```
void **arrival**(void)  /* Arrival event function. */
{
        float delay;
        /* Schedule next arrival. */
        time_next_event[1] = sim_time + expon(mean_interarrival);
        /* Check to see whether server is busy. */
        if (server_status == BUSY)
        {
                /* Server is busy, so increment number of customers in queue. */
                ++num_in_q;
                /* Check to see whether an overflow condition exists. */
                if (num_in_q > Q_LIMIT)
                {
                        /* The queue has overflowed, so stop the simulation. */
                        fprintf(outfile, “\nOverflow of the array time_arrival at”);
                        fprintf(outfile, ” time %f”, sim_time);
                        exit(2);
                }
                /* There is still room in the queue, so store the time of arrival of the arriving customer at the (new)
                end of time_arrival. */
                time_arrival[num_in_q] = sim_time;
        } else {
                /* Server is idle, so arriving customer has a delay of zero. (The following two statements are for
                program clarity and do not affect the results of the simulation.) */
                delay = 0.0;
                total_of_delays += delay;
                /* Increment the number of customers delayed, and make server busy. */
                ++num_custs_delayed;
                server_status = BUSY;
                /* Schedule a departure (service completion). */
                time_next_event[2] = sim_time + expon(mean_service);
        }
}
```