

AIRPORT MANAGEMENT SYSTEM

DAMG6210 - PROJECT GROUP 2

BACKGROUND:

Airports must ensure seamless daily flight operations, passenger handling, and resource management. Airlines ground handling services and airport authorities must coordinate to manage flight schedules, passenger check-ins, and gate assignments. Each operation must be carefully tracked, and data must be accurately stored and accessed in real-time. Our detailed, centralized **Airport Management System (AMS)** will allow efficient coordination between different departments, including airlines, ground services, and baggage handling. This system provides real-time data that helps optimize gate assignments, track flight delays, and handle passengers efficiently.

SCOPE:

Flight Management

Managing flights involves organizing arrivals and departures, assigning gates according to aircraft requirements, and coordinating runway usage for safe operations. It provides real-time updates on flight changes and ensures smooth communication with air traffic controllers and airlines. In case of disruptions or emergencies, the system facilitates rapid responses and coordination with relevant authorities to maintain operational flow.

Passenger Management

This component ensures a streamlined experience for passengers, covering check-in and boarding. It connects with airline systems for automated check-in and provides timely flight information while managing queues efficiently. The system also offers support for passengers, helping them navigate their journey, especially when they need to catch connecting flights, by offering real-time guidance and notifications.

Baggage Handling

Baggage handling encompasses tracking luggage from the point of check-in to final retrieval. It uses automated systems to ensure luggage is directed to the right flights and provides real-time updates, especially for passengers with connecting flights.

Resource Management

Resource management focuses on the effective use of airport facilities and equipment, such as gates, terminals, and ground vehicles, according to flight schedules and passenger flow.

FUTURE ENHANCEMENTS:

Parking Slot

Integrating a parking system will allow passengers to reserve spots in advance, provide real-time availability updates, and streamline traffic flow around the airport.

Security assignments

Automating security staff assignments based on real-time data will improve personnel allocation, enhance incident response, and strengthen overall airport security.