School of Computing
CA326 Year 3 Project Proposal Form

SECTION A

Project Title - Ethereum Blockchain Marketplace

Student 1 Name - Dara Lynch ID Number - 19324446
Student 2 Name - Alan McGrath ID Number - 19392951

Introduction

Our idea was to create a website that is an online platform where almost anything can be bought or sold, similar to the likes of DoneDeal or Adverts. Our hope is to reduce the opportunities for dishonest users to scam others. We plan to do this by utilizing the Ethereum blockchain where reviews and transactions can be publicly visible and cannot be deleted or altered.

Outline

In our project we would like to create a marketplace for private and public buyers and sellers. On this marketplace you will be able to sell a large range of products such as furniture, tickets, electronics, clothing and cars.

When transactions are completed, they will have metadata attached. This will contain the details of the transaction and may also include a review of the buyer or seller. This information will be publicly visible and cannot under any circumstances be changed or deleted, which will show future clients whether a buyer/seller is legitimate or not.

Background

One of the main issues with using the currently available marketplaces such as DoneDeal or adverts is the risk of being scammed. There is a large amount of dishonest buyers and sellers on these platforms.

In order to help combat this issue we would like to create a platform where users can build up a publicly verifiable backlog of past transactions and reviews. This will improve the transparency and legitimacy of the platform by allowing users to view all other users' transaction history and reviews. The current marketplaces have little or no measures in place to minimise or prevent users from being scammed or deceived.

In a case where a seller scams a buyer, the buyer can leave a negative review which will be on the ethereum blockchain and will be visible to all future users who interact with this seller. The data which is publicly available will include the wallet addresses of both users, meaning the seller cannot simply create a new account on our website to circumvent a bad review as their wallet address will be the same even for a new account.

Goals

We aim to achieve an online marketplace where buyers and sellers can operate with complete trust and transparency. Users will be able to have the piece of mind of personally verifying all of the other users' transactions and reviews before engaging in business with that user.

Programming language(s) and tools

The website will be created on top of Django, using HTML, CSS and Javascript for the front end, python for the back end and Solidity working on the Ethereum blockchain. We have experience using Django on PyCharm which also allows us to easily work with Git.

Breakdown of work

Student 1 - Dara Lynch

I plan to take a large part of the work revolving around building the framework for the transactions to take place and to communicate this with the Ethereum blockchain. I will also work on the python backend and help with the frontend.

Student 2 - Alan McGrath

I plan to collaborate with my partner to build the framework for the Ethereum transactions and to develop the python backend for this project. I will take on a large part of developing the frontend of our website using HTML, CSS and JavaScript.