



Interaction Diagrams for System TwitterNethack

Assignment in the course PA1415 Software Design

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Authors and Authors contribution

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System Description

The goal of this system is to create a game based on the idea of the game Nethack. The system shall adopt the rules of the original Nethack to keep its flare.

The most interesting feature for the system is the map generation where the maps can be generated with the Twitter API. The map generation can also work offline without the usage of the Twitter API.

The system also includes multiplayer support. User are able to access games online via the internet or offline via a LAN.

Prioritised list of Use Cases

1. Create character - 361 story points
2. Enter room - 141 story points
3. Open dialogue with entities - 113 story points
4. Engage combat with entities - 183 story points
5. Pick up items - 293 story points
6. Use item - 233 story points
7. Generate level - 663 story points
8. Start new game - 521 story points
9. Open inventory - 88 story points
10. Join existing game - 431 story points
11. Save game - 63 story points
12. Load game - 40 story points
13. Show event log - 21 story points
14. Show help - 13 story points
15. Drop/discard item - 8 story points
16. Player chat - 5 story points
17. Play tutorial - 3 story points

System Events

1. **System events for Use Case:** Create Character
 - makeNewCharacter
 - setAttribute
 - finishCreation
2. **System events for Use Case:** Enter room
 - enterRoom
3. **System events for Use Case:** Engage combat with entities
 - startCombat
 - combatAction
 - endCombat
4. **System events for Use Case:** Open dialogue with entities
 - startDialogue
 - sendMessage
 - endDialogue
5. **System events for Use Case:** Pick up items
 - pickUpItem
6. **System events for Use Case:** Use item
 - useItem
7. **System events for Use Case:** Generate level
 - startGame
8. **System events for Use Case:** Start new game
 - startNewGame
9. **System events for Use Case:** Open inventory
 - openInventory
10. **System events for Use Case:** Join existing game
 - joinExistingGame(IP)

