**Chapter 3**

**Analysis**

* **User requirements** 
  + **Functional Requirements**
  + **Non-Functional Requirements**
* **System Requirements** 
  + **Functional Requirements**
  + **Non-Functional Requirements**
* **Use Case**
* **Use Cases Description**
* **Entity Relationship Diagram**
* **Class Diagram**
  1. **User Requirements**

1. **Functional Requirements**
2. The system must manage all the data in the system.
3. The system must allow the admin to add and show :

* hotel`s rooms.
* hotel`s services.
* hotel`s Purchases.
* hotel`s reports.
* hotel`s bonds.

1. The system must allow the admin to add food in hotel`s restaurant.
2. The system must allow the admin to show room`s cases.
3. The system must allow the admin to add Reservation.
4. The system must allow the admin to send SMS messages to customer.
5. The system must send the report to the hotel manager on demand.
6. **Non-Functional Requirements**
7. The system must be fast.
8. Usability.
9. High security.
10. Maintainability.
11. Efficiency.
    1. **System Requirements**
12. **Functional Requirements**
13. The system must manage all the data in the system.
14. The system consists several interface every interface has specific task.
15. The system must allow the admin to add and show :

* hotel`s rooms.
* In this part the system will provide interface to add and show hotel`s rooms to and from database.
* hotel`s services.
* In this part the system will provide interface to add and show hotel`s services to and from database.
* hotel`s Purchases.
* In this part the system will provide interface to add and show hotel`s Purchases to and from database.
* hotel`s reports.
* In this part the system will provide interface to add and show hotel`s reports to and from database.
* hotel`s bonds.
* In this part the system will provide interface to add and show hotel`s bonds to and from database.

1. The system must allow the admin to add food in hotel`s restaurant.
2. There is interface in the system about the hotel`s restaurant in this interface you can add the restaurant`s food.
3. The system must allow the admin to show room`s cases.
4. There is a specific interface to show the room`s cases , there is three type of cases:
5. Busy.
6. Empty.
7. Need maintain or clean.
8. The system must allow the admin to add Reservation.
9. The admin can add Reservation in the empty rooms after show room cases.
10. The system must allow the admin to send SMS messages to customers.
11. The admin can send SMS messages to customers to tell them about the important things.
12. The system must send the report to the hotel manager on demand.
    * + 1. if the hotel manager request any type of report the admin will send it to him.
13. **Non-Functional Requirements:**
14. Speed:

* The system must be fast in work.

1. Usability:

* The system must be easy to use.

1. High security:

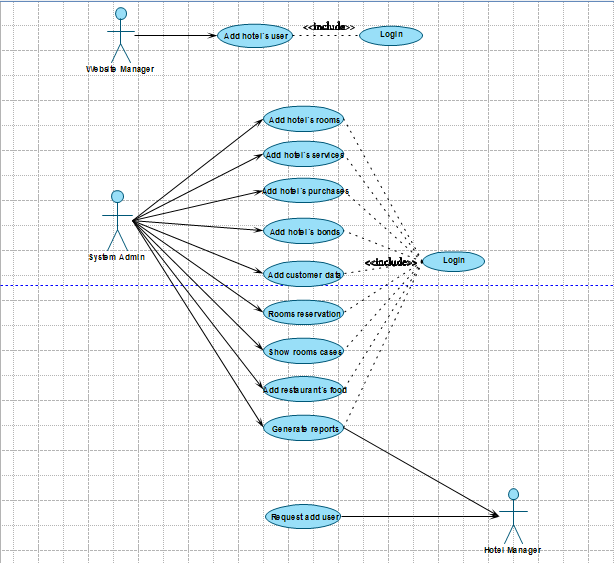
* The system must has high security.

1. Maintainability:

* The system must be Maintainable to develop the system in the future.

