

SKILLS FRAMEWORK FOR INFOCOMM TECHNOLOGY SKILLS MAP – FRONT END DEVELOPER		
Sector	Infocomm Technology	
Track	Product Development	
Sub-track	Software Development	
Occupation	Software Developer	
Job Role	Front End Developer	
Job Role Description	<p>The Front End Developer writes clean testable codes and develops client-side systems to support end user's needs and experience. He/She gathers user feedback to propose improvements to the product's interface. He provides technical support to develop an intuitive and responsive experience for end users. He supports usability testing to validate user interfaces. He also identifies security vulnerabilities and assists his senior in selecting security tools to aid his senior in addressing these vulnerabilities.</p> <p>He works in a team and is proficient in programming languages required by the organisation to design and develop user interfaces. He is familiar with graphic designing tools and is also knowledgeable in commonly used design methods. He uses various tools to read codes and uncover security vulnerabilities.</p> <p>The Front End Developer is innovative in designing compelling and intuitive user interfaces. He supports others in the team and is confident in communicating ideas to the team in a clear and compelling manner.</p>	
Critical Work Functions and Key Tasks	Critical Work Functions	Key Tasks
	Understand technical specifications required by the business	Participate in discussions with stakeholders to understand user requirements
		Write technical requirements and specifications
		Execute software requirement specifications
		Recommend approaches that balance security, stability, and performance needs
		Support team with technical guidance on proposed solutions and alternatives
	Manage the front-end design of software	Develop front-end and integration components of products
		Collaborate with stakeholders to build and improve new and existing products
		Deliver high quality, maintainable, and scalable codes
		Collaborate with internal and external stakeholders to enhance the product offering and drive-up user engagement and adoption
		Execute improvements to front-end system
		Use simulation and prototypes to evaluate front-end software design quality
		Partner business teams to align products with business goals and objectives
		Perform code re-factoring
	Perform software testing	Perform integration testing as part of the integration process
		Write unit tests for delivered codes
		Support final pre-release testing activities involving stakeholders
		Write success and failure criteria for unit and integration testing
		Execute the test environment and test case scenarios to ensure software resilience
		Specify test cases for the selected testing techniques including clean coding
		Gather defect arrival rate and failure intensity data
		Identify potential defects in software through testing

	Manage software configuration management (SCM)	Execute the SCM plan		
		Assist in specifying the SCM measures to be used		
		Support the development of tools for generating SCM audit reports		
		Perform product readiness review in software configuration management		
		Execute the building, verification, and implementation of software releases		
		Support the procurement of SCM tools		
		Maintain mechanisms for recording and reporting SCM information		
		Ensure the execution and documentation of approved changes		
	Oversee security provisions in software	Follow recommended coding standards and secure-coding principles to avoid security vulnerabilities		
		Adhere to project standards in the collection of security assessment metrics		
		Perform code reviews to identify security vulnerabilities		
		Use security tools to identify and address security vulnerabilities		
		Support threat modelling to identify and mitigate security risks		
		Identify the attack surface of new and modified systems		
Skills and Competencies	Technical Skills and Competencies		Critical Core Skills	
	Agile Software Development*	Level 3	Communication	Intermediate
	Applications Development*	Level 3	Creative Thinking	Intermediate
	Applications Integration*	Level 3	Learning Agility	Intermediate
	Applications Support and Enhancement*	Level 2	Problem Solving	Intermediate
	Business Needs Analysis*	Level 2	Self Management	Basic
	Configuration Tracking*	Level 2		
	Continuous Integration and Continuous Deployment*	Level 3		
	Quality Standards*	Level 4		
	Service Level Management*	Level 3		
	Software Configuration*	Level 2		
	Software Design*	Level 3		
	Software Testing*	Level 2		
	User Interface Design*	Level 3		
	Business Environment Analysis	Level 2		
	Business Requirements Mapping	Level 3		
	Business Risk Management	Level 3		
	Change Management	Level 3		
	Data Design	Level 3		
	Database Administration	Level 2		
	Emerging Technology Synthesis	Level 3		

	Performance Management	Level 4	
	Problem Management	Level 3	
	Product Management	Level 3	
	Project Management	Level 3	
	Test Planning	Level 2	
Programme Listing	For a list of Training Programmes available for the ICT sector, please visit: www.skillsfuture.sg/skills-framework/ict		

The information contained in this document serves as a guide.

Note: Technical Skills and Competencies (TSCs) with an asterisk () refer to Priority Skills (i.e., TSCs to be prioritised for this role).