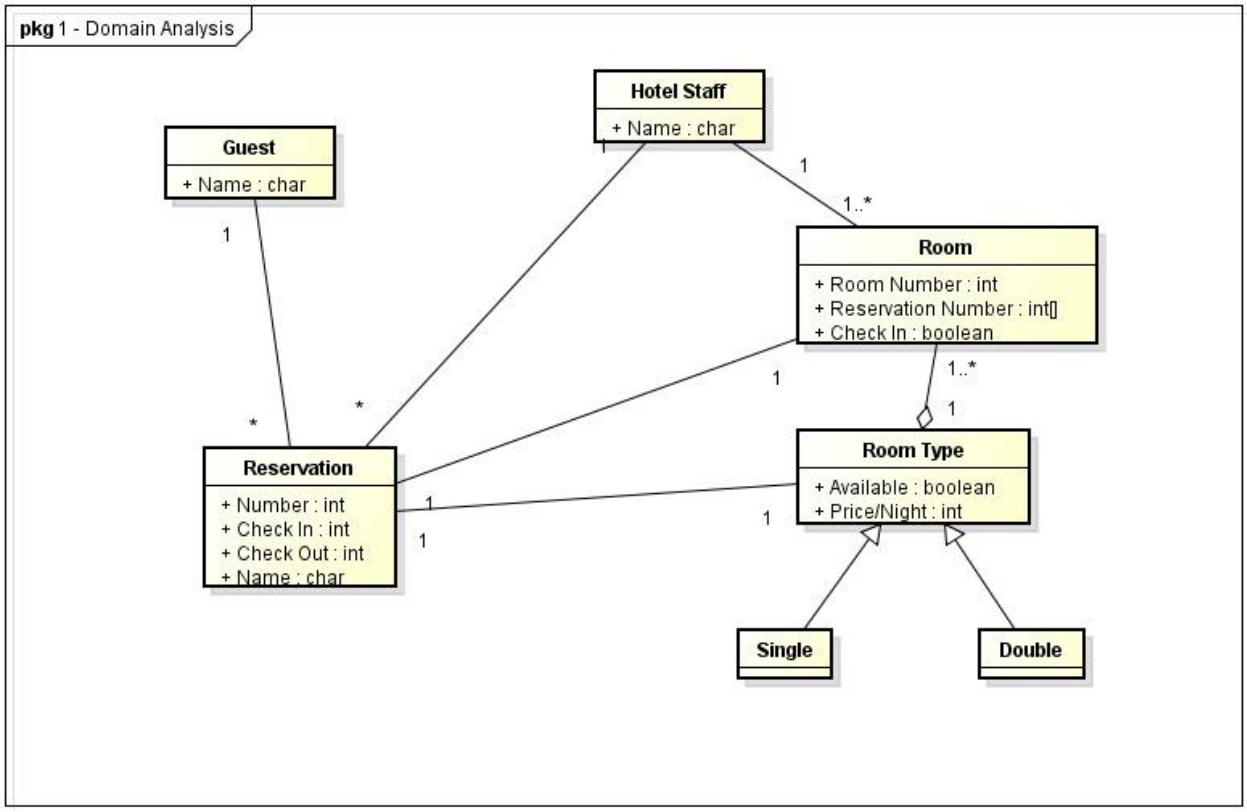
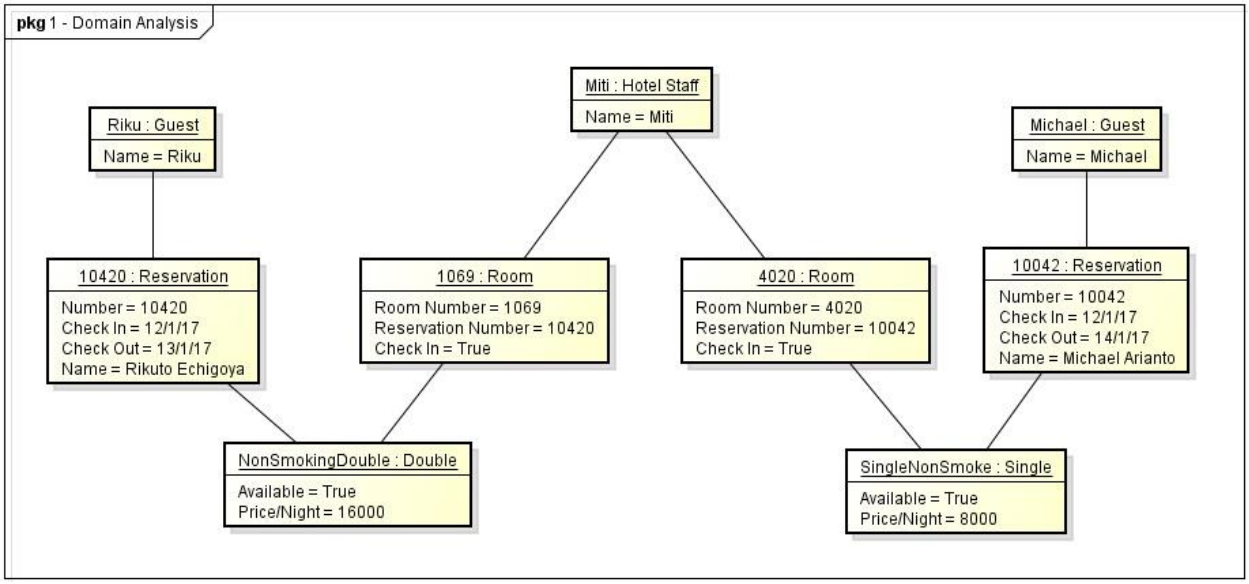
Domain Analysis

Firstly we observe the domain situations. We conclude that there are two parties involved the the Hotel Reservation System or HRS which are the guest and the hotel staff. The guest will make the reservation which received by the hotel staff. The reservation will include the room details which is the check in/out date as well as the room type selected. Here is the class diagram.



