



# Website Building: Weekend Assignment

## HTML/CSS - Minecraft

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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.
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### Understanding the task

Minecraft is a sandbox video game initially created by Swedish programmer, [Markus "Notch" Persson](#). The creative and building aspects of [Minecraft](#) enable players to build constructions out of textured cubes in a 3D [procedurally generated world](#).

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:
  - a. Axe - for cutting trees
  - b. Pickaxe - for mining rocks

- c. Shovel - for digging dirt
- 2. 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.
- 3. 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
  - a. Different functionalities
  - b. Things that should be in HTML
  - c. Things that should be generated on the fly using JS
  - d. Write a lot of pseudo-code before typing one bit of code!**
- 2. Do not use 3D-party plugins
- 3. 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).