UC5-1 Use Case: Player Moves Character

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UC5-4: Purpose: Move the player in one of the four directions

UC5-5: Overview: The player character’s location is a particular point on the map. The Player presses one of the keys W, A, S or D. These keys map to up, left, down, right respectively. The game client sends a request to the server with the details on the action. The server validates this input and decides whether or not the player character can move in that direction. If the character can be moved the server updates the character’s position in-memory. The server responds with the current location of the character. The client updates the dungeon graphical representation. Alternative 1: A wall is blocking the direction that the player wishes to move their character in. The server does not update the player’s position and responds with the current player location the same as it was.

UC5-6: Cross References: R5.1

UC5-7: Actors: Player

UC5-8: Pre Condition:

UC5-Pre-1: The player must be in a dungeon (i.e. not the menu).

UC5-Pre-2: The map has been loaded.

UC5-9: Post Condition:

UC5-Post-1: The player’s position is the player’s previous position moved one unit in the chosen direction.

UC5-Post-2: The client’s graphical representation has updated.6

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| **Actor Actions** | **Client System Actions** | **Server System Actions** |
| 1. Begins when player presses movement key |  |  |
|  | 1. Sends movement request to server |  |
|  |  | 1. Checks whether or not the player can move in that direction. |
|  |  | 1. Sends response |
|  | 1. Receives and parses response |  |
|  | 1. Updates dungeon graphical representation |  |

UC5-10: Alternative flow of events:

Step 3: The movement is illegal. Server doesn’t update player location, responds with player in the same location.

UC5-11: Exception flow of events:

Steps 2,4,5: The request or response network packets are dropped or corrupted. The sends a request for the current state of the system. If that request fails the client displays an appropriate message regarding network connectivity problems to the player.