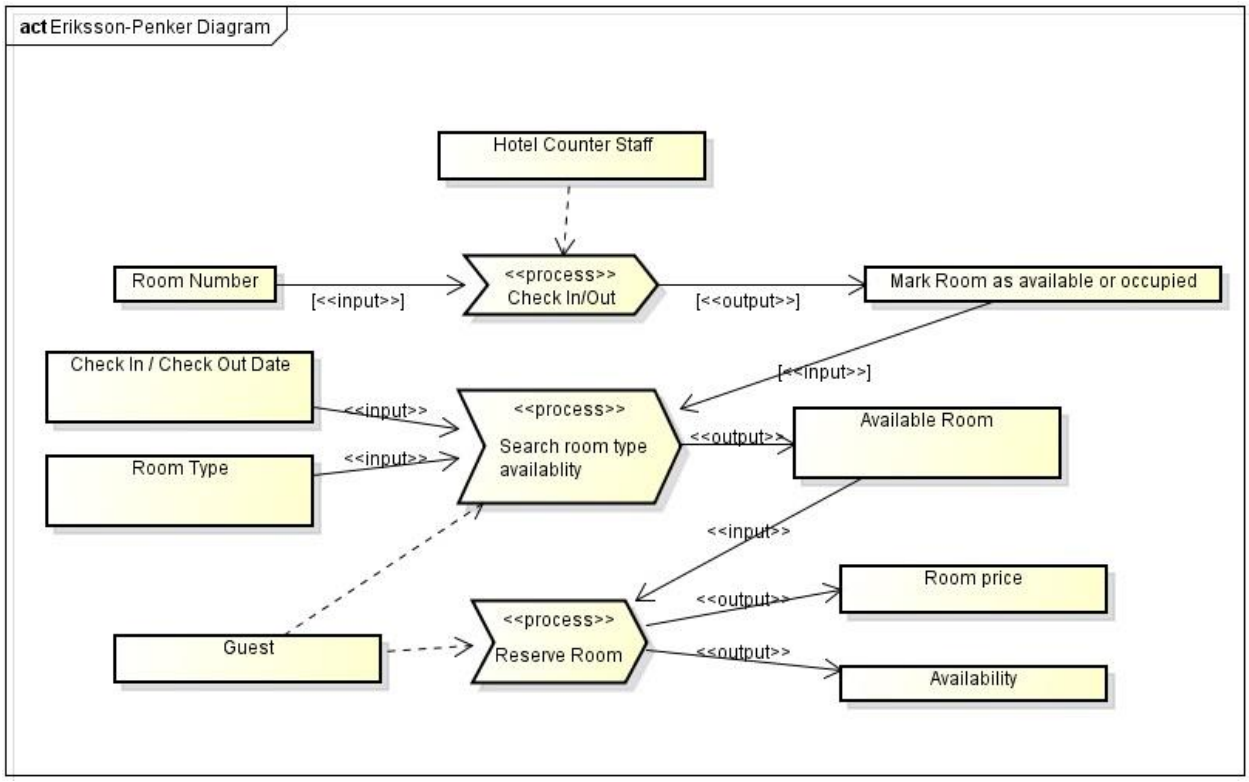
The hotel staff has the information about the room and the reservation. The room will have the room number, reservation number, and the check in which can be available or occupied. The room then divided by room type, which is single or double that has the corresponding price. The reservation made is about the room details, which include the reservation number, check in/out date, the guest name, and the room type as well. Therefore, all the lines connected make sense.

We tried to validate the class diagram by creating the object diagram based on the concrete situation. Here is the object diagram looks like.



Here we include two guests, Riku and Michael as a concrete example. We also create a real hotel staff example, Miti from Thailand. So as you can see that Riku and Michael made two different reservations, which include the reservation number, check in/out date, and guest name. Then the reservation is connected to the room type selected by the guest, which differs between Riku and Michael. Then because Miti is the one who has the information about the room, he presents the specific room that meets the preference the guests wanted. Then Miti gives them the available room with its room number.

We also design another diagram which called the Eriksson-Penker diagram. This diagram really helps to analyze the process chronologically. Another thing is in this diagram the arrow has either input or output attribute to make it clearer. Here is the Eriksson-Penker Diagram.



As you can see very clearly, the hotel staff will checks the room in or out with the room number as an input. As the output, the hotel staff will mark the room as available or occupied depends on whether it's check out or check in. As the room status changed it will be the input to the next event, which is the search room by the guest. The guest will input the check in/out date and the room type preferred, then the output will be the available room. This makes sense because the available room depends whether it has been checked in by another guest or if the previous guest already checked out from the room. So the "mark room as available or occupied" must be the input for the search room event. As the available room already outputted, then the guest will reserve the room which then it will output the room price and availability.