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Databases Final Project Proposal

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       I will be creating a database that can serve as a worldwide rock-climbing guidebook. "Mountain Project" (https://www.mountainproject.com/) is a popular online guidebook that offers users all the feature of a written guidebook (climbs with grades (difficulties), star ratings, descriptions, and locations) grouped by area, along with a social aspect where users can "tick" climbs, add them to their "to-do list", and comment on climbs and areas. The database I will be implementing will allow for all the same features and will be built with a relational model that allows for data analytics. Mountain project is an amazing resource, but some statistical minded climbers may want more details than mountain project can provide, and without a public API, these climbers are stuck in the water. The goal of my project is to lay the groundwork for an application that would allow these climbers have limitless access to climbing data. Mountain project has a small route finder with few filters (only stars, pitches, and grade), but some climbers may want to find a route with comments that mention certain key words, have been done by certain climbers, are located within a certain distance of a location, or other queries that could been completed with a relational database.

       Due to the scope of this project, I will not be implementing a frontend or backend, but will have enough data in the database to show the possibilities for queries such as the ones stated above. Along with route finding queries, other statistics that my database design would allow for include things like the day of the year where the greatest number of routes were climbed (for people who added ticks), the route that is on the most to-do lists, the most popular climbs by area, or even the area in the country with the highest number of climbing routes. If time allows, I may try to web scrape mountain project to get a good chuck of data into the database, but if not will focus the data on the Adirondacks, which may be of use to local climbers. It may seem like mountain project provides all that a climber could want, but most climbers who I've talked to that use the app find themselves scrolling through comments to look for certain words like "this route is very scary (i.e., dangerous)," or comments that mention how spectacular the view is. The scariness comment hunting is specifically important for climbers without the equipment needed

for some routes, or not comfortable getting into a dangerous route, so this information is vital to keep people safe. The data is there, but it can be hard to find on the app.