CST4125: Blockchain Development
Week: 24
Title: Formative Feedback

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Winter 2023

Contact and Office Hours

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Office Hours
- During term time only
- When: Autumn Term: Mondays 1100-1300hrs
- Please read notifications or emails
- There are occassions that these could be arranged online, e.g., due to industrial action or inclement weather

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Deadlines

Description	Submission	Weight	Deadline	Feedback Formative	Feedback Summative
1. Hyperledger	MyLearning	50%	18th December 2022	LW11-12	12/01/2023
2. Ethereum	MyLearning	50%	2nd April 2023	LW23-24	24/04/2023
Resits	MyLearning	50-100%	1st July 2023	None	None
Deferals	MyLearning	50-100%	1st July 2023	None	None

Objectives

- Assessment Criteria
- Questions on Coursework

Structure

Lecture
There is no structure to today's lecture. This is about formative feedback.

Problem Definition: 12%

Criteria	Sub-criteria	0	1	2	3	4	W	Σ
Problem Definition, PD (12%)	Specification	No Spec.	Aim matches implementation	Spec. is conducive to Ethereum and matches implementation.	UCD Description	All components explained and coherent	1	/4
	Use Case Diagram, UCD.	No UCD	Aligned Actors to code.	Relationships between UCs.	UCs completed as recommended in [1] (2 marks)		1	/4
	Actors	No Actors	1 Actor	2 Actor	3 Actor	4+ Actor	1	/4

Contract Model: 12%

Criteria	Sub-criteria	0	1	2	3	4	W	Σ
Contract Model (12%)	Relationships	No Relationships	Inheritence	Aggregate	Interface	Code Alignment	1	/4
	Methods	No Methods	Some methods, incomplete	Return Types identified	Parameters Identified	Code Alignment	1	/4
	Data	No Data	Clear state data	State data values & pre-conditions	Optimised for Gas	Code Alignment	1	/4

Contract Development: 32%

Criteria	Sub-criteria	0	1	2	3	4	W	Σ
Contract Development(32%)	Solidity	None	Transfer funds	correct use of assert, equal and require	FT compliant/ERC-20	Correct use of functional qualifiers	1	/4
	Solidity	None	Variables & Storage correct	Compliant with storage rules	Events captured and use appropriately	Correct use of polymorphic and override functions	1	/4
	Code Alignment	None	SPA conducive to design	Alignment exceptions commented	Complete Alignment of SPA	Complete Alignment of solidity	1	/4
	Data	None	Appropriately sized data types	Correct mappings & nested-mappings	Access modifiers	Correct Qualifiers	1	4
	Users	None	Correct Modifiers	Correct Access	Correct Transfer of funds	use of structures and enums	1	/4
	React	None	correct use of components	correct use of useEffect and useState	use of Properties	use of Array methods appropriately, e.g., spread, map, forEach	1	/4
	Web3	None	getAccount	getBalance	currentProvider	getBlock & getTransaction	1	/4
	Bulma	None	Columns & Layout	Tables & Forms. Entry and output.	Navigation	Footer	1	/4

Evaluation: 12%

Criteria	Sub-criteria	0	1	2	3	4	W	Σ
Evaluation (12%)	Error Handling	None	Require	Revert	Assert	Emit	1	/4
	Truffle	None	Compile	Migrate	Test	Config File	1	/4
	Input/Output	None	Project Structure	Unit test	truffle test output	block inspection	1	/4

Security: 12%

Criteria	Sub-criteria	0	1	2	3	4	W	Σ
Security (12%)	Arithmetic	None	Identified vulnerability.	Concise solutions.	Demonstration	Tested, tested evaluated and limitations discussed	1	/4
	Reentrancy	None	Identified vulnerbility & associated function(s)	Clear concise solutions	Demonstration	Tested, evaluated and limitations discussed.	1	/4
	Security Measure	None	Identified vulnerbility & associated function(s)	Clear concise solutions	Demonstration	Tested, evaluated and limitations discussed.	1	/4

Presentation: 12%

Criteria	Sub-criteria	0	1	2	3	4	W	Σ
Presentation (12%)	Content	No slides	Coherent presentation and MP4	Narration is clear, understandable and audible	Between 7-8 minutes	Consistency and clear figures	1	/4
	Transaction, TX	No Demo	Demo of successful TX	Demo of unsuccessful TX	Demonstration of unsuccessful Demonstration	All demonstrations completed	1	/4
	Transaction, TX	No Demo	Demo of unit testing	Demo of security measure	Demo of associated block update	Demo of aim of coursework 2	1	/4

Documentation: 8%

Criteria	Sub-criteria	0	1	2	3	4	W	Σ
Report (8%)	English	Sentences rendered nonsensical	No misspellings	Written in third person	Good grammar	Relevant and not verbose	1	/4
	Template	Numbered sections and chapters. 5 Chapters present.	Correct structure present, front matter, main matter and back matter	Figure, listing and table captions correctly numbered.	Citations or references present, correct bibliography style applied	Correct front matter, including title page, declaration, acknowledgements and ToC	1	/4

Summary

- Coursework Feedback

References I

[1] Alistair Cockburn. *Writing effective use cases*. Pearson Education India, 2001.