

Weather Adventures

Project Plan

By Melodie Collins, Joey Le, Peter Nelson, Angela Pelky, Alexa Roskowski - Mar 12, 2023

Project Plan

Our group will take a dynamic approach to our team organization. Although we each have individual focuses, we will all step in and assist where we are needed. In regard to dividing work among team members, we will split work based off of focus, strength, and confidence in tasks. All tasks should be completed prior to meeting times so that meeting times may be used to ask questions, discuss findings, and identify next steps. At the end of each meeting, we will update the gantt chart and determine which tasks need to be completed by the next meeting. At this time, we will also assign who will be doing what task. Because we are a team, decisions will be addressed communally during these meetings. Please see the bullet points below for focus, team meetings, and communication.

Focus

- Activity recommendation developer, progress tracker
 - Angela will take on an organizational role and a developer role. This role will entail taking thorough and organized notes during the meeting and sending out a meeting recap via discord after each meeting that will include a synopsis of information discussed, action items for the next week, as well as the time, date, and location for the next meeting. Lastly, Angela will update the gantt chart at the end of each meeting.
 - Angela will also take on the role of activity recommendation developer. This role will entail connecting information found from the weather API, user interface, and map API to produce an outdoor activity recommendation for the user.
- Documentor, user interface
 - Melodie will be responsible for ensuring crisp documentation throughout the development process. After each module of code is marked as completed, Melodie will clean up any comments. Furthermore, for any submission, Melodie will proofread documents and submit them to the professor.
 - Melodie will also build the user interface. She will become familiarized with tkinter, so that the user can click a specified portion of the map.
- Interviewer, researcher, system connector, user interface
 - Joey will be responsible for finding and interviewing at least three people around Eugene who are interested in outdoor activities. He will schedule meetings, prepare questions, and ask team members to come and take notes during the interview. After the interview, he will prepare his findings and present them to the group. With the system, he will make sure that the knowledge acquired from the interviews will be incorporated.
 - Joey will also be a researcher. He will look into potential APIs that we might need in the near future and request approval. Other forms of research includes potential user interface strategies and ways to implement the activity recommender.
 - As each system module develops, Joey will look into ways to integrate each module into the system and have them interact with other modules.
 - Finally, Joey will work on the user interface alongside Melodie. He will become familiar with tkinter to properly format and display tkinter windows in a user-friendly way.
- Development designer, tester
 - Alexa will be responsible for developing designs for our program. She will create diagrams for the team to use as well as templates for coding to promote best coding practices.
 - Alexa will also be the designated testor before the final submission. Although we will all test as we develop, Alexa will be responsible for identifying edge cases and ensuring a thoroughly tested program gets turned in.
 - Alexa will also make room reservations in the Science Library for the team to meet in.

- Weather API developer, researcher
 - Peter will be responsible for finding and implementing an API that displays current weather data within a certain location. This API will need to continuously update as up to date information is imperative for this project. Once the API is identified, Peter will implement it. Finally, Peter will report back to the group how one might use this API if they were interacting with it.
 - Peter will also be a general researcher and identify best coding practices for the group.

Meetings and Communication

Our group will be using different types of communication throughout the project. Discord will be used to quickly communicate questions and clarifications. Text message will be used only if a team member has failed to check or answer a question posed on discord more than 24 hours before. We will also be meeting twice per week (1) In person meeting at the Science Library on Tuesdays at 6:00pm (2) Virtually, on discord at 4:00pm on Sundays to discuss ideas, next steps, and work out blockers. Lastly, a meeting recap with reminders and important dates will be sent out via discord after meetings in order to help track our progress and goals.

