1. **Detailed Requirements**
   1. **External Interface Requirements**
      1. **User Interfaces**

* + 1. **Hardware Interfaces**
* Desktop Computer required where the System is supposed to be installed.
* Each Staff Member must have mobile phone to get notifications.
* Internet setup in the premises for smooth working of website.
* Each staff and guest connected to network for availing services.
* Printer to print bills, receipts.
* Scanner to scan Guest Id’s.
  + 1. **Software Interfaces**
    2. **Communication Interfaces**
  1. **Function Requirements**

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| --- | --- |
| **Function 1** | **Reservation** |
| Input | Guest Details |
| Output | Receipt, Database Updated |
| Processing | Validate Details and add to Database |

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| **Function 2** | **Verification** |
| Input | Guest Details |
| Output | Information of Reservation to Guest |
| Processing | Check the Details in Database |

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| **Function 3** | **Billing** |
| Input | Order of Guest |
| Output | Bill |
| Processing | Add the Sales in Database, Calculate Bill |

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| **Function 4** | **Staff Allocation** |
| Input | Service, Room Number |
| Output | Service Provided to Customer |
| Processing | Allocate free staff, Update Database |

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| **Function 5** | **Provide Salary** |
| Input | Staff Attendance |
| Output | Salary Details |
| Processing | Calculate Salary |

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| **Function 6** | **Inventory** |
| Input | Required Supplies |
| Output | Notify Production Unit |
| Processing | Check what inventory is required |

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| **Function 7** | **Room Availability** |
| Input | Type of Room, Check – In, Check – Out |
| Output | Available Rooms |
| Processing | Pick Available Rooms from Database |

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| --- | --- |
| **Function 8** | **Add Employee** |
| Input | Employee Details, Designation |
| Output | Update Database |
| Processing | Add New Employee in Database |

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| --- | --- |
| **Function 9** | **Set Rates** |
| Input | Rate of Room per day |
| Output | Update Room rate in Database |
| Processing | Validate the given details and record the information in to the Database |

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| --- | --- |
| **Function 10** | **Taking Backup** |
| Input | Backup Command |
| Output | Display a message showing backup successfully created |
| Processing | Backup Database on Cloud |

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| --- | --- |
| **Function 11** | **Login** |
| Input | Employee Details |
| Output | Open Dashboard |
| Processing | Validate from Database |

## 1.3 Performance Requirements

Performance requirements define acceptable response times for system functionality. Although the system is developed suiting for the least system performances, the performance of the system will highly depend on the performance of the hardware and software components of the installing computer. When consider about the timing relationships of the system the load time for user interface screens shall take no longer than two seconds. It makes fast access to system functions. The log in information shall be verified within five seconds causes’ efficiency of the system. Returning query results within five seconds makes search function more accurate.

## 1.4 Safety Requirements

There are several user levels in hotel management system, Access to the various subsystems will be protected by a user log in screen that requires a user name and password. This gives different views and accessible functions of user levels through the system. Maintaining backups ensure the system database security. System can be restoring in any case of emergency.

## 1.5 Security Requirements

Customer Service Representatives and Managers and owner will be able to log in to the Hotel Management System. Customer Service Representatives will have access to the Reservation/Booking and subsystems. Managers will have access to the Management subsystem as well as the Reservation/Booking subsystems. Owner has the maximum privilege to all subsystems. Access to the various subsystems will be protected by a user log in screen that requires a user name and password.

## 1.6 Software Quality Attributes

* Availability: - The system shall be available during normal hotel operating hours
* Correctness: - extent to which program satisfies specifications, fulfills user’s mission objectives
* Efficiency: - How much less number of resources and time are required to achieve a particular task through the system.
* Flexibility: - Ability to add new features to the system and handle them conveniently.
* Integrity: - How the system would insecure the information in the system and how it avoids the data losses. Referential integrity in database tables and interfaces
* Maintainability: - How easy is to keep the system as it is and correct defects with making changes.
* Portability: - The Hotel Management System shall run in any Microsoft Windows environment
* Reliability: - Specify the factors required to establish the required reliability of the software system at time of delivery. Mean time between failures and mean time to recovery
* Reusability: - What is the ability to use the available components of the system in other systems as well.
* Testability: - Effort needed to test to ensure performs as intended
* Usability: - How easily a person can be taken the benefits of the system and the user friendliness.
* Robustness: – Strength of the system to handle system functions accurately and maintain the database without facing to unexpected failures
* Maintainability: – What design, coding standards must be adhered to exclusions created

## Design and Implementation Constraints

Software development crew provides their best effort in developing the system. In order to maintain the reliability and durability of system, some design and implementation constraints are applied. Availability of an android app for hotel management system could make the system portable but due to time constraint it is not possible. System will need a minimum memory of 512MB. But it is recommended to have a memory of 1GB. When designing interfaces of system, we had the capability of work with new tools such as Dev Express. Considering the client’s budget we decided to create those interfaces in a simple realistic manner using affordable technology.