GAME 3030 Game Level Design
Spring 2015
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Assignment: FPS Multiplayer Playable Map
Due dates:

1 week-   March 23: paper map and rough, playable greybox

2 weeks- March 30: final playable whitebox. Paper map and description.

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Memo from Lead Designer:

You know how you did that 2D paper RPG map a while ago? Well, forget the RPG, we're going to make the game a first person shooter now. Why? Oh, just to give you the experience of designing a MP FPS map! Just kidding. Actually, the CEO's daughter really likes playing FPS's so the CEO decided the game should be a FPS. Hey, it's the game industry, plus she can change her mind last time I checked. Anyway, the FPS will need a multiplayer component so we need you to design a MP map for it and greybox it in Unreal 4, get it to a playable state. No, we don't know the theme for the game yet, or have a name for the game. Maybe we'll call it "Sewer Death Puppy." That would be rad. Or maybe not.

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Instructions:

- **Create a "paper" floor plan map** for a 3D multiplayer FPS level. The map can be in sketch form but should be clear and readable.
    - Provide a **key/legend** for the map showing player spawn points, bot spawn points and pickups.
    - See "Suggested Process" and "Paper Map Info" below.
- **Short written description** (a few sentences or short paragraph) on the paper map or in Word of what the setting/ theme of the map is supposed to be. No backstory is necessary.
- A **playable map in Unreal 4,** in 2 phases:
    - **Rough playable greybox** level for the 1st due date. We will playtest.
    - **Playable whitebox textured level** for the final due date. We will playtest.
        - See " MP Level Specifications" below
- **Submit the .umap file using Blackboard**.

The setting/environment and theme: up to you! But it is a FPS and you'll be using the futuristic player model and bots that come with Unreal 4, so there won't be knights swordfighting and wizards casting spells at giant goblins, or whatever it is wizards usually do. This will be player vs. player. The bots are stand-ins for players, not really "mobs" like in a single-player game.

Interior/ "exterior" spaces: a mix of interior spaces and spaces large enough that could be exterior (but they also may be enclosed interior spaces, theme-wise).

Combat: ranged - bullets and rocket launchers. Click, click, boom.

Suggested process:

If you don't typically play MP FPS's, have a classmate help you check some out! Good online reference: *The Visual Guide to Multiplayer Level Design* by Bobby Ross

Paper map - The paper map is intended to get you started and thinking of the layout and where to place spawnpoints and pickups. While you should have a complete design on paper *before* you dive into Unreal, you do not need to retro-fit, **in fact you should not retro-fit,** the paper map to your 3D Unreal level. That's not what we use maps for - ultimately you are making a game, not a paper map. *It is expected the 3D level will evolve different from the paper map design.*

Therefore, once you have a paper map that's to a point where you have a design you think works, you can go into Unreal. The paper map may still be rough then, sure. But for this assignment, and your portfolio, I still want you to turn in a clear, clean and readable version of the paper map for the 1st due date. So, you may need to clean it up. But don't retro-fit it to what you're building in Unreal. Keep it real.

Note: Use the ShooterGame template in Unreal 4 to make your map.

MP Level Specifications

- Size: the MP level map should be large enough for 4 to 10 players. For size, a map roughly the size of the playable area of the Sanctuary map can work (but note the architecture does *not* need to be as elaborate as Sanctuary is. Also you should landmark it better than Sanctuary is landmarked).
- Place player start.
- Place bot pawns (away from player start).
- Place pickups for
    - Health
    - The sweet Rocket launcher
    - Ammo
- Create cover elements that you feel are needed.
- Create navmesh so the bots can navigate and go after you. Now you can playtest your map! *(see "Additional Unreal 4 Info" below)*
- For whitebox:
    - Texture floors, walls and ceilings differently.
    - Place basic lights as necessary.
    - Additional detailing, static mesh placement and fancier lighting are optional. Do as finished a job as ambition drives you, but it is not expected you will be creating a finished AAA map in 2 weeks.

Paper Map Info

When designing the level, you *can* think about what the spaces are, and their purpose, **but this is optional**, as is labeling the spaces on the paper map. **The focus is on MP gameplay.**

The map does *not* need to be accurate to a specific scale, but you should have some idea of the rough size of spaces.

Options for drawing the map:

- Your map can be drawn by hand on paper, if you wish.
    - If drawn by hand, I strongly suggest using graph paper.
- Or, your map may be drawn digitally in MS Paint, Photoshop, Gimp or a drawing application of your choice. However, you should draw the map "from scratch" - *do not use* "dungeon mapping software" that draws the rooms for you or uses pre-made modular tiles, etc. If you have any questions about this, let me know.
    - If you do draw the map digitally, I strongly suggest starting out designing/sketching by hand on paper.

Suggestion: whether you use hand sketching or draw the map digitally, adding the text digitally may be easiest and is cleanest,

Submit map as JPG through Blackboard: Whichever option for drawing the map, or mix of options that you take (hand-drawn, digital, or combo of both), you need to submit a jpg of it - submit as a jpg (scanned in from paper, or from drawing application).

ADDITIONAL UNREAL 4 INFO

- IMPORTANT: You'll need to download the **Shooter Game** Unreal 4 project template from Epic.
- **WARNING:** You **MUST be in the ShooterGame project when you start your new map** to have FPS code associated with it. If you don't, you will need to *Migrate* your assets later and you will be sad having to do that, plus it may not work.
- Note: do NOT start in the 3rd person shooter or the template
- After you open the Example Map.umap in the ShooterGame project, **be sure to do a "Save As" and save your level with your name in it.** Ex: LSkywalker
- Where does Unreal save the .umap? Here:
    - \My Documents\Unreal Projects\ShooterGame\Content\Maps
- After you build some map area you can try adding bot pawns. Then place a Navmesh volume:
1. To add a **Navmesh volume** - Navmesh is generated by a volume which you must place. You find the Nav Mesh Bounds Volume asset in **"Volumes"**
2. Drag the Volume asset to the middle of your map. Then resize the volume so it covers your whole map.
3. Then you need to **Build Paths** - click on the Build drop-down button and select Build Paths
4. After that, when you click "Play" the bots should be able to navigate. They'll try to kill you. I suggest you try to kill them first.