TRAVEL MANAGEMENT SYSTEM

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Project overview:

This Travel Management project is a console project which is built to optimize the booking facility offered to customers. It offers functionalities to simplify booking of the packages offered by the site. Various functionalities are implemented to provide user-friendly access. This project is built in python and sqlite.

Technology Used:

- Python for Programming language.
- SQLite for database
- Logging for maintaining log file for errors.
- Shortuuid for unique ID.
- Datetime for storing dates.
- Hashlib for hashing password.
- Maskpass for masking password.
- Regex for input validation.
- Tabulate for pretty console.
- Visual Studio code for IDE.
- DrawIO for diagrams.

Modules:

1) Admin module:
    - One admin for the system
    - Authenticated when providing username and password.
    - It is responsible for handling package and itinerary module.
    - Perform many operations like adding and updating the modules.
2) Customer module
    - Multiple customers for the system.

- Register themselves.
- Authenticated when providing username and password.
- They can see packages offered by the system by providing preferences.
- Book packages after viewing packages.
- View or update customer details.
- Add review for bookings after they have visited that place.
- Cancel packages booked in the past.

3) Package module
    - Package details added by admin.
    - Viewed by user.
    - Input validation using regex when added by admin.
    - Can be updated by admin.
4) Itinerary module
    - Itinerary details added by admin.
    - Viewed by user.
    - Input validation using regex when added by admin.
    - Can be updated by admin.
5) Booking module
    - Customer can book packages by providing personal information and information needed for booking.
    - Booking can be viewed by customer.
    - Can be cancelled by customer.
6) Review module
    - Add review by customer.
    - Review can be viewed by customer of a particular package.

Functional Requirements:

1) ADMIN
    I. Package module
        - Add package by entering details. Applied input validation for admin input.
        - Activate and deactivate packages by entering package id.

- View all the packages.
- Update package – can update multiple fields (package name, duration, limit, price and category)

II. Itinerary module
- Add itinerary by entering details. Applied input validation for admin input.
- Show itinerary by entering itinerary id.
- Update itinerary – can update multiple fields (city, day and description)

2) CUSTOMER
   I. View packages by choosing details (categories, no of days and package type)
   II. Book packages by entering details. Applied input validation for user input.
   III. View bookings.
   IV. Cancel bookings.
   V. Add review of a package they have visited.
   VI. View reviews.
   VII. View or update customer details.

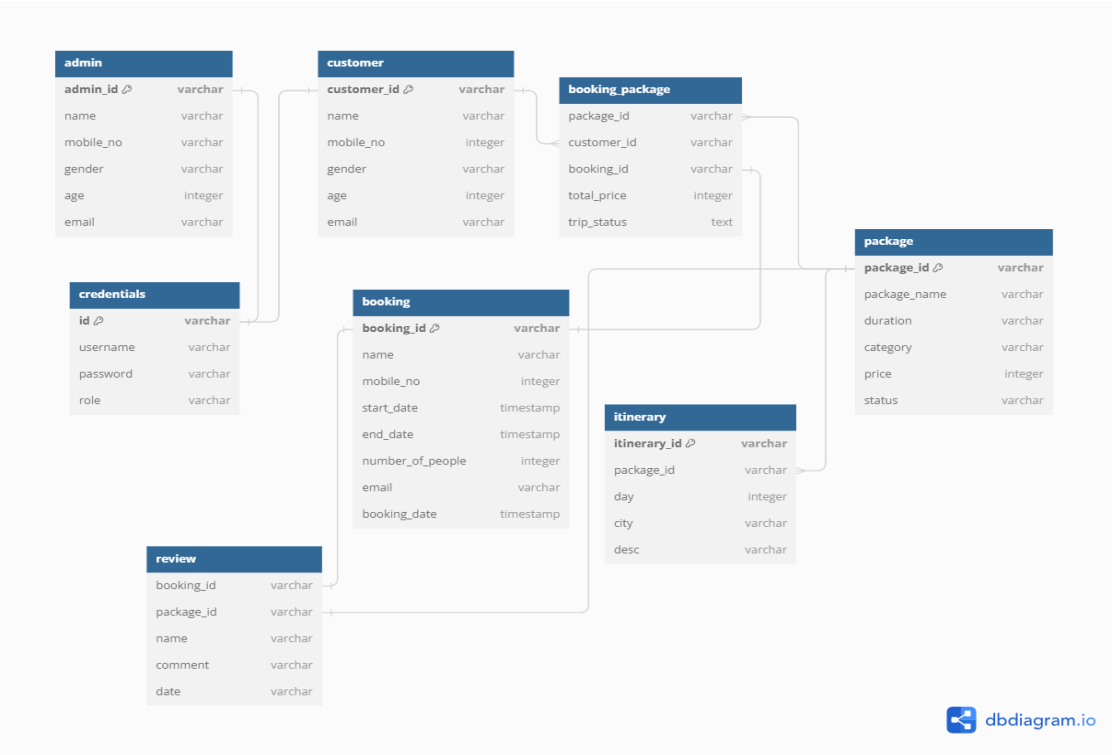
Nonfunctional requirements:

