**HOTEL RESERVATION SYSTEM**

**System**

**Hotel Reservation System [HRS]**

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| **Name:**Hotel Reservation System |
| **Authors:**Dharshini, Dipanjan, Mahesh and Sanhita |
| **Description:** The Hotel Reservation system has HRS as a participant in most of the use cases. All the communication between any user and the HRS is assumed to occur on and authenticated and secure channel. Activities such as login and registration are therefore not included in the use cases. The activities of the HRS are usually mentioned as authentication, adding a room, deleting a room or updation of an existing set of available rooms. |
| **Organizations:**Northeastern University |
| **Creation Date:**February 5, 2017 |

**System Actors**

**HRS Admin[sys]**

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| **Description:**The singular authority that supervises the overall functionality of the Hotel Reservation system |

**Chef[chef]**

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| **Description:**The singular authority that manages the overall functionality of the hotel kitchen |

**Receptionist[recp]**

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| **Description:**The entity that manages the hotel front-desk activities |

**Housekeeping[hk]**

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| **Description:**The entity that manages the cleaning services of the hotel |

**Customer[user]**

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| **Description:**The entity that books and uses the hotel services |



**Use Cases**

**Add Customer**

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| **Description:**HRS admin creates a new customer record in HRS  **Exposition**: HRS admin is creating a new customer record  **Precondition**: HRS admin has the name, email(unique) and age (optional) information about the customer  **Post condition**: A new customer record is created in HRS |
| **Step-by-step Description:**   1. [[#sys]](http://www.ccs.neu.edu/home/kenb/ontologies/oor-usecase.xml" \l "User) – Creates a new customer record in HRS |

**Add Room**

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| **Description:**HRS admin creates a new room record in HRS  **Exposition**: HRS admin is creating a new room record  **Precondition**: HRS admin has the room type, room price information about a newly built room  **Post condition**: A new room record is created in HRS |
| **Step-by-step Description:**   1. [[#sys]](http://www.ccs.neu.edu/home/kenb/ontologies/oor-usecase.xml" \l "User) – Creates a new room record in HRS |

**Delete Room**

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| **Description:**HRS admin deletes a room record in HRS  **Exposition**: HRS admin is deleting a room record as the room is no longer available for booking  **Precondition**: HRS admin has the room id  **Post condition**: A room record is deleted from HRS |
| **Step-by-step Description:**   1. [[#sys]](http://www.ccs.neu.edu/home/kenb/ontologies/oor-usecase.xml" \l "User) – Deletes a room record from HRS |

**Search All Room**

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| **Description:**HRS admin searches the HRS for current status of all rooms  **Exposition**: HRS admin is searching the HRS database to check the current status of all rooms available in HRS  **Precondition**: HRS admin has access to the HRS system  **Post condition**: A room record is deleted from HRS |
| **Step-by-step Description:**   1. [[#sys]](http://www.ccs.neu.edu/home/kenb/ontologies/oor-usecase.xml" \l "User) – searched HRS database for all rooms 2. [#HRS] – returns the list of all rooms with details to the HRS admin |

**Search All Customer**

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| **Description:**HRS admin wants to search the customer database  **Exposition**: HRS admin is searching the HRS database to see the list of all customers  **Precondition**: Customer records are available in HRS database  **Post condition**: All customer record available in HRS are returned |
| **Step-by-step Description:**   1. [[#sys]](http://www.ccs.neu.edu/home/kenb/ontologies/oor-usecase.xml" \l "User) – Searches HRS database for list of all registered customers |

**Search Availability in HRS**

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| **Description:**User checks for availability of room in the Hotel and HRS system checks for its availability  **Exposition**: The user is searching in the HRS for the available rooms  **Precondition**: User searches for a specific room type within a date range  **Post condition**: The HRS provides the user with the list of available rooms |
| **Step-by-step Description:**   1. [[#user]](http://www.ccs.neu.edu/home/kenb/ontologies/oor-usecase.xml" \l "User) - A user searches for the room 2. [#HRS] - The system searches the database for the availability based on search criteria and returns a list of available rooms |