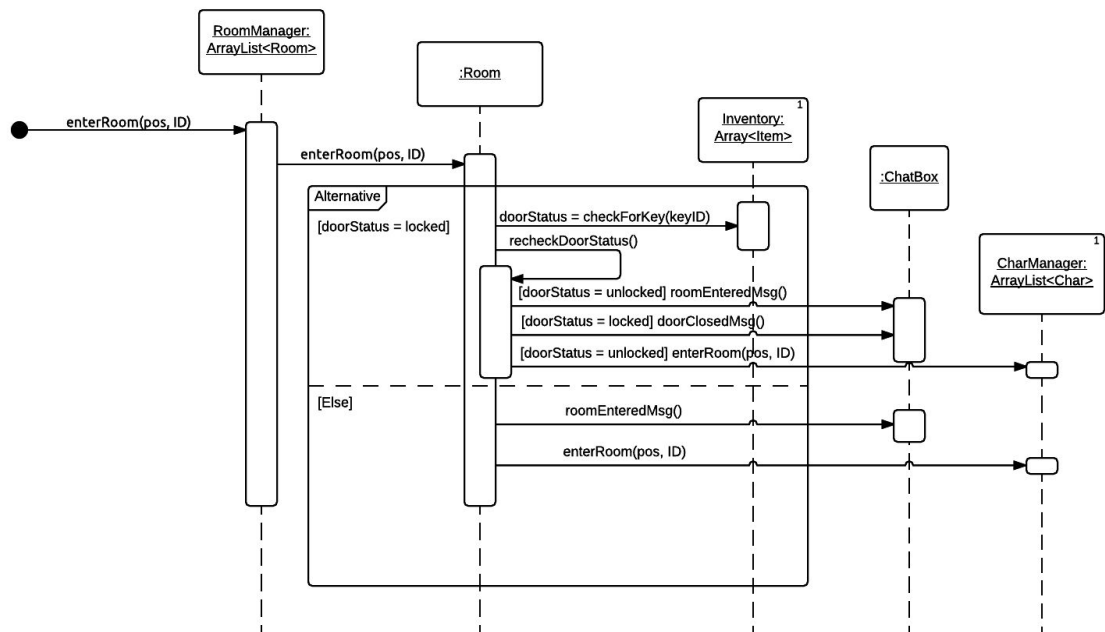
```
sequenceDiagram
    participant CL as :CharLobby
    participant CM as CharManager: ArrayList<Char>
    participant C as :Char

    CL->>CL: makeNewCharacter()
    CL->>CM: makeNewCharacter()
    CM-->>CL: attributeArr

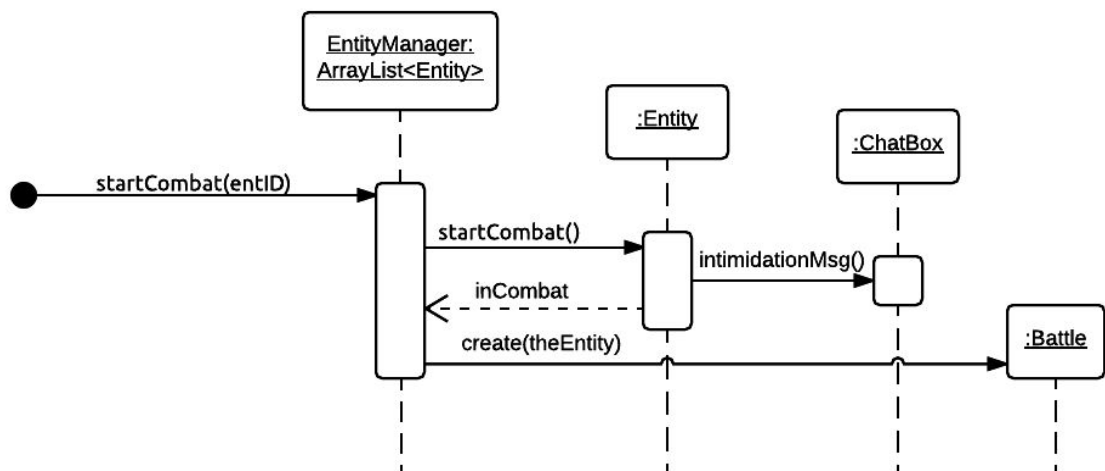
    CL->>CL: setAttribute(index, value)
    CL->>CM: setAttribute(index, value)
    CM-->>CL: setAttribute(index, value)

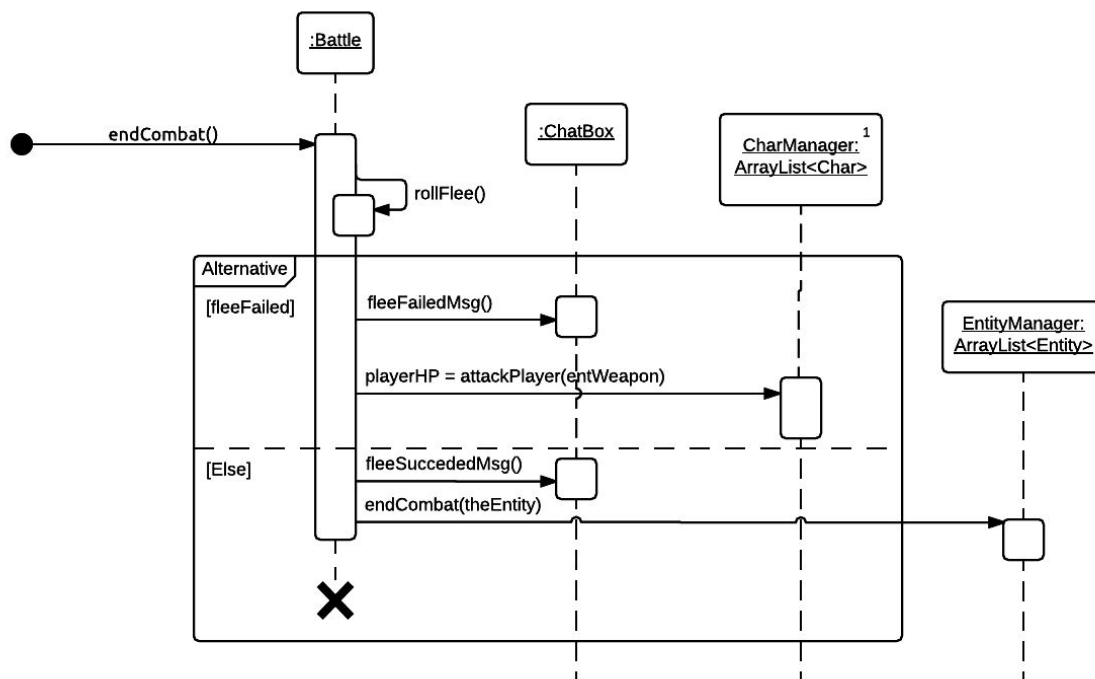
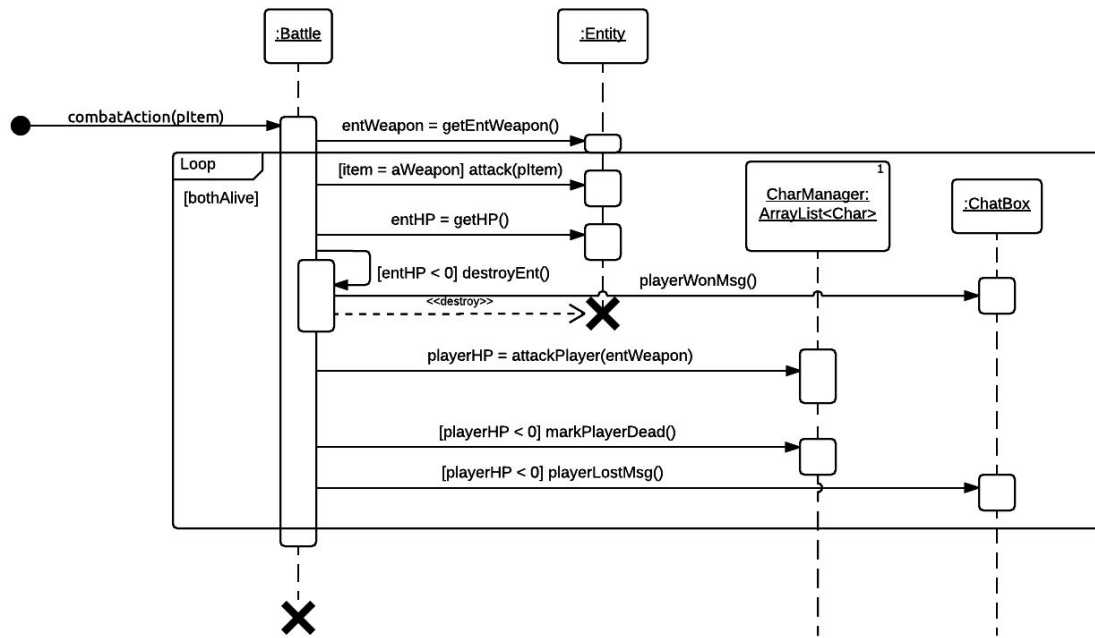
    CL->>CL: finishCreation()
    CL->>CM: makeCreation(attributeArr)
    CM->>C: create(attributeArr)
    C-->>CL: charCreated
    CL-->>CL: X
```

