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Github URL: https://github.com/courageousstrawberry/210-lab-29

Project Overview:
My project simulates sending a spacecraft on a mission to Mars, a program designed to predict the possible weather outcomes and the effects that those would cause on the spacecraft over the next 50 years. This software will illustrate the potential impact of environmental patterns on Mars and the steps that will need to be taken for a successful mission.

Implementation:
I plan to use a std::map to store and manage data related to different surface temperatures, solar distances, and rock abundance values. This map will track years in which THEMIS weather data was measured into three std::lists representing temperature, solar distance, and rock abundance. Each key in the map will have the year that the data was measured. The map's value will be an array of these three lists.

One map entry would be for the year 2023. The three lists would represent the surface temperature measured, solar distances, and rock abundance values measured in that year. Each map entry represents a different year.

Simulated events:
The simulation will focus on three events: dust storms on Mars; volcanic activity; and when the spacecraft measures new weather data. Each of these could happen at any time period and will leave effects on the planet's temperature.

Website used to gather data: https://viewer.mars.asu.edu/viewer/themis#T=0