



Australian Government

Department of Education, Employment and Workplace Relations

ICAB5067B Prepare for software development using rapid application development

Release: 1

ICAB5067B Prepare for software development using rapid application development

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit defines the competency required to carry out rapid application development, known as RAD, in the context of preparing for software development. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

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. Determine RAD requirements	1.1. Select and demonstrate use of the most suitable industry standard tool set 1.2. Implement a prioritised plan using a series of recursive stages of build and review for delivery of the system 1.3. Implement and/or incorporate a physical database 1.4. Identify, document and schedule modules to be implemented by incremental development techniques 1.5. Identify and formally allocate responsibilities to authorised user and suitably skilled builders for each module 1.6. Plan for and document the endorsement of reviews, administration schedules and development milestones
2. Determine work metrics	2.1. Set development goals 2.2. Seek and secure agreement on and adherence to a single common notation 2.3. Determine tools, features and techniques most appropriate to the development environment 2.4. Facilitate, plan, develop and document version and change control methods 2.5. Facilitate the training and exposure to the user participants via RAD
3. Implement administration method	3.1. Determine and reach agreement of stakeholders on the specifics 3.2. Confirm dates for milestones with stakeholders and secure with written agreement 3.3. Inform production system parties and secure with written acknowledgment 3.4. Administer and maintain relevant time recording and management methodologies

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- Risk management when a prioritised plan using a series of recursive stages of build

REQUIRED SKILLS AND KNOWLEDGE

and review for delivery of the system is implemented

- Problem solving skills for a defined range of unpredictable problems (e.g. when determining RAD requirements)
- Communication skills in relation to evaluation of Rapid Applications Development (RAD) tools selection
- Skills in facilitating planning and developing version/change control methods, and when agreement of all parties is ensured
- Facilitating the training and exposure to the user participants via Joint Applications Development (JAD) 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
- Client business (e.g. when determining RAD requirements)
- Two or more programming languages
- Broad knowledge of quality assurance practices
- Broad knowledge of two or more current industry development methodologies

Evidence Guide

EVIDENCE GUIDE

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.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- Assessment must confirm sufficient knowledge of RAD tools and prototyping methods. Assessment must confirm the ability to meet client requirements by meeting the agreed deadlines and client performance requirements.
- Assessment must confirm that code produced is bug-free.

To demonstrate competency in this unit the person will require access to:

- CASE tools
- Prototyping software
- Detailed user requirements
- CASE repository to facilitate the reuse of templates and components
- Requirements document, including model and scope

Context of and specific resources for assessment

The selection and utilisation of a suitable RAD tools can have an impact on cost and quality of a software project and should be carefully selected and used with code projects. 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.

Assessment must ensure:

- 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.

EVIDENCE GUIDE	
	• 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.
Method of assessment	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. • 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. • This competency may also be applicable to other phased implementation methods and related competencies. • 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.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. An individual demonstrating this competency would be

EVIDENCE GUIDE

	able to: • Demonstrate understanding of a broad knowledge base incorporating theoretical concepts, with substantial depth in some areas • Analyse and plan approaches to technical problems or management requirements • Transfer and apply theoretical concepts and/or technical or creative skills to a range of situations • Evaluate information, using it to forecast for planning or research purposes • Take responsibility for own outputs in relation to broad quantity and quality parameters • Take some responsibility for the achievement of group outcomes • Maintain knowledge of industry products and services
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Range Statement**RANGE STATEMENT**

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.

Tool set may include:	• compiler • code beautifier • integrated development environment • bug analyser • test harness software
Database may include but is not limited to:	• relational databases • object-relational databases • proprietary databases • commercial off-the-shelf (COTS) database packages
System may include but is not limited to:	• databases • applications • servers

RANGE STATEMENT	
	• operating systems • gateways • application service provider • ISP
Documentation may follow:	• ISO/IEC/AS standards • audit trails • naming standards • version control • project management templates and report writing • maintaining equipment inventory • client training • satisfaction reports
Stakeholders may include:	• sponsor • user • development team • project team

Unit Sector(s)

Unit sector	Build
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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