Discord Policies and Procedures

- Our conversations will be documented on Discord because it does not auto-delete messages. No members are allowed to delete conversations. We will only communicate in (5) different text channels:
 1. *Discussion-1*: This will be our “home” channel. In this channel, we will share ideas, identify next steps, and have general conversations.
 2. *Discussion-2*: This is a spare channel that will only be used if the team starts feeling overwhelmed by the amount of content in *Discussion-1* or if an unrelated conversation is necessary.
 3. *Questions*: Any group member will navigate to this section to pose any question. If individual questions are necessary, we will use the @ symbol followed by the individual’s name to ensure the message they know is directed toward them.
 4. *Resource-links*: This will be a channel dedicated to sharing any relevant research we have found.
 5. *Document-links*: This will be a channel dedicated to sharing any relevant document links that we have created. For example, this project plan was written on Google Docs, so the link to this document will be shared in this channel.
- Discord is a space for open and honest communication about the project materials. It is not a space to converse about personal lives. If any disrespect is displayed, immediate action will be taken.
- Team members will check Discord daily. They are expected to answer questions within two hours if the question is asked on a weekday between 10am-5pm PST. Team members will be expected to live-chat at 4:00pm every Sunday.
- Members are required to turn on “Mobile Push Notifications” which allows them to receive notifications on a phone whenever a person sends a text on Discord. This ensures members will be aware of any discussions taking place on Discord.
- During the virtual meetings all group members are expected to have their cameras on, have a stable internet connection, and to be in a quiet environment.

Meeting Schedule

Group members will meet weekly on Tuesday at 6:00pm in a Science Library Meeting room reserved by Alexa and specified in the previous meeting’s Discord recap. Meetings will also take place on Sunday via Discord at 4:00pm. All group members are expected to attend group meetings. If a member needs to be excused from a meeting, it is expected of them to communicate such with team members 24 hours in advance. All team members are responsible for completing their assigned tasks before each team meeting. Meetings will be structured:

- Previous meeting recap
- Team member process report

- Identify next steps
- If time allows, begin working on next steps / ask clarifying questions

All records of meeting notes, attendance, and next steps will be tracked. Please see the appendix for all tracked meeting notes.

Milestones

In order to successfully complete this project we need to accomplish these milestones:

**Once a milestone has been complete it will be “check marked” and “crossed off” the list*

- ☒ ~~GitHub and Discord setup — FEB 13th~~
- ☒ ~~3-Page Proposal completed — FEB 19th~~
- ☒ ~~Initial SRS/SDS/Project Plan completed — FEB 26th~~
- ☒ ~~APIs chosen and approved — MAR 2nd~~
- ☒ ~~Map images incorporated — MAR 4th~~
- ☒ ~~Weather API integrated — MAR 4th~~
- ☒ ~~Grid and activity recommender created — MAR 6th~~
- ☒ ~~All programs in the system working together — MAR 9th~~
- ☒ ~~Program is tested for any bugs — MAR 11th~~
- ☒ ~~Documentation is finalized — MAR 11th~~
- ☒ ~~Program completed and turned in — MAR 12th~~

Build Plan and Rationale

Please see the appendix for the gantt chart. The steps to build the system have been chosen in order to complete the project in a timely manner. This will allow our group to understand which tasks are critical and need to be completed first versus which tasks have room for extra time. Our plan ensures we will have room for collaboration, design modifications as necessary, as well as extra time to work out any blockers and/or bugs along the way.

Monitoring and Reporting

At the end of each meeting, we will determine what needs to be done by the next meeting and who will be doing what. We will monitor individual contributions and project progress through GitHub’s push history, electronic record of modifications to any documentation, and our gantt chart.

Meeting 1

Date: 02-13-2023

Location: Science Library

Time: 11:30 AM

Attended: Joey, Peter, Melodie, Alexa, Angela

- Meeting in-person Wednesday at 5pm (Science Library)
- Meeting Sunday at 3pm (over Discord)
- Considering Offline Maps
- Created Discord server that receives GitHub updates
- Created GitHub
- Considered looking into API for this (see in Discord server)

Meeting 2

Date: 02-15-2023

Location: Science Library

Time: 5:00 PM

Attended: Joey, Peter, Melodie, Alexa, Angela

- Platform: Desktop
- Language: Python (may need other languages for API)
- APIs: TBD (2 Minimum at the moment: weather-related and map-related)
 - Ideas: satellite images, hiking,
- Idea: Google road map with extra displays
- Notes: constantly need to update the radar - weather api instead of radar, split up in a *grid idea* - do it with different filter options
- Restrict our map to Oregon in order to build off functionality
- Two diagrams
 - 1 Software Architecture
 - Grid representation example
- Instead of radar → weather symbols
- User could click on area and get more detailed information of weather
- User could filter for certain weather (rain, wind, snow, etc.)
- Activity recommendation
- Seasonal average yields with graphical output
- Divided Initial Plan and Document Work
 - SRS: Joey and Peter
 - SDS: Alexa and Melodie
 - Project Plan: Angela

