

ASSIGNMENT 6

INTRO, PURPOSE AND GOAL

1. To make games with procedural generation
2. To work more with 2D games

HAND-IN

Hand in before Wednesday 27th March, by pasting the URL to your github project next to your name in this sheet:

<https://docs.google.com/spreadsheets/d/1rekEFkgqSKu9matm9qia9eLW68W9Ph06gJlogIDCJ68/edit#gid=0>

USEFUL RESSOURCES

1. A code base you could use to start your project from, it has some basics set up already:
<https://github.com/borginteractive/ProcGen2D>
2. Complex top down generation: <https://www.youtube.com/watch?v=xNqqfABXTNQ>
3. Another top down generation tut: <https://www.raywenderlich.com/2425-procedural-level-generation-in-games-using-a-cellular-automaton-part-1>
4. Simple procedural generation: <https://www.youtube.com/watch?v=j2E5nXzzrhg>
5. What is chunking:
http://www.gamasutra.com/blogs/GrahamDavis/20170130/290326/Procedural_Level_Generation_in_Unity_for_MERC_part_1_of_2.php
6. Mobile touch input, for those who want a head start for next week:
<https://docs.unity3d.com/Manual/MobileInput.html>

ASSIGNMENT

GREEN (MINIMUM REQUIREMENTS & CURRICULUM)

1. In this assignment, you must make 2 different games
2. Next assignment (not now) – these games must be converted to mobile games.
3. GAME 1:
4. Use the code base from resources or start a new project in Unity (make sure to use the 2D template).
5. Make a top down game. It could be a pac-man clone, a top down strategy game or whatever you please, as long as it is a 2D, top down game. If you are making a top down strategy game, I recommend making it turn based, since real time is a bit harder.
6. You can use sprites or tilemaps to generate the tiles of the game.
7. The controls must be ONLY with the mouse, and not using right click. Simple control will make porting to mobile easier, when we have to do that
8. There must be some degree of procedural generation. If it is a pacman clone, make sure the walls and powerups are randomized. If it is a top down strategy game, the leves must be randomized in some way, for example, mountains or resources are scattered all over the place in random or semi-random fashion.

9. GAME 2:
10. An infinite runner, like Subway Surfers. This game can be 3D or 2D – you decide. You also decide if it is a sidescroller, a third person game, or a top down game.
11. The game must be quite simple and utilize one button only, meaning no matter where I click on the screen, the player jumps (or ducks or whatever you prefer). The aim of the game is to jump at the right moment.
12. The level must be procedurally generated – so make sure there are obstacles randomly in the level.
13. Make sure the game ends and starts over if the player hits an obstacle

YELLOW (GO FOR IT)

1. Make sure the two games are actually playable, so the games never generates impossible levels
2. Make some points or powerups in Game 2, so players get tempted to jump and get them, while also having to time it so they don't hit the obstacles.

RED (CHALLENGE YOURSELF)

1. Use chunking to make more interesting levels in either or both games