## **Database Design & Development – Higher Checklist**

Topic	Database and Design Development	Tick
Analysis	Identify the end-user and functional requirements of a database problem that relates to the	
	implementation at this level.	
Design	Describe and exemplify entity-relationship diagrams with three or more entities, indicating:	
	entity name	
	• attributes	
	<ul> <li>name of relationship</li> </ul>	
	cardinality of relationship	
	o one-to-one	
	o one-to-many	
	o many-to-many	
	Describe and exemplify an instance using an entity-occurrence diagram.	
	Describe and exemplify a compound key.	
	Describe and exemplify a data dictionary with three or more entities:	
	entity name	
	attribute name	
	<ul> <li>primary and foreign key</li> </ul>	
	attribute type:	
	o text	
	o number	
	o date	
	o time	
	o Boolean	
	attribute size	
	• validation:	
	o presence check	
	o restricted choice	
	o field length	
	o range	
	Exemplify a design of a solution to a query:	
	tables and queries	
	• fields	
	search criteria	
	• sort order	
	• calculations	
	grouping	
Implementation	Describe, exemplify and use SQL operations for pre-populated relational databases, with three	
	or more linked tables:	
	<ul> <li>UPDATE, SELECT, DELETE, INSERT statements making use of:</li> </ul>	
	<ul><li>Wildcards (*?)</li></ul>	
	<ul> <li>aggregate functions</li> </ul>	
	■ MIN	
	■ MAX	
	■ AVG	
	■ SUM	
	<ul><li>COUNT</li></ul>	
	<ul> <li>computed values</li> </ul>	
	o AS (alias)	
	o GROUP BY	
	o ORDER BY	
	o WHERE	
	Read and explain code that makes use of the above SQL.	
Testing	Describe and exemplify testing:	
	<ul> <li>SQL operations work correctly at this level</li> </ul>	
Evaluation	Evaluate solution at this level in terms of:	
	fitness for purpose	
	accuracy of output	