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CS330 Write-up

Problem 5 was a unique problem to solve in that we couldn't approach it in the general way we've been used to programming. This was somewhat of a complex task so we had to start with some paper and map out what we would do ahead of time before implementation. We started by separating tasks and completing them in individual functions rather than forming one large function to solve the entire problem from the get go. This approach helped us stay organized and compartmentalize bugs so we could eliminate them in a much easier manner than we would if we were trying to write all of the code for the problem at once. We also took a lot of time for general discussion on how we'd implement our graph as well. We eventually decided to put together a dictionary, each node would be represented by a key and each key would have a list of lists representing the edges. Forming the connections between the individual nodes proved to be the largest challenge, and had a good amount of failed attempts until we finally were able to write working code for it. What streamlined this process though was generating our nodes in a separate function and then simply operating on them with another. While we could've solved this with one big function, compartmentalization once again streamlined the process so we could just focus individually on the edges and calculations between nodes. Implementation of Prim's algorithm was difficult as well. This was an overall challenging but satisfying experience that taught us to collaborate as our code is somewhat of a compromise between our individual approaches to the problem.