



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **ICAB5068B Build using rapid application development**

**Release: 1**

## ICAB5068B Build using rapid application development

### Modification History

Not Applicable

### Unit Descriptor

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|------------------------|--|
| <b>Unit descriptor</b> | <p>This unit defines the competency required to build using rapid application development (RAD) tools.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p> |
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### Application of the Unit

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| <b>Application of the unit</b> |  |
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### Licensing/Regulatory Information

Refer to Unit Descriptor

### Pre-Requisites

|                           |  |  |
|---------------------------|--|--|
| <b>Prerequisite units</b> |  |  |
|                           |  |  |
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## Employability Skills Information

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| <b>Employability skills</b> | This unit contains employability skills. |
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## Elements and Performance Criteria Pre-Content

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| Elements describe the essential outcomes of a unit of competency. | Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide. |
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## Elements and Performance Criteria

| ELEMENT                            | PERFORMANCE CRITERIA  |
|------------------------------------|---|
| 1. Construct application using RAD | 1.1. Capture and record business rules using a methodology well-suited for the chosen RAD and <i>RAD techniques</i><br>1.2. Design <i>application</i> with focus on modularity and future extension<br>1.3. Develop code by other <i>RAD tools</i><br>1.4. Build and demonstrate completed transaction to <i>user</i> for revision within the agreed terms of reference<br>1.5. Take action to ensure that design caters for continuous change by involving <i>user</i> in iteration process<br>1.6. Provide QA testing throughout the phase and provide feedback to <i>appropriate person</i><br>1.7. Demonstrate use of code optimisers and performance tools |
| 2. Prepare handover stage          | 2.1. Track implemented modules and follow up where necessary with <i>appropriate person</i><br>2.2. Review <i>user</i> and builds for each module in the deliverables as preparation for handover<br>2.3. Compare <i>specifications</i> and implementation schedules for each module and confirm the functional requirements according to <i>specifications</i>   |

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- Communications where code is developed by CASE tool, code generator or industry standard tools and delivered within the 'timebox', and when specifications and implementation schedules for each module are compared and the functional requirements are confirmed according to project requirements
- Evaluation and presentation of information (e.g. when each completed transaction is built and demonstrated to end-users for revision within the agreed terms of reference)
- Ability to manage iterative changes in design by involving end-users in the

**REQUIRED SKILLS AND KNOWLEDGE**

development process

- Prototyping tools skills for identifying, analysing and evaluating a range of solutions

**Required knowledge**

- Current industry-accepted prototyping tools, with broad knowledge of general features and capabilities and detailed knowledge in some areas
- Broad general knowledge of the client business domain (e.g. when developing construction stage)
- Broad knowledge of three or more programming languages
- Broad knowledge of the role of stakeholders and the degree of stakeholder involvement
- Broad knowledge of quality assurance practices (e.g. when developing construction stage)
- Broad knowledge of three or more current industry development methodologies

## Evidence Guide

| <b>EVIDENCE GUIDE</b>   |  |
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| <p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p> |  |
| <b>Overview of assessment</b>   |  |
| <b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>   | <p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• Assessment must confirm sufficient knowledge of the fundamentals and features of RAD. Assessment must confirm the ability to build using RAD within the required timeframe and to technical and client specifications. High-quality code should be produced.</li> <li>• Supplementary questioning may be used during the assessment, where necessary, to ensure that all issues relating to quality issues were considered and appropriate choices made, given the chosen RAD technique.</li> </ul> <p>To demonstrate competency in this unit the person will require access to:</p> <ul style="list-style-type: none"> <li>• CASE tools</li> <li>• Prototyping software</li> <li>• Detailed user requirements</li> <li>• CASE repository to facilitate the reuse of templates and components</li> <li>• Code generator</li> <li>• Requirements document, including model and scope</li> </ul> |
| <b>Context of and specific resources for assessment</b>   | <p>RAD building for a software project should be carefully managed to deliver maximum benefit for cost and quality. Selection of the most appropriate RAD tool will take into consideration the targeted platform or multi-platform options. The breadth, depth and complexity covering planning and initiation of alternative approaches to skills or knowledge applications across a broad range of technical and/or management requirements, evaluation and coordination would be characteristic.</p> <p>Assessment must ensure:</p>  |

