**Website Building: Weekend**



**Assignment**

HTML/CSS - Minecraft

The following exercise contains the following subjects:

* HTML + CSS + JavaScript

**Submitting instructions:**

Please add the following:

* A link to the repository
* Free text – a description of the app. Stuff you found hard to implement, known bugs, and your assignment review.

**Understanding the task**

Minecraft is a sandbox video game initially created by

Swedish programmer, [Markus "Notch" Persson](https://en.wikipedia.org/wiki/Markus_Persson) . The creative and building aspects of [Minecraft](https://www.minecraft.net/en-us) enable players to build constructions out of textured cubes in a 3D [procedurally generated world](https://en.wikipedia.org/wiki/Procedural_generation).

In our version of the game, we will use a 2D pre-generated world (meaning, our world will be hardcoded).

1. The user will have 3 types of tools:
2. Axe - for cutting trees
3. Pickaxe - for mining rocks
4. Shovel - for digging dirt
5. Clicking on a tool followed by clicking on a tile in the world will remove the tile. (If it is of the correct type according to #1) and add it to the inventory.
6. Users can click on the tile in the inventory and place it back in the world (just the last one).

**Approaching the assignment**

1. Sit down and think about the implementation
2. Different functionalities
3. Things that should be in HTML
4. Things that should be generated on the fly using JS
5. **Write a lot of pseudo-code before typing one bit of code!**
6. Do not use 3D-party plugins
7. Try to write everything from scratch, if you copy code from the internet be sure that you understand it completely.

**Basic Requirements**

1. You should implement all of the features

2. You must use Git throughout the assignment (and not only commit at the end)

3. The UI/UX should look at least as good as the demo.

4. You should create a landing page with a tutorial

explaining the game.

5. A reset button that will reset the world to its initial state.

**Tips**

1. Prefer using CSS classes instead of dynamically changing CSS properties in JS.
2. The background-image property would be a better choice than <img> for tiles.
3. Create an object that holds all the logic.
4. Break down the main functionalities in different functions.
5. Hardcode the containers in HTML.
6. Separate your concerns. A separate HTML file, CSS file and JS file.

**Geek out**

Extra Features:

* Add the ability to remember more than the last tile clicked (maintain the user’s inventory) Add more tools
* Add more tiles
* Make it responsive
* Allow the user to set the world width and height
* Add themes (changing a theme should change the world’s textures)
* Add more than one world type
* Make the world wider than the screen and allow scrolling
* Add fade-in/out effect when adding/removing tiles

**Unleash the ninja within**

* Randomize the generation of the world (make it reasonable, trees should be on grass, nothing floating in the air, etc).