CHS – team 15

Cairo University

Faculty of Engineering

Computer Engineering Department

CMPN202

Introduction to Database Systems

Railway Management System

ER Diagram Report

Team Number: 15

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**Problem Definition:**

**Users:**

1. Passengers
2. Maintenance employees
3. Managers

**Privileges:**

**Passengers**

1. Book a trip between two stations
2. Cancel a booked trip
3. Change a booked trip
4. View booked trips information
5. View previous trips
6. View available trips
7. Search for a specific trip
8. View train information
9. Feedback a trip

**Maintenance employees**

1. View available spare parts in inventory
2. Decrease the quantity of spare parts in inventory
3. Request more spare parts from managers
4. View maintenance date of trains from train table
5. Change maintenance date of trains from train table

**Managers**

1. Add/remove trip between two stations
2. Hire/fire employee
3. Update employee’s data
4. Change train’s stations
5. View trains schedule
6. Add/remove suppliers
7. Approve/reject spare part orders
8. Calculate employee’s total salaries

**Entities:**

* + - 1. Maintenance Employees
      2. Managers
      3. Passengers
      4. Stations
      5. Trains
      6. Trips Timetable
      7. Inventory (Spare part number, quantity, …)
      8. Suppliers (Suppliers of spare parts)
      9. Feedback

**Relationships:**

1. Bookings
2. Feedbacks\_of
3. Requests (Spare part orders)

**ER Diagram:**

1. **Entities and Relationships:**
2. **Attributes of each entity:**