| <b>EVIDENCE GUIDE</b>           |   |
|---------------------------------|---|
|                                 | <ul style="list-style-type: none"> <li>• The demonstration of competency may also require self-directed application of knowledge and skills, with substantial depth in some areas where judgement is required in planning and selecting appropriate equipment, services and techniques for self and others.</li> <li>• Applications involve participation in development of strategic initiatives as well as personal responsibility and autonomy in performing complex technical operations or organising others. It may include participation in teams including teams concerned with planning and evaluation functions. Group or team coordination may also be involved.</li> </ul>  |
| <b>Method of assessment</b>     | <p>The purpose of this unit is to define the standard of performance to be achieved in the workplace. In undertaking training and assessment activities related to this unit, consideration should be given to the implementation of appropriate diversity and accessibility practices in order to accommodate people who may have special needs. Additional guidance on these and related matters is provided in ICA05 Section 1.</p> <ul style="list-style-type: none"> <li>• Competency in this unit should be assessed using summative assessment to ensure consistency of performance in a range of contexts. This unit can be assessed either in the workplace or in a simulated environment. However, simulated activities must closely reflect the workplace to enable full demonstration of competency.</li> <li>• Assessment will usually include observation of real or simulated work processes and procedures and/or performance in a project context as well as questioning on underpinning knowledge and skills. The questioning of team members, supervisors, subordinates, peers and clients where appropriate may provide valuable input to the assessment process. The interdependence of units for assessment purposes may vary with the particular project or scenario.</li> </ul> |
| <b>Guidance information for</b> | Holistic assessment with other units relevant to the  |

| <b>EVIDENCE GUIDE</b> |  |
|-----------------------|--|
| <b>assessment</b>     | <p>industry sector, workplace and job role is recommended.</p> <p>An individual demonstrating this competency would be able to:</p> <ul style="list-style-type: none"> <li>• Demonstrate understanding of a broad knowledge base incorporating theoretical concepts, with substantial depth in some areas</li> <li>• Analyse and plan approaches to technical problems or management requirements</li> <li>• Transfer and apply theoretical concepts and/or technical or creative skills to a range of situations</li> <li>• Evaluate information, using it to forecast for planning or research purposes</li> <li>• Take responsibility for own outputs in relation to broad quantity and quality parameters</li> <li>• Take some responsibility for the achievement of group outcomes</li> <li>• Maintain knowledge of industry products and services</li> </ul> |

## Range Statement

| <b>RANGE STATEMENT</b>   |  |
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| <p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p> |  |
| <p><b><i>Applications</i></b> may include but are not limited to:</p>  | <ul style="list-style-type: none"> <li>• commercial software applications</li> <li>• organisation-specific software; word processing, spreadsheet, database, graphic, communication packages and presentation functionalities</li> </ul> |
| <p><b><i>RAD tools</i></b> may include:</p>  | <ul style="list-style-type: none"> <li>• CASE tool</li> <li>• code generators</li> </ul>   |
| <p><b><i>User</i></b> may include:</p>   | <ul style="list-style-type: none"> <li>• a person within a department</li> <li>• a department within the organisation</li> </ul>   |

| <b>RANGE STATEMENT</b>                                   |   |
|--|---|
|  | <ul style="list-style-type: none"> <li>• a third party</li> </ul>   |
| <i>Appropriate person</i> may include:                   | <ul style="list-style-type: none"> <li>• supervisor</li> <li>• teacher</li> <li>• authorised business representative</li> <li>• client</li> </ul>   |
| <i>Specifications</i> may include but is not limited to: | <ul style="list-style-type: none"> <li>• technical requirements</li> <li>• user problem statement</li> <li>• current system functionality</li> <li>• project plan</li> <li>• software requirements</li> <li>• metrics</li> </ul>                            |
| <i>RAD techniques</i> may include:                       | <ul style="list-style-type: none"> <li>• CASE tools</li> <li>• iterative life cycles</li> <li>• prototyping</li> <li>• workshops</li> <li>• SWAT teams</li> <li>• timebox development methodology; and reuse of applications, templates and code</li> </ul> |

### Unit Sector(s)

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| <b>Unit sector</b> | Build |
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### Co-requisite units

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| <b>Co-requisite units</b> |  |
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## Competency field

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| Competency field |  |
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