Mini Project 1 (MP1)

Zeki Karamuk 22496

**1. Daily Transactions**

**A) Acibadem:**

- Patients schedules doctor appointments.

- Patients can filter and list specialists based on their degrees or areas of expertise

- Online payment for services such as lab testing, hospital stays.

- Patients can access the health report details and monitor laboratory tests and previous illnesses.

- Using portals to communicate with specialists.

- Doctors can update and track the medical history of patient and also construct and update their health cards.

**B) THY:**

- Passangers can make reservation, cancellation, modification and also payments for their flights.

- Passangers can list and find the optimal flight by filtering flights.

- Passangers can do create a boarding pass and check in.

- Passanger can obtaining details about flight's overall status, including duration, route, and current position.

**C) Hilton:**

- Visitors can make reservations, changes, and cancellations for rooms and events.

- By listing and filtering rooms visitors can find optimal room.

- Online payments are accepted for both reservations and extra services.

- Making requests for amenities and housekeeping services.

**2. Data Stored in the Databases**

**A) Common Data**

- Personal informations: name, birth date, phone number, address, email.

- Users login information such as their username and password.

- The user role information can be stored.

- Payment informations: method, status, date, and amount.

**B) Acibadem Data**

- Doctor appointment details: doctor name, appointment date, location, service type.

- Patient health card informations: patient's medical history, allergies, operations.

- Patient's specific details: blood type, gender, age, name.

- Medical history of patient: disease name, treatment method of ilness.

- Doctor details: name, phone number,mail, specialty

- The results of lab tests done for the patient data:test name, test date.

**C) THY Data**

- Passanger's private details: passport number, Gender, birth date, nationality.

- Booking details: flight number, booking date, seat number.

- Travel history: flight routes, destinations.

- Flight informations: flight number, departure time,arrival time,flight duration,aircraft type.

- Visa informations: visa number, visa type, expiry date.

- Check in informations: booking ID, boarding pass number, seat number.

**D) Hilton Data:**

- Guests private details:name, phone number, and email address, may be stored.

- Guest's reservation details: booking date, check-in and check-out dates, and payment status

- Booking available rooms: room number, room type

- Guest's stay history: rooms booked, stay duration

- Events booked by guests can be stored.

**3.Expected Reports and Queries**

**A) Common**

- Total Revenue Report: We can monitor total revenue generated by each service, financial performance of the firm can be seen.

- Peak Time Usage Report: With looking at the bookings and identifying high demanding periods or services, we can optimize resource allocation such as staff needed, flight schedules.

- Rezervations Report: We can track the total number of rezervations done, cancelled or updated and we can track the rezervations between two specified dates.

- Payment Method Report: By analyzing it, we can assess which methods are more cost-effective for the business.

**B) Acibadem**

- Appointment Load Report: We can identify which doctors and departments are highly demanded in which hours we can optimize the staffs and reduce the waiting times for patients.

- Doctor Performance Report: We can monitor the workload distribution and performance.

- Lab Test Report: Patient can see all test results by specifing the dates.

**C) THY**

- Delay Report: This report shows the most frequently delayed flights and by analyzing report potential causes can be determined.

- Online Check-In Report: With this report, resource and staff optimization and allocation can be done.

- Flight Occupancy and Revenue: By analyzing each routes occupancy and revenue resource allocation and scheduling can be planned.

**D. Hilton**

- Revenue From Addittional Services Report: The report shows how much addittional services contribute the total revenue.

- Guest Stay History Report: To identify frequent guests in the hotel.

- Occupancy and Revenue per Room Type: We can identify and track the most liked rooms.

**4. Business Constraints on Data Storage**

**A) Common**

-Legal Constraint: Sensitive person informations such as personal details, medical information or payment details must follow government rules.

-Security Constraint: Sensitive informations must stored encrypted: password, credit card number.

**B) Acibadem**

- Appointments can only be made during available times to prevent scheduling conflicts.

- To ensure confidentiality, sensitive patient records are only accessible by authorized individuals.

- For giving the best treatment, patient’s records must include whole medical history.

**C) THY**

- It is possible to overbook flights to maximize revenue and occupancy while preventing capacity overruns.

- If there is cancellations or modifications requests than customer has to obey policies specified which includes fees and deadlines.

- if there is capacity, higher class upgrades can be done.

- Valid passport and visa are needed for rezervations abroad.

**D) Hilton**

- The number of rooms that can be reserved cannot exceed the number of rooms that are available in order to avoid overbooking.

- Room prices can change based on demand to maximize revenue.

**5. Advantage via Information Systems:**

**A) Common**

- Customer Retention and satisfaction

- Revenue increasing

- Optimized service with lower cost or staff.

**B) Acıbadem:**

- Better the optimization of doctors schedules wait times will be reduce and patients will get better service.

- Based on the persons medical records personalized treatment programs will be applied and patient satisfaction will increase.

- Patients will access datas easily such as test datas or radiology images.

**C) THY**

- Revenue is maximized by modifying ticket costs with respect to demand.

- Easy reservations and check-ins which reduces wait time in airport.

- Delays and operating expenses are decreased with predictive maintenance.

**D) Hilton**

- Guest pleasure is increased with personalized room choices.

- Revenue is maximized by updating hotel prices with respect to demand.

- Wait times are decreased with digital check-ins.