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Rupei Xu*, 428 Apollo Rd, Richardson, TX 75081. *Meet Erdős in Alice's Restaurant*. Preliminary report.

Alice's restaurant is the name of a popular song—you can get anything you want at Alice's Restaurant(Peter Winkler first used this term in his paper to capture the spirit of this magic property. In this paper, we study the following problems: a group of students and mathematicians are planning to meet Erdős in Alice's restaurant, each one has a graph to represent service settings, those settings are assumed to be auto-cleaned after dining, thus Alice only needs to modify one graph to be another graph to meet the next request, if Erdős tips Alice according to the total modifications, what are the bounds of total tips? If each graph modification is related to each guest's waiting time, what are the bounds of total waiting time? If Erdős has a problem list, each guest has a subset of the problem list, how to schedule the guests to cover Erdős' problem list more cost-friendly? Those problems are not only interesting by the story presentation, surprisingly, but they can also capture the combinatorial natures of some important applications in the reconfigurable network, data center scheduling, and 5G network function mapping, etc. This paper aims to provide more insights into those problems by the study of their mathematical properties. (Received February 16, 2021)