1. Efficiency:

* The system must work 100% without any errors.
  1. **Use Case**



* 1. **Use Case Description**

1. **Add hotel user.**

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| --- | --- | --- | --- |
| Importance Level: High | ID: 1 | Use Case Name: Add hotel user | |
| Use Case Type: Essential | | | Primary Actor: Website manager |
| Stakeholders:  Website manager | | | |
| Brief Description: This use case describes how the system add hotel user. | | | |
| Pre-condition: user open the website and request add user. | | | |
| Post-condition : ----- | | | |
| Trigger: user open the website and request add user.  Type: External | | | |
| Relationships:  Include: Login.  Extend: | | | |
| Normal Flow of Events:   1. User will open the website and request add user [E1]. 2. The website manager will receive the request and open a new user. | | | |
| Alternate/Exceptional Flows:  [E1] the user want to see the system before add a user:  1. Website manager will give him experimental user to see the system. | | | |

1. **Request add user.**

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| --- | --- | --- | --- |
| Importance Level: High | ID: 2 | Use Case Name: Request add user | |
| Use Case Type: Essential | | | Primary Actor: Website manager |
| Stakeholders:  Hotel manager | | | |
| Brief Description: This use case describes how the user Request add user. | | | |
| Pre-condition: user open the website and want to get a user. | | | |
| Post-condition : ----- | | | |
| Trigger: user open the website and request a user.  Type: External | | | |
| Relationships:  Include:  Extend: | | | |
| Normal Flow of Events:   1. User will open the website and want to get a user[E1]. 2. The user will request add user. | | | |
| Alternate/Exceptional Flows:  [E1] the user want to see the system before add a user:  1. Website manager will give him experimental user to see the system. | | | |

1. **Add hotel`s rooms.**

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| Importance Level: High | ID: 3 | Use Case Name: Add hotel`s rooms | |
| Use Case Type: Essential | | | Primary Actor: System admin |
| Stakeholders:  System admin | | | |
| Brief Description: This use case describes how the admin add hotel`s rooms. | | | |
| Pre-condition: admin login to the system | | | |
| Post-condition : ----- | | | |
| Trigger: admin open the interface of add hotel`s rooms.  Type: internal | | | |
| Relationships:  Include: login.  Extend: | | | |
| Normal Flow of Events:   1. The admin will login to the system. 2. The admin will open the interface of add hotel`s rooms. 3. The admin will add hotel`s rooms . | | | |

1. **Add hotel`s purchases.**

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| Importance Level: High | ID: 4 | Use Case Name: Add hotel`s purchases. | |
| Use Case Type: Essential | | | Primary Actor: System admin |
| Stakeholders:  System admin | | | |
| Brief Description: This use case describes how the admin add hotel`s purchases. | | | |
| Pre-condition: admin login to the system | | | |
| Post-condition : ----- | | | |
| Trigger: admin open the interface of add hotel`s purchases.  Type: internal | | | |
| Relationships:  Include: login.  Extend: | | | |
| Normal Flow of Events:   1. The admin will login to the system. 2. The admin will open the interface of add hotel`s purchases. 3. The admin will add hotel`s purchases. | | | |

1. **Add hotel`s services.**

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| Importance Level: High | ID: 5 | Use Case Name: Add hotel`s services. | |
| Use Case Type: Essential | | | Primary Actor: System admin |
| Stakeholders:  System admin | | | |
| Brief Description: This use case describes how the admin add hotel`s services . | | | |
| Pre-condition: admin login to the system | | | |
| Post-condition : ----- | | | |
| Trigger: admin open the interface of add hotel`s services .  Type: internal | | | |
| Relationships:  Include: login.  Extend: | | | |
| Normal Flow of Events:   1. The admin will login to the system. 2. The admin will open the interface of add hotel`s services. 3. The admin will add hotel`s services . | | | |

1. **Add hotel`s bonds.**

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| Importance Level: High | ID: 6 | Use Case Name: Add hotel`s bonds. | |
| Use Case Type: Essential | | | Primary Actor: System admin |
| Stakeholders:  System admin | | | |
| Brief Description: This use case describes how the admin add hotel`s bonds. | | | |
| Pre-condition: admin login to the system. | | | |
| Post-condition : ----- | | | |
| Trigger: admin open the interface of add hotel`s bonds.  Type: internal | | | |
| Relationships:  Include: login.  Extend: | | | |
| Normal Flow of Events:   1. The admin will login to the system. 2. The admin will open the interface of add hotel`s bonds. 3. The admin will select the customer to add bonds. 4. The admin will add bonds to the customer. | | | |

