

Problem Understanding:

The goal of this assignment was to develop a simple yet functional visa token management system that simulates a real-world scenario of managing visa applicants at an embassy or visa office. The system must be able to issue tokens for four different visa types—Tourist (TR), Medical (MED), Business (BS), and Government Officials (GO). Each category is limited to 25 applicants per day, and the total number of applicants cannot exceed 100.

Once tokens are issued, four counters are assigned to serve applicants. Each counter specializes in one type of visa but should also serve applicants from other categories if its primary type is not available. The entire process should conclude with a detailed summary report showing how many applicants were served per visa type and by each counter.

Data Structure Concepts Used:

Structures:

I defined two structures—Applicant to store information about each visa applicant, and Counter to store service-related statistics for each counter. Using structs allowed me to manage and access related data conveniently and with clarity.

Arrays:

Arrays were used to store both applicants and counters. Since the maximum number of entries is fixed (100 applicants, 4 counters), static arrays were ideal in terms of memory efficiency and simplicity.

Challenges Faced:

- **Input Handling:**
Managing different user inputs and ensuring accurate token assignment required careful condition handling and validation.
- **Serving Logic:**
Making sure each counter prioritized its designated visa type first and only served others when none were available was a bit tricky and involved proper flagging and sequencing.

