Michigan Technological University

College of Computing

Computer Science Department

CS3141 Team Software Project

Fall 2022

Team Software Project proposal

Section: R01

Team #: 4

Roll#	Student name	position
8	Avery Doherty	Scrum master
10	Brendan Fuhrman	Developer
9	Nicky Franklin	Developer
6	Julianna Cummings	Developer
7	River Dallas	Developer

Project name/title: Star Finder Site

Instructor name: Serein AL-Ratrout

- Project introduction and description:

The star finder website is a website that is supposed to help the user find the stars that are in the night sky. The location of a star can be found by using the user's longitude and latitude and by using a star's right ascension and declination which we conveniently have in a book. Some of the issues that we may have in doing this project are that we have to find the equations that are used to find stars and that some of our group members have not used one or more of the technologies that we will be using. The purpose of this website is to have the user be able to find where a star is located in the night sky. The motivation behind this project is that stars and astronomy are cool and we want to make it accessible for everyone as well as learn some stuff for ourselves.

- Problem statement

The problem with finding stars is that they take complex equations to find their location. To begin, a starting location is needed in which the longitude and latitude coordinates are required. With these numbers, a set of long, complex equations are needed to find the star's location in which mistakes are inevitable. This problem needs to be solved because without convenient software that can pinpoint the position of stars it is difficult for one to find them through the equations alone.

- Proposed solution:

We are going to solve this issue by creating an easily accessible website that allows the user to use their location to find specific stars in relation to the user and to teach the user how to find those stars in the night sky. the website will take in the users location and the star thay want to find and will use that information along with a database of the stars position to locate that star in relation to the user and then will tell them how to find that star in the sky and if that star can be currently found.

- Tools:

MySQL for the database; HTML, PHP and CSS for the frontend website; guide for where stars are located + where to find them depending on a person's geographic location

- Constraints and challenges:

- Lack of technical skill - not all of us have used the programming languages needed to create the website - will need to put time into learning how to use them
- Lack of time - a lot of time will be spent ensuring that the database works correctly, any issues could easily put us behind

- Lack of knowledge - not all of us know how to correctly use the equations to find the stars in the sky

➢ The expertise of the Team Members

Not everyone knows how to use mySQL + PHP, HTML, or CSS, and not everyone knows how to use the equations correctly, but with support from other members this knowledge can be developed. Those with knowledge of them are confident in their knowledge that they can help other team members learn.

References

[1] Burnett, K. (1998, May 27). RA and DEC to ALT and AZ. Stargazing Network Main Page. http://www.stargazing.net/kepler/altaz.html#twig04