

**Specification of Competency Standards**  
**for the Retail Industry**  
**Unit of Competency**

Functional Area - Website Design and Development

Title	Design and setup software systems
Code	107224L6
Description	In the process of website design and development, implement software system design and architecture.
Level	6
Credit	6 ( For Reference Only )
Competency	<p>Performance Requirements</p> <p>1. Understand the basic knowledge of software system design and architecture</p> <ul style="list-style-type: none"> <li>• Understand master planning of information systems engineering, software development methods, development management, reverse engineering and reconstruction projects etc,</li> <li>• Master the software architecture design knowledge, architecture-based software development methods and system architecture assessment etc.</li> <li>• Understand UML modeling and architecture documentation, and UML-based software development process</li> <li>• Understand development platforms and typical architectures such as CORBA, RMI and DCOM etc.</li> <li>• Understand security technology, management and evaluation such as encryption and decryption techniques, hash functions and digital signatures, key distribution centers and public key infrastructure, information security systems, etc.</li> <li>• Understanding system security architecture design, such as network security architecture design, database system security design, etc.</li> <li>• Understand the reliability design of the system, such as software reliability modeling, evaluation, design and management</li> </ul> <p>2. Implement software system design and architecture</p> <ul style="list-style-type: none"> <li>• Implement the software system development life cycle, such as system design, requirements analysis, system architecture design, implementation model, system conversion, operation and maintenance</li> <li>• Implement software architecture management (VRAPS organization and management principles), including vision, Rhythm, Anticipation, Partnering and Simplification.</li> <li>• Plan and design of hierarchical architecture and information architecture.</li> <li>• Establish service-oriented architecture (SOA), such as reference architecture, key technologies and standards, design principles and design patterns and implementation processes</li> </ul> <p>3. Exhibit professionalism</p> <ul style="list-style-type: none"> <li>• Ensure the software system design and architecture in line with international standards</li> <li>• Ensure the integration capacity of the software system design and architecture order to achieve a seamless coordination with different stakeholder.</li> </ul>
Assessment Criteria	<p>The integrated outcome requirement of this UoC is the ability to:</p> <ul style="list-style-type: none"> <li>• Understanding software system design and architecture, such as UML modelling and architecture documentation, component platform and typical architecture, system security architecture design and system reliability design</li> </ul>

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	<ul style="list-style-type: none"><li>• Carryout software system design and architecture and software system development life cycle for the implementation of software system architecture management and service-oriented architecture.</li></ul>
Remark	