1. Security
   - Added hashing for password to maintain security.
   - Used data as parameters for query to avoid SQL injection attack.
2. Authentication
   - It is maintained by user credentials username and hashed password.
3. Validation
   - Validated every user input.
4. Logging
   - Added logging wherever necessary to log the information or errors.

Diagrams:

1) USE CASE

2) DATABASE DIAGRAM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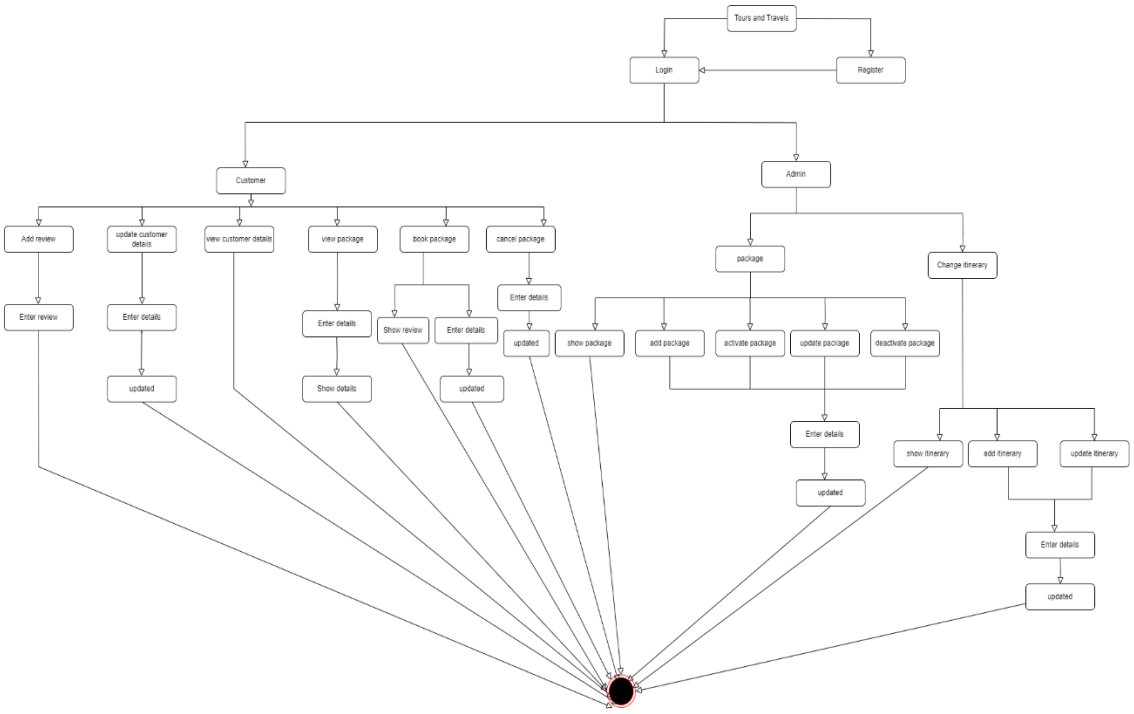
admin_id varchar
name varchar
mobile_no varchar
gender varchar
age integer
email varchar
customer
customer_id varchar
name varchar
mobile_no integer
gender varchar
age integer
email varchar
booking_package
package_id varchar
customer_id varchar
booking_id varchar
total_price integer
trip_status text
package
package_id varchar
package_name varchar
duration varchar
category varchar
price integer
status varchar
credentials
id varchar
username varchar
password varchar
role varchar
booking
booking_id varchar
name varchar
mobile_no integer
start_date timestamp
end_date timestamp
number_of_people integer
email varchar
booking_date timestamp
itinerary
itinerary_id varchar
package_id varchar
day integer
city varchar
desc varchar
review
booking_id varchar
package_id varchar
name varchar
comment varchar
date varchar
dbdiagram.io

3) FLOWCHART


Tours and Travels
Login
Register
Customer
Admin
Add review
update customer details
view customer details
view package
book package
cancel package
package
Change itinerary
Enter review
Enter details
updated
Enter details
Show details
Show review
Enter details
updated
Enter details
updated
show package
add package
activate package
update package
deactivate package
Enter details
updated
show itinerary
add itinerary
update itinerary
Enter details
updated

4) CLASS DIAGRAM