ICTICT527 Develop and maintain blockchain solutions

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 6.0.

Application

Industry Focused

This unit describes the skills and knowledge required to identify, develop and maintain blockchain solutions to specified business needs.

It applies to those in roles, including senior software developers or blockchain developers, who perform the planning, development and implementation of new and existing technologies to business models in the Information and Communications Technology (ICT) and related industries.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

General ICT

https://github.com/kdnolanchisholm/

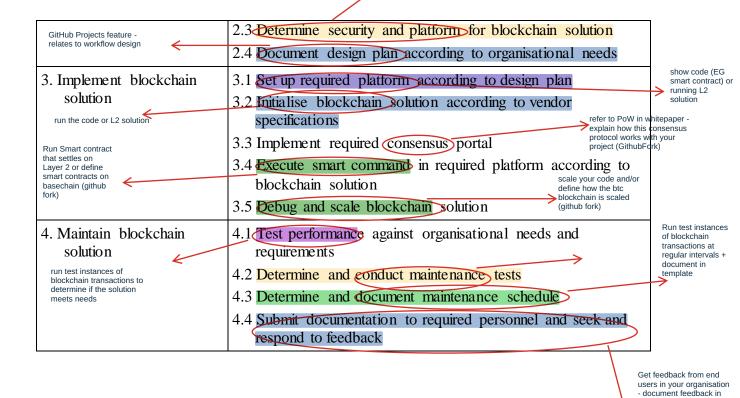Fork Github repo and describe needs of their industry

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes.	*Performance criteria describe the performance needed to demonstrate achievement of the element.*
1. Determine blockchain solution requirements Proof of Work and Proof of Transfer GithubRepo forkk answer 1.3 for their industry Research and reference in Github Repo Fork 1.4	1.1 Establish blockchain objectives, purpose and requirements according to organisational needs 1.2 Identify organisational processes and transactional types suitable for blockchain technology 1.3 Identify organisational use-case according to organisational needs 1.4 Determine legislation and organisational policies and procedures for blockchain and determine impact on solution
2. Design blockchain solution components	2.1 Gather data according to organisational needs 2.2 Design integration workflow according to organisational need

Fork Github Repo - gather and report data (spreadsheet)

Diagram (EG MIRO) embed in fork https://github.com/kdnolanchisholm/ICTICT527

BTC Security understanding explained +choice of layer 2 solution EG Lightning

GitHub Projects feature - relates to workflow design	2.3 Determine security and platform for blockchain solution
	2.4 Document design plan according to organisational needs
3. Implement blockchain solution run the code or L2 solution Run Smart contract that settles on Layer 2 or define smart contracts on basechain (github fork)	3.1 Set up required platform according to design plan
	3.2 Initialise blockchain solution according to vendor specifications
	3.3 Implement required consensus portal
	3.4 Execute smart command in required platform according to blockchain solution
	3.5 Debug and scale blockchain solution
4. Maintain blockchain solution run test instances of blockchain transactions to determine if the solution meets needs	4.1 Test performance against organisational needs and requirements
	4.2 Determine and conduct maintenance tests
	4.3 Determine and document maintenance schedule
	4.4 Submit documentation to required personnel and seek and respond to feedback

show code (EG smart contract) or running L2 solution

refer to PoW in whitepaper - explain how this consensus protocol works with your project (GithubFork)

scale your code and/or define how the btc blockchain is scaled (github fork)

Run test instances of blockchain transactions at regular intervals + document in template

Get feedback from end users in your organisation - document feedback in Github

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

documentation - reasoning articulated behind btc blockchain solution

SKILL	DESCRIPTION
Learning	• Monitors outcomes of decisions, considering results and identifying key concepts and principles that may be adaptable in the future
Numeracy	• Uses mathematical formulae to calculate required equipment, undertake measurements and determine response times
Oral communication	• Obtains information to confirm requirements and responsibilities distinctively using appropriate industry language
Reading	• Recognises and interprets technical, manufacturer and organisational documentation to determine and confirm job requirements
Writing	• Prepares documentation outlining maintenance schedule according to specified requirements
Planning and organising	• Operates from a broad conceptual plan, developing the operational detail in stages, regularly reviewing priorities and performance during implementation, and identifying and addressing issues
Problem solving	• Uses nuanced understanding of context to recognise anomalies and subtle deviations to normal expectations, focusing attention and remedying problems as they arise
Self-management	• Takes full responsibility for identifying and considering relevant organisational protocols and requirements

Hashrate calculator + explainations documented

Referencing whitepaper - ongoing questions

documentation

peer-reviewed

documentation

peer-reviewed

requirements identified + use of tools to make project goals clear

working with different L2 solutions + basechain

Peer-reviewed Github report

SKILL	DESCRIPTION
	• Uses systematic processes, setting goals, gathering required information and identifying and evaluating options against agreed criteria
Technology	• Demonstrates a sophisticated understanding of principles, concepts, language and practices associated with the digital world

P2P tech, software, hardware and web3 protocols used as much as possible

Unit Mapping Information

No equivalent unit. New unit.

Documentation of overall project - and using project tool to identify and evaluation

Links

Companion Volume Implementation Guide is found on VETNet -
https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2