

Computer Programming – CS 6011

Lecture 20: Adventure

MASTER OF SOFTWARE DEVELOPMENT (MSD) PROGRAM

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Miscellaneous

- ▶ Questions?
- ▶ Have you had all of your code reviewed and are your grades in canvas?
- ▶ Sanitizing Data

Sanitizing JSON

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- ▶ Bring up your ChatClient and type the following: (Assuming your using innerHTML)
 - ▶ `Hello`
 - ▶ `<button>press me</button>`
 - ▶ ``
 - ▶ ``

```
function sanitize( string ) {  
  const map = {  
    '&': '&amp;', '<': '&lt;', '>': '&gt;',  
    '"': '&quot;', "'": '&#x27;', '/': '&#x2F;',  
  };  
  const reg = /[&<>"'/]/ig;  
  return string.replace(reg, (match)=>(map[match]));  
}
```


Lecture 20 – Topics

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- ▶ Adventure
 - ▶ Multi Player
 - ▶ Single Player

Adventure

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- ▶ In-class look at Multi Player version
- ▶ In-class coding collaboration on Single Player version
- ▶ Updates (in order to support today's lab) must include:
 - ▶ Handling of the player's inventory
 - ▶ Allowing rooms to respond to commands
 - ▶ Optional
 - ▶ Allowing items to respond to commands
 - ▶ Other things?

Adventure

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▶ Create a room and an item

▶ Item

- ▶ Must “work” (do something) in a classmate’s room. They’ll code the action for their room (based on your item), and you will handle the “work” for your room based on the item they create.
- ▶ Item can either be on the ground, or “hidden” – a player might have to use a command (like “open desk”) to reveal the item, at which point they can pick it up.

▶ Room

- ▶ Must handle at least several commands – main commands should be provided to the user when they type “?”. However, you might want “hidden” commands that only show up in certain situations (see “rotate picture” below).
- ▶ Must have a way that its description / responses to player’s commands can change (based on actions taken in the room).
- ▶ Might want to create several related rooms that work together. Eg: Jail might have two “cell” rooms attached to it.
- ▶ Consider having your room present some sort of puzzle to the player. As a simple example: The room description might include “There is a large painting over the fireplace.” If the user issues the command “rotate picture” (might want to handle “rotate painting” too) you could generate 10 gold pieces that the player can take – or you could open a “hidden” door to a secret chamber.

Adventure Code

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- ▶ Make sure to place comments at the top of your room / item file detailing:
 - ▶ Your name
 - ▶ The classmate's room (or any other room) that your item works with.
 - ▶ Any special information about how the room implements its commands.
 - ▶ What the puzzle is (if there is one).
 - ▶ Anything else I might need to know in grading your room / item.

Adventure Ideas

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- ▶ Handle character deaths: Create a “cemetery” room. Add code to the server such that when a player dies, they come back as a “ghost” in the cemetery. Add a gravestone to the cemetery commemorating the event. Provide a way for them to turn back from a ghost into a player.
- ▶ Add a “heartbeat” to the game – Once every X seconds, the server will call the “heartbeat()” method on every player, room, item in the game.
 - ▶ It is up to the room / item / player / npc (object) to use this heartbeat to “do something” as they wish.
- ▶ If your room has a puzzle or other state (such as the door being locked, etc) – consider a way to let your room reset. Perhaps every time a new player enters the room it resets, or after several minutes of inactivity it resets.

Monday Assignments

- ▶ Lab – Adventure – Add your room / item.
- ▶ Assignment – Finish up the Chat Server
- ▶ Code Reviews – As necessary

~ Fin ~