# Airport Operation Simulation

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## Objectives

1.

Passengers should go through the procedures which take place after the passenger enters the airport.

2

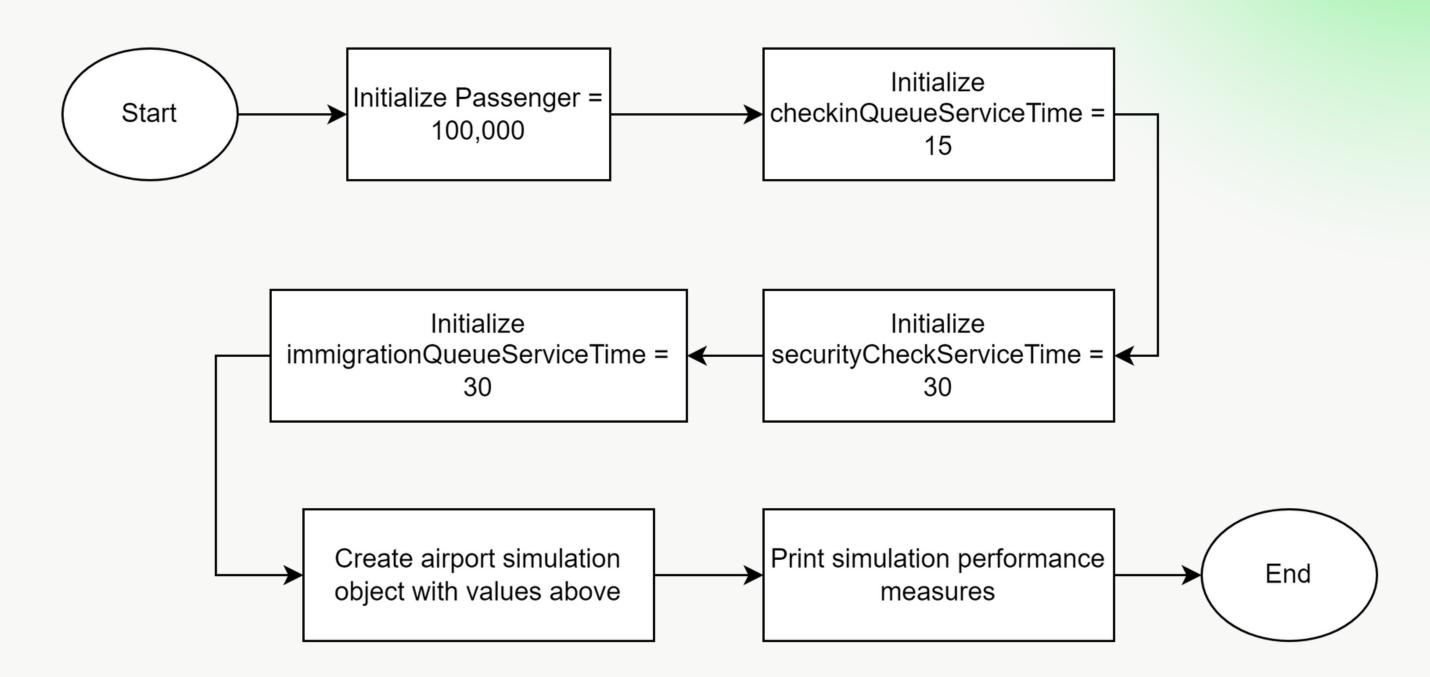
To simulate the procedures as close to reality as possible in terms of its flow and behavior.

3.

To identify any areas which maybe improved after testing out the simulation.

### Flowchart

#### **Program flowchart**



#### Made with Visual Paradigm For non-commercial use Initialize yariable number of for number of Start passengers. passangers Create queues for Add to Setrandom Checkin Queue, Create passenger security check immigration SecurityCheckQueue, object queue wait time queue Immigration Queue Set random Add to list of Create list of Add to security. check in queue passangers check quade passengers wait time. Setrandom Add to Check In Increment Lby 1 Initialize i = 0immigration queue queue watt time

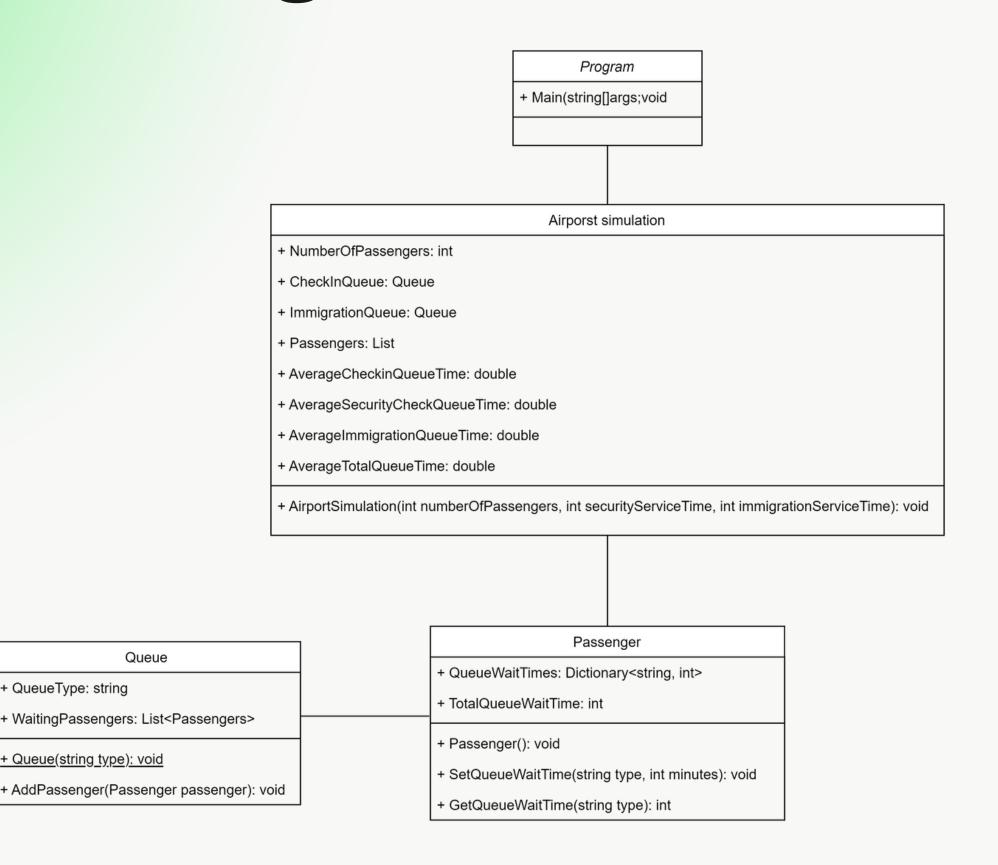
#### **Simulation Flowchart**

## UML Class Diagram

Queue

+ QueueType: string

+ Queue(string type): void



# Code Review

## Demo

## Improvements

- 1. Smart Queue Tech: Introduce smart systems using sensors and data to adjust security lane openings in real-time based on passenger flow. This ensures efficient resource use, minimizing wait times.
- 2.Pre-Check & Biometrics: Implement pre-check procedures and biometric tech (facial recognition, fingerprints) to speed up security checks. Passengers submit info beforehand, expediting the process and enhancing overall security.
- 3. Mobile Apps & Kiosks: Promote mobile check-in, self-service kiosks, and mobile boarding passes. This reduces reliance on traditional counters, making check-in and boarding quicker for passengers while optimizing staff resources.

## Thank You