

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

Functional Area - Operations Management

Title	Implement data management of apps
Code	107990L4
Description	This unit of competency applies to development personnel in the DMT (digital Media Technology) profession. Data management is one of the mandatory tasks in any ICT development process and mobile apps are of no exception. This UoC concerns competencies in handling and manipulating data during the apps development process in the capacity of a developer.
Level	4
Credit	3
Competency	<p>Performance Requirements</p> <p>1. Knowledge for data management of apps</p> <ul style="list-style-type: none"> <li>• Master programming knowhow, concepts and techniques</li> <li>• Understand the organisation's policies and guidelines towards data management</li> <li>• Possess specialized programming skills in areas such as: <ul style="list-style-type: none"> <li>○ Authoring</li> <li>○ Engineering</li> <li>○ Quality testing, etc.</li> </ul> </li> <li>• Familiar with programming languages related to the data management context such as: <ul style="list-style-type: none"> <li>○ SQL</li> <li>○ PHP</li> <li>○ ASP.net</li> <li>○ JSP</li> <li>○ JavaScript, etc.</li> </ul> </li> <li>• Possess good understanding about data manipulation in the process of apps development, such as: <ul style="list-style-type: none"> <li>○ Web-based or local database types</li> <li>○ Methods for apps data connection</li> <li>○ SQL statements for data manipulations such as Create, Read, Update and Delete (CRUD)</li> <li>○ Data operation for remote servers, etc.</li> </ul> </li> <li>• Keep abreast of the new developments and technological advancements in the ICT industry</li> </ul> <p>2. Implement data management of apps:</p> <ul style="list-style-type: none"> <li>• Identify the data needs for the apps to be developed, factors to consider may include but not limited to the followings: <ul style="list-style-type: none"> <li>○ User's geo-location</li> <li>○ User behaviour, e.g. how long, frequency, time of the day, etc.</li> <li>○ User preferences</li> <li>○ User demographic information</li> <li>○ Behaviour analytics of the users, etc.</li> </ul> </li> <li>• Determine the methods and options for the following data management issues: <ul style="list-style-type: none"> <li>○ Rapid backup and recovery</li> <li>○ Data availability</li> <li>○ Data sovereignty</li> <li>○ Data security, etc.</li> </ul> </li> <li>• Create local, remote, web or cloud based data storage according to the requirements of the apps in concern and guidelines of the organisation</li> </ul>

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	<ul style="list-style-type: none"> <li>• Create and link databases to the user interface such that information can be retrieved, stored and processed interactively via the apps application</li> <li>• Perform session data creation and removal locally and remotely by actions such as: <ul style="list-style-type: none"> <li>○ Get</li> <li>○ Put</li> <li>○ Post</li> <li>○ Delete</li> <li>○ Data replication, etc.</li> </ul> </li> <li>• Monitor the operation of data and interaction with the apps to identify possible loopholes and problematic areas</li> </ul> <p>3. Exhibit professionalism</p> <ul style="list-style-type: none"> <li>• Always be current and updated with trends of data management technologies</li> <li>• Apply industry's best practices to data management that meets the organisation's business needs and conformed with the requirements of the apps in concern</li> </ul>
Assessment Criteria	<p>The integrated outcome requirements of this UoC are the abilities to:</p> <ul style="list-style-type: none"> <li>• Grasp the organisation's policy and guidelines towards data management and apply to the apps in concern accordingly</li> <li>• Design and implement the required data management methods that can operate correctly and conform to the requirements of the apps application</li> </ul>
Remark	