**Central Travel Agencies Management System**

***1.Designing (Entity Relationship) ER Diagram***

**Step-1: Identify the Entities Required**

There is a central management system for travel **Agencies**. Each agency will have a **Director**. Agencies will have many **Branches**. Travel agencies will have many **Agents**. Every travel agency will offer various travel **Packages**. Each package will have **Package info**. Each package will also have a **Tour\_group**. Travel agencies will assign a tour **Guides** for each tour group. **Customers** will buy packages. They will do **Payment** to buy packages. Travel agencies will book any **transportation** for safely reach the customers to the travel place. Travel agencies will also book **Hotel** for the rest and refreshment of customers. After finishing the tour, customers can review **packages** and **agencies**.

**Step-2: Identify the Attributes and Primary key for each Entity**

1. agencies (agency\_id, name, head\_office, location, hotline, email)
2. director (director\_id, name, contact, email)
3. branches (branch\_id, name, address, contact)
4. agents (agents\_id, name, contact, email)
5. packages (package\_id, name, destination, cost)
6. package\_info (info\_id, starting\_point, duration, description)
7. tour\_group (group\_id, name, descriptions, max\_members)
8. guides (guide\_id, name, phone, email, experiences)
9. customers (customer\_id, name, address, contact, email)
10. payment (payment\_id, amount, method, date, references)
11. transportation (transport\_id, company\_name, type, starting point, destination, hotline)
12. hotel (hotle\_id, name, manager, contact, address, email)

**Step-3: Identify the Relationship needed**

1. directors -controls-agencies
2. agencies-establishes-branches
3. agencies-assigns-agents
4. agencies-offers-packages
5. packages-includes-package\_info
6. package\_info-includes-transportation
7. package\_info-includes-hotel
8. packages-has- tour\_group
9. guides-leades-tour\_group
10. customers-chooses-packages
11. customers-completes -payment
12. customers-reviews-packages
13. customers-reviews-agencies

**Step-4: Draw the ERD Diagram**

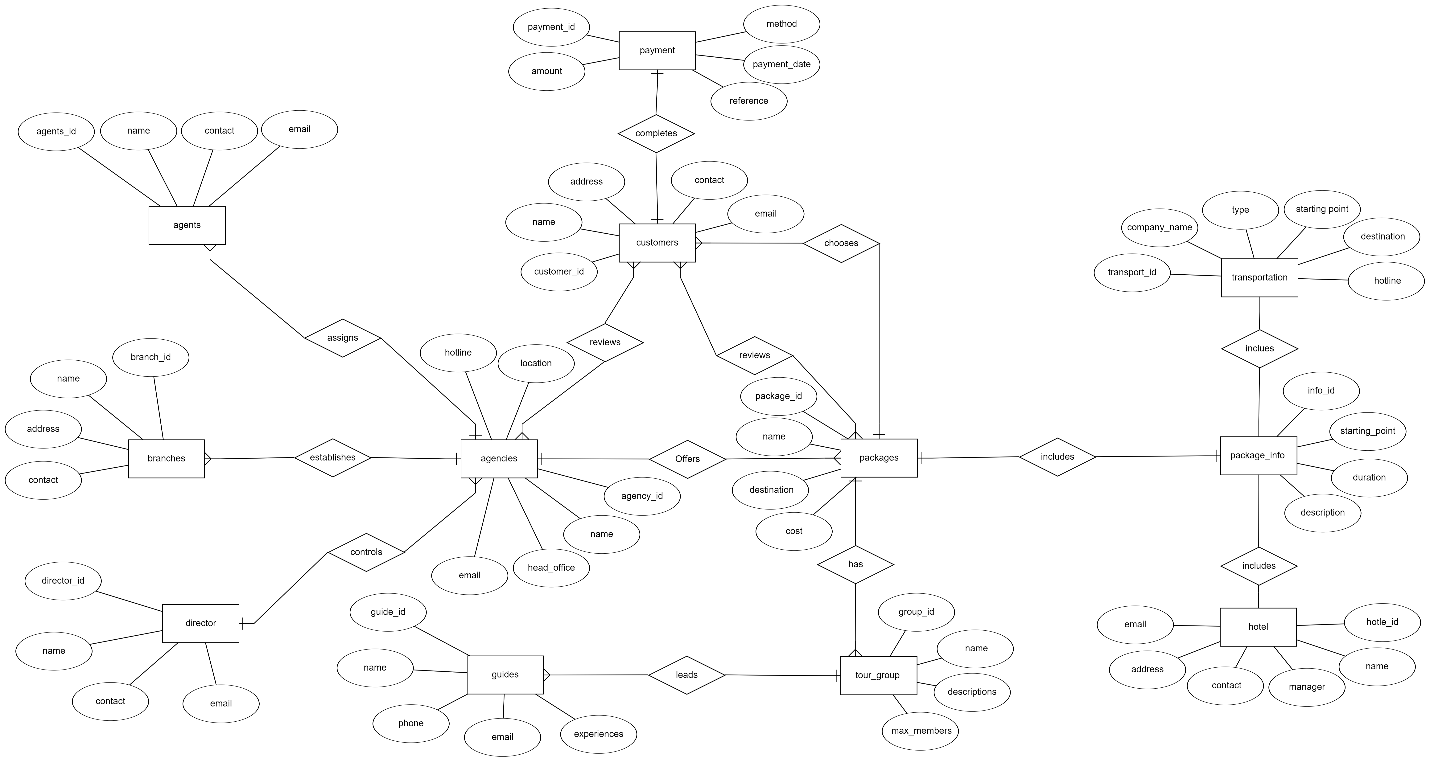


Figure: ERD Diagram for Central Travel Agencies Management System.

***2.*** ***Reduction to database schema:***

1. agencies (agency\_id, name, director\_id, head\_office, location, hotline, email)
2. director (director\_id, name, contact, email)
3. branches (branch\_id, name, agency\_id, address, contact)
4. agents (agents\_id, name, agency\_id, contact, email)
5. packages (package\_id, name, agency\_id, destination, cost)
6. package\_info (info\_id, package\_id, starting\_point, duration, description, transport\_id, hotel\_id)
7. tour\_group (group\_id, name, package\_id, descriptions, max\_members)
8. guides (guide\_id, name, phone, email, experiences, group\_id)
9. customers (customer\_id, name, package\_id, address, contact, email)
10. payment (payment\_id, customer\_id, amount, method, payment\_date, reference)
11. transportation (transport\_id, company\_name, type, starting\_point, destination, hotline)
12. hotel (hotle\_id, name, manager, contact, address, email)
13. package\_review (pr\_id, customer\_id, package\_id, rating, comments)
14. agency\_review (ar\_id, customer\_id, agency\_id, rating, comments)