Name: Joseph Baskin  
Date: 10/26/2024  
Week: 2 - Create an Analysis Model for a Small Bed & Breakfast Reservation System

1)  
Rubric Criteria:  
Create UML use case diagram of 3-7 use cases 10%  
Your Response:

A diagram of a person's life cycle

Description automatically generated

2)  
Rubric Criteria:  
Write use case sequence of events for each use case in the use case diagram 20%  
Your Response:

A screen shot of a computer

Description automatically generated

3)  
Rubric Criteria:  
Explain approach, steps, and rationale of the use case model 25%  
Your Response:

Approach: Plan out software that would give the most functionality for the owners with the least functionality for guests. Software would use limited, if any, internet connection and only show a room list with features and prices for each room. Include a catch to notify office at check-in if the rest of the payment is required.

Steps: Start with building room listing for external guests with a prompt to call the B&B office; Office will check reservation calendar to review dates and, if available, reserve the room in the system; Office will request payment information; Guest provides payment information and states a minimum or full charge for the stay; confirm payment and reservation to the guest.

Rationale: This method provides the best use of the software for the owners. While their B&B is small, they don’t require a lot of user interaction and want to ensure they have control over the room reservations while giving payment flexibility.

4)  
Rubric Criteria:  
Create UML class diagram 10%  
Your Response:

A screenshot of a computer program

Description automatically generated

5)  
Rubric Criteria:  
Explain approach, steps, and rationale of the class diagram model 25%  
Your Response:

Approach: Begin by creating the Guest and Payment classes as the only relationship-based classes. Variables in both classes will not be accessible by guests, only function getRoomList() will be. The owner class will run all functions outlined in requirements. Each Room class will store the price and calculate the price.

Steps: Guests query room list and receive 4 rooms in a list. Once called, the owners will run necessary functions to check for vacancy, reserve a room, and make a payment. Other functions allow the owners to check guests in/out, check on payments made, and check for reservations.

Rationale: The owner class would function as the main class, calling and storing variables in other classes, but containing no variables itself. Functions are based on the requirements and are very simple for the owners to use.

6)  
Rubric Criteria:  
Reflect on the learning experience and lessons learned 10%  
Your Response:

I have used operational/class diagram UMLs in a previous class, so that seemed simple. The hardest part of this assignment was interpreting the requirements from the Owners for the B&B and what their needs are. The requirements state that a 1-night payment is required to guarantee the room, but doesn’t state if the guest can pay for this or if the owner needs to process the payment themselves. Lastly, I learned to create use-case diagrams and sequence diagrams that can be helpful in showing both how the system can be used and by who, as well as the flow of tasks performed within and through the system.