**CSC 470 – Functional Requirements**

The goal of this project is to design a system for managing reservations, costs, and prices for a hotel in the desert called Ophelia’s Oasis. The following is a basic summary of the project.

1. The system shall provide automated reservation handling for customers.
2. The room cost shall be determined by a base rate.
3. The base rate shall be modifiable for separate days, for days on holidays, or for days of different seasons.
4. There shall be four different types of reservations: *prepaid reservations*, *sixty-days-in-advance reservations*, *conventional reservations*,and *incentive reservations*.
5. The *prepaid reservation* shall require guests to pay at the time of reservation.
6. The rate for this type shall be 75% of the base rate.
7. This must be made at least 90 days in advance.
8. No refund shall be paid for cancellations or changes.
9. Guests shall be able to change reservation date at a cost 110% of current base rate, less the cost of the original reservation.
10. The *sixty-days-in-advance reservation* shall require guests to provide an email upon reservation.
11. An email shall be sent to guests informing that the reservation must be paid in 15 days, or will be cancelled.
12. Employees shall generate these emails each morning.
13. The rate for this type shall be 85% of base rate.
14. No refund shall be paid for cancellations.
15. Guests shall be able to change reservation date at a cost 110% of current base rate, less the cost of the original reservation.
16. The *conventional reservation* shall be paid by guests at the end of their stay.
17. The guests must provide credit card number at the time of reservation.
18. Guests shall be charged for the first day if they are a “no show” or cancel less than three days before the start of their stay.
19. These types shall be available at any time or changed at any time subject to availability.
20. The *incentive reservation* shall follow all rules as a *conventional reservation*, except the quoted rate shall be 20% less if average expected occupancy rate is 60% or less for the period.
21. All reservations shall be stored to disk at the end of each transaction.
22. Reservations must never be removed from the registry.
23. The reservations must be backed up offsite at the end of each business day.
24. Payments must be made by credit card.
25. 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.
26. Management must be able to change the base rate for a room at any time.
27. Guests shall not be able to make a reservation for a specific room.
28. Room numbers shall be assigned the day of the guest’s scheduled arrival.
29. The reservation system must print three management reports: *expected occupancy report*, *expected room income report*, and *incentive report.*
30. The *expected occupancy report* shall show all reserved rooms for the next 30 nights.
31. Each line shall include the type, date, and number of rooms reserved.
32. The last line shall show average occupancy expectancy for that period.
33. The *expected room income report* shall show expected income for each room for the next 30 days.   
    Each line shall show date and expected income for the night.
34. Last two lines shall show total income for and average income for the period.
35. The *incentive report* shall show how much money would be lost for the next 30 days as the result of incentive occupancy reservations.
36. Each line shall show the date and total incentive discount.
37. The last two lines shall show the total incentive discount and average incentive discount for that period.
38. Two operating reports shall be generated by the employees: *daily arrival* and *daily occupancy*.
39. The *daily arrival report* shall list all guests expected to arrive that day.
40. Each line shall show the room number, guest name, date of departure, number of nights, and total charge; this is sorted by guest name.
41. The *daily occupancy report* shall list all guests currently staying at the hotel.
42. Each line shall show room number, guest name, and departure date if the room was occupied the previous evening.
43. If the guest is leaving that day, the name shall be preceded by an asterisk.
44. These shall be sorted by room number.
45. The *accommodation bills* report shall be presented to guests as they check out.
46. The report shall detail date printed, guest name, room number, arrival date, departure date, number of nights, and total charge.
47. Reports for any type of prepaid reservation must reflect the date paid, and total paid.