- Sent Hornof email of our group name and members

Meeting 3

Date: 2/19/2023

Location: Discord

Time: 3:00

Attended: Joey, Peter, Alexa, Melodie, Angela

- Combine each component into the initial plan
- By Tuesday
 - Work on respective components as much as possible
 - Brainstorm some APIs (Peter & Alexa)
 - Consider coding roles / Discuss individual strengths
 - Determine libraries for image display and grid (Joey)
 - Research frontend - Tkinter? (Melodie)
 - Research activity recommendations (Angela)
- Interview right after class on Monday

Meeting 4

Date: 2/21/2023

Location: Science Library

Time: 6:00 PM

Attended: Joey, Peter, Alexa, Angela

- Agreed to narrow System scope to just the city of Eugene for now
- Idea for map is to use a map image of Eugene, then put the grid, weather activities, and outdoor activities on it
 - No Map Api would be needed
 - Can expand on it if possible
- Project Plan is complete
- SDS is Halfway complete
- SRS is halfway complete
 - Agreed to make up some functions if needed for Section 3.2
- Overall, on track on getting these documents done by Thursday Night
 - No Specific time
- Activity recommender - manual input
 - Include how hard each activity is
- Idea for wind gusts will be to add an arrow displaying which direction the wind is blowing

Meeting 5

Date: 2/26/2023

Location: Discord

Time: 4:00 PM

Attended: Joey, Peter, Melodie, Angela

- Discussed SRS/SDS/Project Plan, thumbs up to submit
- Change it to Eugene to start off with, branch out to lane county then oregon
- Do we have the map yet? Ask Alexa
- Important that we figure out how big our squares are going to be - we need to nail down our long & lat – next meeting focus
- Grid module and mouse control - In the same module? Mouse could be separate
- Could have user pick between celsius km/hr and fahrenheit mi/hr
- Additional Meeting on Thursday March 2nd, 6:00 PM (In-person)

Meeting 6

Date: 3/2/2023

Location: Knight Library

Time: 6:00 PM

Attended: Joey, Peter, Melodie, Angela, Alexa

- Maybe we add in a weather forecast, so that someone knows if it is raining or not
- Light, medium, and high degrees of rain - Indoor climbing activities, meditate, fishing, focus on forest trails when trainings, mushroom huntings, bird watching, scuba diving, caving, stargazing, campfire, kite flying, frisbee golf, golf-golf, sailing, mountain biking, river rafting
- Add a warning for when it is raining and snowing
- We have the split maps, and we can overlay images
- Alexa will be responsible for connecting the program
- Tkinter message box - UI in charge of message box
- 5 Activities per button
- It is dangerous don't go outside
- Activity name, description, address, website link
- Weather returns the list, temp, avg wind speed, wind direction added to the nearest 15 degrees, and the wind path
- Clear, cloud, snow, rain
- Option to do wind vs weather
- Next steps: longitude and latitude defined, symbols and message popup, maps, getting the weather into buckets, creating a main function, create the activity recommender and json file
- An address for the activities AND long/lat

- Layer, what map we're on is an int so it's a 1 or 2

Meeting 7

Date: 3/5/23

Location: Discord

Time: 4pm

Attended: Joey, Peter, Melodie, Angela, Alexa

- String path for large, string path for small, tuple for image dim
- Angela needs, (zoom level (int), weather (str - "isClear", "isRain", or "isSnoworIce"), wind (str - "yes", "no")); will return the full dictionary of information, can change that if needed
- Want to hard code the long/lat for the buttons
- Humidity

Meeting 8

Date: 3/7/2023

Location: Science Library

Time: 6pm

Attended: Joey, Peter, Melodie, Angela, Alexa

- Alexa will send me center and I'll do the calculations
- Angela will send back an ordered recommended list based on the distance away from the center - Limit to top 5 nearest activities
- Angela needs to update the Gantt chart
- Add interviewee recommended
- Path to image add to dictionary
- Alexa - call activity / user docs
- Peter - readme / ect
- Melodie - SDS

Meeting 9

Date: 3/10/2023

Location: Discord

Time: 4pm

Attended: Joey, Peter, Melodie, Angela, Alexa

- What does our system do on a higher level? SRS - does he want the functions section?
- Team will check for typos

