Statement of the problem. In this study, airports terminal buildings, the capacity of the airport terminal buildings, and the factors affected the capacity were searched. It was determined that the airport terminal building may vary and their spatial functions affect all airport functions. It was observed that any positive/negative change in the functions of terminal buildings affected the operation of terminal building. Method: A program was developed as a result of observations and studies while investigating the airport terminal buildings. Applicable regulations and the factors which negatively affect the capacity of the terminal, with improvements on the total capacity of the system were investigated.

Results. As a result of analysis with developed software, a different and theoretical perspective was developed to capacity calculation methods developed according to international standards referring to capacity accounts in the literature. With developed software, can calculate and be detailed necessary lower limits should be allowed variables to target the volume and capacity, new and different functioned terminal buildings were designed.

Conclusions. These terminal buildings just designed were evaluated by developed software and owing to that the most suitable designing method found as spatial and functional for the airport terminal buildings.