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CSE 302-01

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### Project Part 2 Problem 1

One “advanced” ADT that could be used for this dataset is a queue. Although this dataset represents a history of weather in Louisville. If this data were to be used for the next week, a queue may be a useful way of organizing it for a weather application or website. When people check the weather, they are not concerned with the history of weather. They are worried about the future weather. As each day passes, data can be dequeued to leave room for the useful data. This is assuming that the website is unconcerned with using the history of weather for later.

Another ADT that could be used for this dataset is the priority queue. One application of this would be if people are researching days that have extreme weather. Typically, extreme precipitation or temperatures do not persist for large amounts of time. Additionally, there may be critical points leading to extreme weather that are more interesting to researchers than the actual days themselves. Thus, a priority queue may keep extreme conditions more accessible. Another more practical application would be for weather stations that are meant to alert the public about weather related threats. The extreme data may be useful to have quickly accessible for analysis and to alert the public.