**Technical Design Document**

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**Program Description**: This program is designed to sell tickets and keep track of the remaining tickets and the number of buyers after each purchase. Also, it prevents buyers from purchasing more than 4 and the remaining tickets.

**Functions, parameter and Variables**: In this program, I used two functions as required. The first function, buying\_tickets, allows each buyer to request tickets and takes tickets\_left as an argument (parameter). This way, the function knows how many tickets remain before processing any purchase. Inside the function, the variable tickets\_needed stores the number of tickets the buyer intends to purchase.

The other function is the main function that controls the overall ticket-selling process. It initializes the total number of tickets “ tickets\_left” and a counter “buyer” to keep track of how many buyers have purchased tickets. The function uses also a while loop to repeatedly call “ buying\_tickets” for each buyer until all tickets are sold. After each successful purchase, it updates the remaining tickets and the buyer count. Once all tickets are sold, it displays the total number of buyers and a message indicating that ticket sales have ended. Inside this function, another local variable “tickets\_bought” is also used to validate the number of tickets the buyer has purchased.