1. **Add food to hotel`s restaurant.**

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| Importance Level: High | ID: 7 | Use Case Name: Add food to hotel`s restaurant. | |
| Use Case Type: Essential | | | Primary Actor: System admin |
| Stakeholders:  System admin | | | |
| Brief Description: This use case describes how the admin add restaurant `s food. | | | |
| Pre-condition: admin login to the system. | | | |
| Post-condition : ----- | | | |
| Trigger: admin open the interface of add restaurant `s food .  Type: internal | | | |
| Relationships:  Include: login.  Extend: | | | |
| Normal Flow of Events:   1. The admin will login to the system. 2. The admin will open the interface of add restaurant `s food. 3. The admin will add restaurant `s food. | | | |

1. **Add customer data.**

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| Importance Level: High | ID: 7 | Use Case Name: Add customer data | |
| Use Case Type: Essential | | | Primary Actor: System admin |
| Stakeholders:  System admin | | | |
| Brief Description: This use case describes how the admin add customer user. | | | |
| Pre-condition: admin login to the system. | | | |
| Post-condition : ----- | | | |
| Trigger: the user will open the interface of adding data.  Type: internal. | | | |
| Relationships:  Include: login.  Extend: | | | |
| Normal Flow of Events:   1. The admin will login to the system. 2. The admin will open the interface of adding customer data. 3. The admin will add customer data. | | | |

1. **Rooms reservation.**

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| --- | --- | --- | --- |
| Importance Level: High | ID: 8 | Use Case Name: Rooms reservation. | |
| Use Case Type: Essential | | | Primary Actor: System admin |
| Stakeholders:  System admin | | | |
| Brief Description: This use case describes how the admin add reservation to rooms. | | | |
| Pre-condition: admin must add customer data. | | | |
| Post-condition : ----- | | | |
| Trigger: admin open the interface of add reservation.  Type: internal. | | | |
| Relationships:  Include: Login, add customer data.  Extend: | | | |
| Normal Flow of Events:   1. The admin will login to the system 2. The admin will open the interface of add rooms reservation. 3. The admin will show the rooms to knew the empty rooms. 4. The admin will add reservation to the rooms. | | | |

1. **Show room`s cases.**

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| --- | --- | --- | --- |
| Importance Level: High | ID: 9 | Use Case Name: Show room`s cases. | |
| Use Case Type: Details. | | | Primary Actor: System admin |
| Stakeholders:  System admin | | | |
| Brief Description: This use case describes how the admin show room`s cases. | | | |
| Pre-condition: admin must add hotel`s rooms. | | | |
| Post-condition : ----- | | | |
| Trigger: admin open the interface of room`s cases.  Type: internal. | | | |
| Relationships:  Include: Login.  Extend: | | | |
| Normal Flow of Events:   1. The admin will login to the system 2. The admin will open the interface of room's cases. 3. The admin will show the room`s cases. | | | |

1. **Generate reports.**

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| Importance Level: High | ID: 10 | Use Case Name: Generate reports. | |
| Use Case Type: Details. | | | Primary Actor: System admin |
| Stakeholders:  System admin, hotel manager. | | | |
| Brief Description: This use case describes how the admin send reports to hotel manager. | | | |
| Pre-condition: hotel manager request reports. | | | |
| Post-condition : ----- | | | |
| Trigger: admin open the interface of add reports.  Type: internal. | | | |
| Relationships:  Include: Login.  Extend: | | | |
| Normal Flow of Events:   1. The admin will login to the system 2. The admin will open the interface of add reports. 3. The admin will add new reports. 4. The admin will send the reports to hotel manager. | | | |

* 1. **Class Diagram**

