COMP6212 Computational Finance.
Assignment 4: Design a cryptocurrency for a bonus scheme.

Maximum marks for this assignment 50 marks.	Intended Learning Outcomes (from syllabus) A3. Theoretical foundation of Blockchain technologies D2. Analyse the strength and limitations of Blockchain technologies. D3. Investigate emerging variants of cryptocurrency-based
Overall percent for the module: 25%	Date for hand-in: **Tuesday 14th May 2019 at 16:00hs**

1 Scenario

Your company has devised a bonus scheme. There are various ways staff can spend the rewards with selected partners. The company rewards the staff member additional points based on their performance (for this assignment we are not concerned about how this is achieved). The companies in which the staff can spend their bonus are: Car; Boat; Holiday, Furniture, Jewellery, clothes, restaurants.

You have been asked to choose a blockchain infrastructure to manage the bonus scheme.

2 Instructions

You are to partner with another student(s), a group of 2 -3 students to produce a joint submission.

If you cannot form a group let me know and I will allocate you a partner. Undertaking this assign as an individual will not get you more marks, just increase your workload. If you are struggling to make a group e-mail is gbw@soton.ac.uk.

Hand-in your report electronically (PDF only) using the CBass system **and** a paper copy to student's reception in Building 59 (Zepler)

2.1 What to hand-in

Write a 3000 word report (limits: above 2700 but below 3300)

A front cover: to include a word count, team names and student numbers.

No abstract, no contents page, no list of figure, no list of tables and no appendices. The word count starts with the introduction and finishes with the last word of the conclusions. The word count does not include the front cover, references or images.

The report should cover the following:

Criteria	Description	Maximum Marks
Blockchain	The rational for the type of blockchain you would use, including a brief description and comparison of the different blockchain approaches that could be used for this scenario.	10
Consensus	The rationale for the choice of a consensus algorithm	10
Smart Contract	Design of the Smart Contract, give the aims, objectives, limitations of the contract and describe what it is to (requirements).	10
Pseudo Code	Design in Pseudo code of a smart contract, and describe how it may be extended	10
References	References used to develop the argument	10