Interaction Diagram for Use Case: Enter room

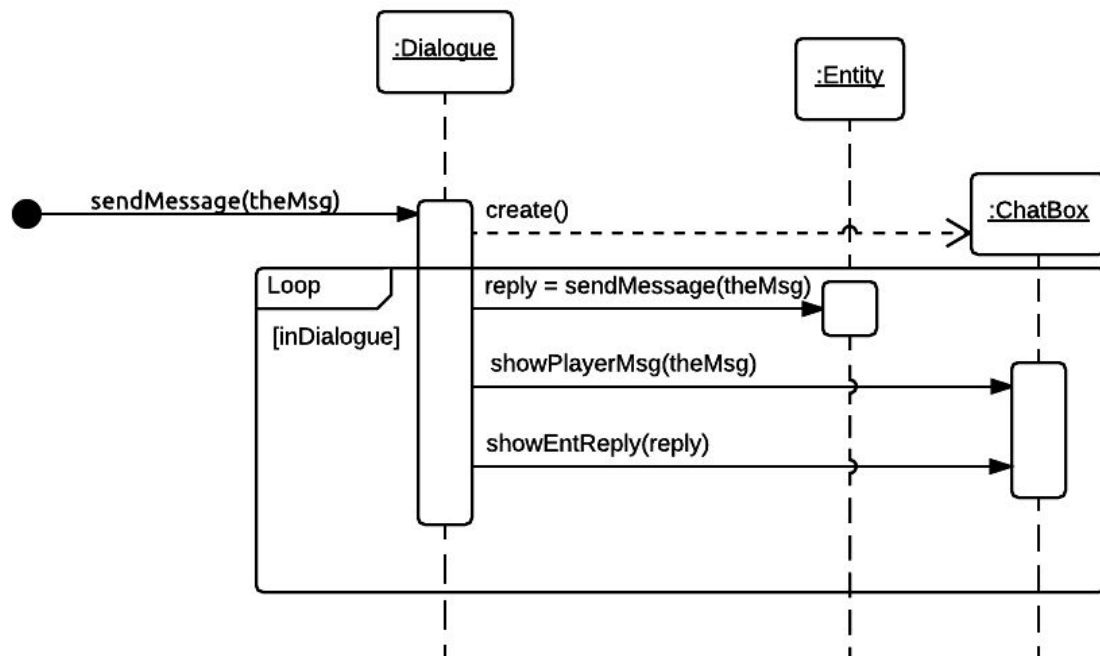
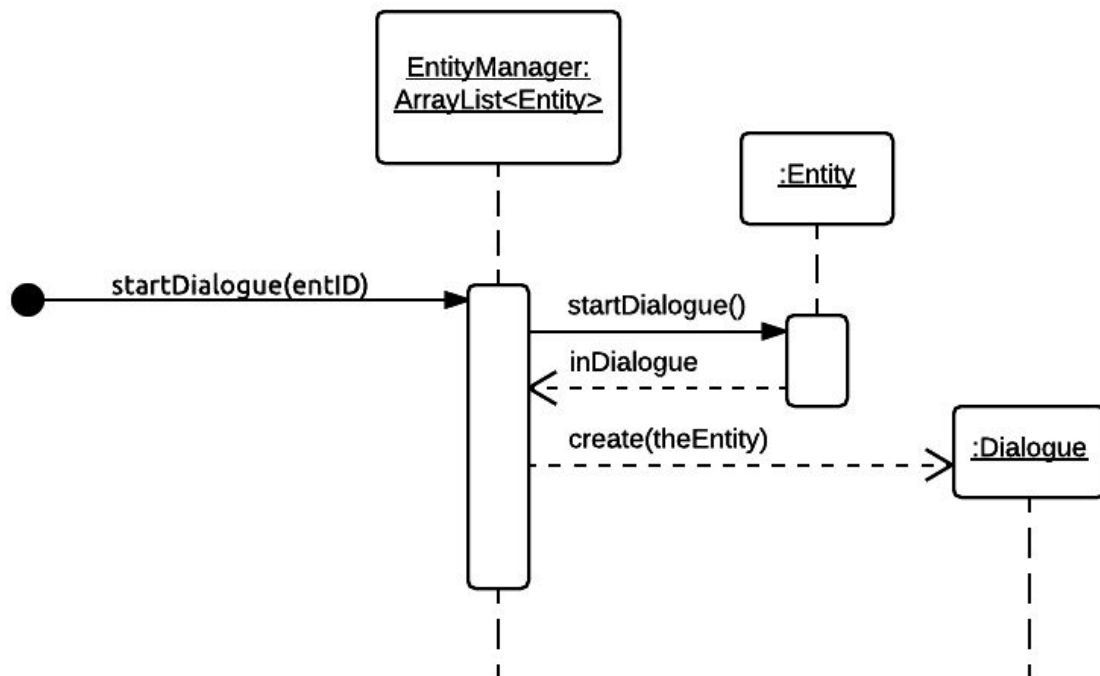


