

Specification of Competency Standards
for the Information & Communications Technology Industry
Unit of Competency

Functional Area - Operations Management

Title	Develop Virtual Reality (VR) application
Code	107996L4
Description	This unit of competency applies to all Digital Media Technology (DMT) practitioners who are involved in the development of VR applications. VR refers to a computer simulated environment that creates life-like 3D visualizations, it is a powerful medium for creating interactive and engaging experiences that involves multiple senses such as visual, auditory and tactile, and the virtual environment gives users a more complete representation of the world and a higher degree of engagement. This UoC is concerned with the abilities in VR application development using specified tools and facilities.
Level	4
Credit	3
Competency	<p>Performance Requirements</p> <p>1. Knowledge for VR application development</p> <ul style="list-style-type: none"> • Realize the philosophy and guidelines of the organisation towards VR application development • Master programming knowhow, concepts and techniques • Well versed in computer graphics, software engineering and applied mathematics • Possess good understanding about virtual reality and related techniques, such as: <ul style="list-style-type: none"> ○ VR software architecture design ○ VR software prototyping ○ 3D simulation engine development and implementation ○ Porting VR software to various platforms ○ High quality standard in software coding, etc. • Understand software related copyright, ethics and privacy issues • Possess the personal traits of a typical VR application developer, such as: <ul style="list-style-type: none"> ○ Highly imaginative ○ Credible industry exposure ○ Experienced with user preferences and requirements, etc. • Keep abreast of new research in Substitutional Reality (SR) and related techniques, such as: <ul style="list-style-type: none"> ○ Create the virtual world using the physical environment ○ Pair the physical object to its virtual counterpart <p>2. Develop VR application:</p> <ul style="list-style-type: none"> • Fully comprehend the key requirements for a VR system and apply them in the development process, including : <ul style="list-style-type: none"> ○ Performance ○ Flexibility ○ Ease of use, etc. • Fully explore and exploit the advantages offered by those popular VR development tools, such as : <ul style="list-style-type: none"> ○ 3D modelling tools used for developing VR games products like CAD software, 3ds Max, etc. ○ Ease of maintenance ○ Ease of modifications ○ Low resources consumption, etc. • Perform routine tasks associated with major milestones in the VR application development life cycle, including :

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	<ul style="list-style-type: none"> ○ Prototyping ○ Development ○ Testing ○ Debugging, etc. ● Perform the detailed VR application development tasks, which may include but not limited to the followings : <ul style="list-style-type: none"> ○ Create high-level and low-level interfaces ○ Create graphics interfaces ○ Handle the details of user and program interaction ○ Edit screen content for fast turnaround ○ Design animation and digital visual effects, etc. ● Make appropriate adjustments reiteratively to the VR application being developed until the desired outcomes are achieved ● Present the completed VR application to the game development team or supervisor for comment and approval <p>3. Exhibit professionalism</p> <ul style="list-style-type: none"> ● Always devote fully to all activities related to the development of the VR application in concern, and remain open, current and updated with related technologies ● Always perform VR application development according to requirements and expectations, and place the interests of potential users as the highest priority consideration
Assessment Criteria	<p>The integrated outcome requirements of this UoC are the abilities to :</p> <ul style="list-style-type: none"> ● Able to complete the VR application development tasks within time and budget constraints ● Able to grasp users' expectations towards the VR application in concern and produce outputs with appropriate contents and level to satisfy the users
Remark	