Take home assignment: Blockchain Application (DAPP)

Duration: One week maximum allowable time for handing in

The following assignment is designed to test your ability to successfully design, implement and test a distributed application . The outcome desired is an application and the code for the project.

The application you develop is a land grab application. It means that you are claiming areas of earth and stake your ownership on them. You can utilize a blockchain of your choice giving reasons in your design documentation for the choice and a language or framework of your choice for this task.

The smallest piece of land is defined by this web site <https://what3words.com/> as a 9 feet by 9 feet square with each square having a unique name. Here we are testing two functionalities. Your ability to get geolocation from the mobile device and interact with an external API.

You will design 3 types of smart contracts that will be triggered by 3 buttons on the application.

1. Claim the square and add the name of the land to your inventory
2. Release the square and free up the square
3. Swap one square of yours with another square of another user

For any swap or release you do not have to be in that square, however for claims you have to be at that square to claim it.

For this application you need to keep track of the user where the user would be able to delete themselves in a setting panel. Upon deleting oneself all the lands will be released.

The minimum application would be able to do all of that.

For bonus points you can design visuals for the land owned by a user.

For further bonus points if the user surrounds another user’s land completely then the user can forcefully take over the surrounded land without swapping.

Thank you and good luck.