 3: (02/19 - 02/25)	Display mountains by sorted distance.	Design deployment diagram, use cases.	Implement the “Weather” feature.	Get altitude, temperatures, humidity and weather.	Learn how to use the Google Places API to locate the users’ locations and find nearby mountains.
Sprint 4: (02/25 - 03/11) Sprint 4 Deliverables on 03/11	Summarize and connect.	Summarize and connect.	Implement he “Near Skiers” feature. Summarize and connect.	Summarize and connect data to the database.	Learn how to make the website interact with firebase so that the users can register and post comments to the community.
Sprint 5: (03/11 - 03/18)	Implement the “Comment Forum”.	Draw diagrams.	Implement the “Search” feature.	Get conditions of trails and price information.	Implement the QR code system for the users to add friends more easily.
Sprint 6: (03/18 - 03/25) Interim Release on 03/25	Implement the “Comment Forum”.	Prepare CRC cards, design approach.	Implement the “Price” feature.	Get conditions of trails and price information.	Implement the “Forums”.
Sprint 7: (03/25 - 04/01)	Implement “Favorites” feature.	Summarize and connect.	Implement the “Rating” part.	Summarize and connect data to the database.	Summarize and connect.
Sprint 8: (04/01 - 04/08)	Implement the “Tutorial recommendation” feature.	Prepare testing documents	Implement the “Precise Location” feature.	Summarize and connect to the database.	Implement other parts.
Sprint 9: (Beta Release) (04/08 - 04/15) Beta Release on 04/15	Prepare for the demo.	Connect each part. Prepare for release.	Implement the “Best Moment” feature.	Prepare for release. Improve scripts.	Prepare for release. Finalize a demo

Final Release (04/15 - 04/25) Final Release on 04/25	Fix potential defects. Do further improvement.	Fix potential defects. Do further improvement.	Fix potential defects. Do further improvement.	Fix potential defects. Do further improvement.	Fix potential defects. Do further improvement.

Contribution Summary

Stakeholders' Name	Contributions
Eric Partridge	1. Developed the function to get users' current location based on Google Maps iOS SDK. 2. Designed a Persona.
Shuze Liu	1. Proposed part of the features we want to implement. 2. Wrote Executive Summary, Business Case, Project Stakeholders, and User Scenarios.
Haoran Hu	1. Developed GoSki framework for iOS devices. 2. Implemented Sign Up and Login functions for our app.
Damin Xu	1. Formed ideas on how to get information from mountains' websites. 2. Began to implement scripts to get the most updated information.
Huiming Chen	1. Found proper templates and structures for websites. 2. Proposed practical features we want to implement and their layouts.

Status Report

We first proposed a basic orientation that we want to develop an application which facilitates the experience of skiing. Then, by group discussion, we designed two user scenarios and propose a list of features to include in this app. Some of them are innovative and practical.

Then, we decide to develop it both as website and iOS application. We have developed sign up and login function on iOS devices with a database supported by Google. Also, we found a proper structure for the website. Furthermore, we formed ideas of writing crawler scripts to extract information from skiing mountains. Finally, we summarized everything we have done and formed a formal report.