**Book Room**

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| **Description:**User views the list of available rooms and books one of them  **Exposition**: The user is booking a room for his/her stay using the HRS  **Precondition**: There are rooms available for the user to choose from  **Post condition**: The HRS returns the booking details on successful booking |
| **Step-by-step Description:**   1. [[#user]](http://www.ccs.neu.edu/home/kenb/ontologies/oor-usecase.xml#User) - A user reviews the available rooms and books the room 2. [#user]- Makes an partial or full payment during booking 3. [#HRS]-The system notifies the customer about successful booking with a booking details id |

**Make Payment**

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| **Description:**  Users makes a payment for the room-type for the first day of stay  **Exposition**: The HRS approves the payment, books the room and marks it as booked in the room list for specified date  **Precondition**: The payment should be successful  **Post condition**: The HRS updates the payment record for the user |
| **Step-by-step Description:**   1. [#user]- Makes the partial or full payment 2. [#HRS]- Payment record is updated with the payment details. 3. [#HRS]- The system notifies the customer about successful payment by providing the payment details. 4. [#recp]- Notifies the housekeeping (Offline process) |

**Check booking details**

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| **Description:**User returns to the HRS to see his/her existing booking  **Exposition**: User reviews the existing bookings  **Precondition**: The user has a customer id and booking id  **Post condition**: The HRS returns the details of the user’s booking |
| **Step-by-step Description:**   1. [#user]- searched for existing booking details in HRS based on booking id 2. [#HRS]- system returns the details of the booking |



**Cancel Booking**

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| **Description:**User cancels an existing booking  **Exposition**: The user searches his existing reservation for cancellation  **Precondition**: User has customer id and booking id  **Post condition**: The HRS provides the user a confirmation message of cancellation |
| **Step-by-step Description:**   1. [[#user]](http://www.ccs.neu.edu/home/kenb/ontologies/oor-usecase.xml#User) - A user places a request to cancel an existing booking 2. [#HRS]- The system cancels the booking and deletes the entry from booking details 3. [#HRS]- Change the status of the room to available 4. [#HRS]- Initiates a payment settlement by nullifying the total dues |

**Check In**

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| **Description:**User arrives at the hotel for check-in  **Exposition**: The user is checked into the room  **Precondition**: User has a valid booking id  **Post condition**: The user is checked in |
| **Step-by-step Description:**   1. [# recp]- checks the valid details and initiates a check-in HRS 2. [#HRS] – changes the status of the room from booked to check-in 3. [#steward] – takes the customer to the specific room (offline process) |

**Food Ordering**

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| **Description:**User browses through the hotel food-menu and orders for food  **Exposition**: The ordered food is prepared and delivered to the customer  **Precondition**: The item requested by the user is available on the menu  **Post condition**: The bill for the customer is updated |
| **Step-by-step Description:**   1. [[#user]](http://www.ccs.neu.edu/home/kenb/ontologies/oor-usecase.xml#Submitter) – checks the menu and places an order in HRS 2. [#recp] - informs the chef about the order 3. [#chef]-prepares the order and gives it to the steward 4. [#stwd] – serves the food to the room 5. [#stwd]- informs the receptionist 6. [#recp]- updates the room bill. |

**Checkout**

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| **Description:**User leaves the hotel after making final payment  **Exposition**: The user checks out of the hotel, pays the bill  **Precondition**: The duration of the stay is complete  **Post condition**: The vacated room is made available |
| **Step-by-step Description:**   1. [[#user]](http://www.ccs.neu.edu/home/kenb/ontologies/oor-usecase.xml#Submitter) – Initiates check-out from the hotel 2. [#recp] – Generates the bill for the entire stay (offline process) 3. [#user] - pays the rest of the bill (offline process) 4. [#HRS] – payment record for the user updated with no dues 5. [#HRS] – update the status of the room to available |