TOUR MANAGEMENT SYSTEM

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OBJECTIVE:

The objective of the project is to develop a system that automates the process and activities of travel agencies and stores customer details.

INTRODUCTION:

Tour management system is a dynamic and responsive website for agencies and tour operation.This website helps the tourism agency to manage customers and provide them with all necessary details.This system maintains a database so that the travel agency makes necessary arrangements for transport , travel guide.. and it makes information easier to retrieve.

USERS:

People visiting metropolitan cities for tourism and even for people permanently moving to those cities(they will be shown around the city and travel_guide will explain everything about the culture,transport,.. of the city);Members of travel agency(They will collect info of customers and also provide info if the package is cancelled)

ADDITIONAL WAYS THE PROJECT CAN BE USED:

The travel history of employees can be used in times of pandemic to check the spread of disease.We can get yearly analysis reports on customers and the cities they travelled so that we can see the

impact of this in the tourism industry.Reports on buses can be used to calculate the contribution to the travel industry.

1. DATABASE REQUIREMENTS

A. Entities(strong) and their attributes:

I. *Customer* (cust_id, name, gender, email id, contact no., travelno.(n>0), age, dob, address, home city,)

II. *Employee* (emp_id, name, designation,salary, email, contact no., gender, DOB, age, id of manager (foreign key))

III. *Place_of_visit* (address , city_code ,pincode, pause_time, distance from office, nearby restaurant name, popularity_rating, avg_cost_person)

IV. Bus (service_no,license plate no., driver name, contact info (multivalued))

V. *Agency_office* (pincode, address, contact info, no. Of employees working, city_code)

VI. *City* (city_code, city_name, state)

VII. *Package* (package_type, cust_id, cost, transaction_id, transaction status, bus_transac_id, start_date, end_date, city_code (foreign key))

B. Weak entities and their attributes:

I. Family (total no, cust_id(foreign key), no.of children, no.of females, no.of old people)

II. Bus_reservation (bus_id (foreign key) , src , dest , departure_date, departure_time, seat_type, cost, total_available_seats, bus_transac_id)

III. Restaurants (restaurant_name,locality_id, rating, restaurant_type, street_address, AvgRate/Person)

IV. Travel guide(emp_id, contact no., address, gender, languages known, services cost, city_code(foreign key))

C. Relationships with short description:

I. Customers related with family entity with the relationship being "have"(1-1 relationship)-full participation by family

II. city and travel guide related by 1:n relationship.with relationship name "has".- full participation by travel guide, partial participation by city

III. Bus and bus_reservation are related by relationship "*provides*" (1-n relationship)- partial participation by reservation, full participation by bus

IV. *Restaurants* , *places* , *agency office* are related to the *city* by a relationship "are there in"(ternary relationship) full participation by restaurants, places.

V. *Employee* and *agency office* are related by "*working in*" relationship(m-n relationship)full participation from employees, partial participation from agency office

D. Subclasses and superclasses:

I. User (login_id(alphanumeric),password) is a superclass. Customers and employees are subclasses who inherit the attributes of the user

II. Travel guide is also an employee and inherits all the attributes of a employee

E. Special attributes:

I. Multivalued attributes:contact no, nearby restaurant name, languages known by travel guide.
II. Composite attributes:address, customer and employee name.
III. Derived: age, end date :=(start date + no. of days in package_type)
IV. Composite key : Bus entity has a composite key consisting of service_no and licence plate no.
V. Relationship with cardinality constraints: A customer cannot have a family of more than 10 members,(the system shows errors if so.)

2. FUNCTIONAL REQUIREMENTS

A. Retrieval:

I. Selection queries: Select all the Customers travelled in Hyderabad.

II. Projection Queries:Select all travels with package type >=3 days.

III. Aggregate functions queries:

Avg: average cost to visit and view each city.
Sum: no. of customers who travelled alone.
Min: minimum package cost for a customer on a one day trip to hyderabad.
Max:which city and package costs the maximum.

IV. Search queries:

Search for the city name by alphabet and it shows the city.

V. Analysis:

01. Number of buses that ran in hyderabad in year 2020;
02. cities which have at least 3 places_to _visit with a popularity rating >4;
03. City that is most visited;

B. Modification:

I. Insert:

each time a new user I'd I created by customer, verify his age and enter the details into the database only if his age is above 18 years(checking integrity constraints) / each time the user orders the package , insert the

travel details to the travel history of the user.

II. Update:
if the user changes the package then update the details in the travel history of the user.

III. Delete:
if due to environmental constraints the trip is cancelled then users are refunded their money and in travel history the travel entry is deleted.

3. CONSTRAINTS

A. A no. of family members starts from 1 and includes the customer also.
B. Minimum people to start a tour ,with a guide and bus is 5 and maximum people is 20.(they are informally termed as batch).
C. A batch can have one guide and one bus, in for one day,and a guide can take only one batch at a time.
D. Guides and bus drivers are considered unlimited, if there aren't enough people.
E. There is only one agency office in one city .

4. COMMENTS

A. Transaction id is system generated and the payment has to be done in the travel agency before the travel using the id.
B. Bus reservation is independent to the travel reservation and has a different transaction id

C. if the user wants to cancel the package the user won't be refunded any money.but,if the user goes to the agency and explains with valid reasons half the money will be refunded.
D. Admins should create a customer id using their personal email ids in order to travel in the agency
E. The different places should necessarily be in different pincode areas as one place implies all the tourist pots in its near proximity(i.e. Same pincode area)

5. COLOR CODE :

A. Cyan- multivalued
B. Red-key
C. Light red-partial key
D. Grey-attributes of composite key
E. Olive green-derived
F. Blue-attributes
G. Pink - relationship name
H. Light green-foreign key
I. Brown - relationship attributes