- Angela will alter the json to fit the need

Meeting 10

Date: 3/10/2023

Location: Science Library

Time: 12pm

Attended: Joey, Peter, Melodie, Angela, Alexa

- Create presentation
- Turn project in

GANTT CHART

PROJECT TITLE							Weather Adventures							COMPANY NAME							University of Oregon													
							DATE														02/15/2023													
WBS NUMBER	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION	PCT OF TASK COMPLETE	PHASE ONE							PHASE TWO							PHASE THREE							PHASE FOUR						
							WEEK 1							WEEK 2							WEEK 3							WEEK 4						
							M	T	W	R	F	Sa	S	M	T	W	R	F	Sa	S	M	T	W	R	F	Sa	S	M	T	W	R	F	Sa	S
1	3 Page Proposal																																	
1.1	Github Setup	Joey L	2/13/23	2/19/23	6	100%																												
1.2	Discord Setup	Joey L	2/13/23	2/13/23	0	100%																												
1.2.1	Brief SRS Concept of Operations	Joey L, Peter N	2/15/23	2/19/23	4	100%																												
1.2.2	SDS System Overview	Melodie C, Alexa R	2/15/23	2/19/23	4	100%																												
1.2.3	Project Timeline	Angela P	2/15/23	2/19/23	4	100%																												
2	Initial SRS/SDS/Project Plan																																	
2.1	Brief SRS Built Out into a Full SRS	Joey L, Peter N	2/20/23	2/26/23	6	0%																												
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2.1.2	Project Timeline build out into full project plan	Angela P	2/20/23	2/26/23	6	0%																												
3	Code Development																																	
3.1	Connect map API with program	Alexa R	2/20/23	2/26/23	6	0%																												
3.1.1	Connect weather API with program	Peter N	2/20/23	2/26/23	6	0%																												
3.1.2	Create a grid on top of map API	Joey L	2/20/23	2/26/23	6	0%																												
3.1.3	Create activity recommender matched with weather, map, and logic	Angela P	2/27/23	3/1/23	4	0%																												
3.1.4	Main program and User Interface created to connect all the programs together	Melodie C	3/2/23	3/5/23	3	0%																												
4	Testing and Deployment																																	
4.1	Thorough map API testing with other parts of program	Alexa R	3/6/23	3/8/23	2	0%																												
4.1.1	Thorough weather API testing with other parts of program	Peter N	3/6/23	3/8/23	2	0%																												
4.1.2	Thorough grid program testing with other parts of program	Joey L	3/6/23	3/8/23	2	0%																												
4.1.3	Thorough recommender testing with other parts of program	Angela P	3/6/23	3/8/23	2	0%																												
4.1.4	General overarching testing / ensuring that code is well documented	Melodie C	3/6/23	3/8/23	2	0%																												
4.2	Finalized SRS	Peter N, Joey L	3/8/23	3/11/23	3	0%																												
4.2.1	Finalized SDS	Alexa R, Melodie C	3/8/23	3/11/23	3	0%																												
4.2.2	Finalized Project Plan	Angela P	3/8/23	3/11/23	3	0%																												
4.3	Presentation Created	All Members	3/8/23	3/11/23	3	0%																												
4.4	Project Turned In	All Members	3/12/23	3/12/23	0	0%																												

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PROJECT TITLE		Weather Adventures					COMPANY NAME		University of Oregon																									
							DATE		03/02/2023																									
WBS NUMBER	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION	PCT OF TASK COMPLETE	PHASE ONE					PHASE TWO					PHASE THREE					PHASE FOUR					PHASE FIVE							
							WEEK 1					WEEK 2					WEEK 3					WEEK 4					WEEK 5							
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3.1	Connect weather API with program	Peter N	2/27/23	3/2/23	4	100%																												
3.1.1	Size the graph images for the grid	Melodie C	3/2/23	3/5/23	3	50%																												
3.1.2	Create grid logic	Joey L	3/2/23	3/5/23	3	50%																												
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4.1.1	Thorough testing	All Members	3/8/23	3/10/23	2	0%																												
4.1.2	ReadMe	Peter N	3/8/23	3/10/23	2	0%																												
4.2	Finalized SDS	MC, AR	3/8/23	3/10/23	2	0%																												
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