**OOAD - Project Requirements**

**Functional Requirements**

1. The system shall provide automated reservation handling for customers.
2. The room cost shall be determined by a base rate.
3. There shall be four different types of reservations: *prepaid reservations*, *sixty-days-in-advance reservations*, *conventional reservations*,and *incentive reservations*.
4. The *prepaid reservation* shall require guests to pay at the time of reservation.
5. The *sixty-days-in-advance reservation* shall require guests to provide an email upon reservation.
6. The *conventional reservation* shall be paid by guests at the end of their stay.
7. The *incentive reservation* shall follow all rules as a *conventional reservation,* except discounts apply to encourage reservations.
8. All reservations shall be stored to disk at the end of each transaction.
9. Reservations must never be removed from the registry.
10. The reservations must be backed up offsite at the end of each business day.
11. Payments must be made by credit card.
12. Credit card information must be provided at the time of reservation, except for *sixty-days-in-advance reservations*, where the must be provided at least 30 days before arrival date.
13. Management must be able to change the base rate for a room at any time.
14. Guests shall not be able to make a reservation for a specific room.
15. Room numbers shall be assigned the day of the guest’s scheduled arrival.
16. The reservation system must print three management reports: *expected occupancy report*, *expected room income report*, and *incentive report.*
17. Two operating reports shall be generated by the employees: *daily arrival* and *daily occupancy*.
18. The *accommodation bills* report shall be presented to guests as they check out.
19. The report shall detail date printed, guest name, room number, arrival date, departure date, number of nights, and total charge.
20. Reports for any type of prepaid reservation must reflect the date paid, and total paid.

**Non-functional Requirements**

**OOAD – Domain Modeling**

**Business Description**

**Overview**

Ophelia’s Oasis in the Amlet desert is a hotel in located within the Amlet desert. The business needs a reservation management system to improve user interactivity and reduce the need for manual reservation management. By using a system like this, the business can increase its efficiency and reservation processing capabilities

**Business Operations**

This system will, ideally, include a web interface that allows users to access the reservation system at any time. Additionally, there might be a desire to include an automated answering service that can handle these reservations as well.

These requests are passed the central reservation system, which will validate the request, and added it to the central registry is it is approved. Exact process may vary with the type of reservation. For certain reservations, guests will receive emails notifying them of the coming reservation date, as well as the need to provide a payment to ensure their reservation won’t be canceled. Room numbers will not be assigned until the morning of the arrival. Obviously, the system must prevent overbooking, while striving to achieve full capacity every day. The guests, if they have not prepaid, must provide a credit card before they are allowed to occupy a room. On checkout, they will pay for the room, if not already done, and receive a receipt for their stay.

Daily, the system will generate different types of management reports, such as vacancy reports, income, as well as expected income and occupancy. All reservations records must be kept, whether canceled or not. These will be stored locally after each transaction, and will be backed up elsewhere at the end of the day.

**UML Class Diagram**