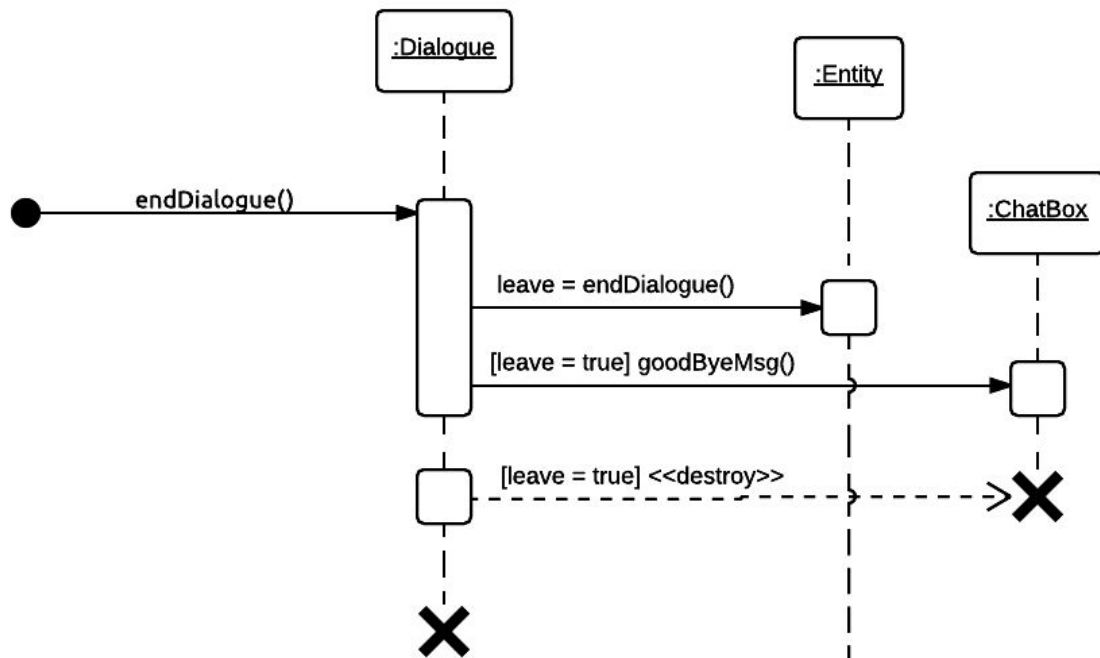
Interaction Diagrams for Use Case: Engage combat with entities





Interaction Diagrams for Use Case: Open dialogue with entities





Interaction Diagram for Use Case: Pick up items

