

SKILLS FRAMEWORK FOR MEDIA SKILLS MAP - SENIOR GAME PROGRAMMER					
<b>Sector</b>	Media				
<b>Sub-sector</b>	Games				
<b>Track</b>	Game Technical Development				
<b>Sub-track</b>	Game Programming				
<b>Occupation</b>	Game Programmer				
<b>Job Role</b>	<b>Senior Game Programmer</b>				
<b>Job Role Description</b>	<p>The Senior Game Programmer manages the overall code development processes across the development and maintenance phase of the game. He/She is an expert in specific aspects of game programming and provides inputs on the technical feasibility of requested game features and functions during planning discussions. He takes responsibility for delivering certain complex game elements with robust and stable code. He supports the technical leads by designing and documenting the game's architecture. He manages a team of programmers and helps them improve their technical skills by coaching and training them.</p> <p>The work involves technical leadership as well as project management of a programming team. He spends most of his time in guiding the team in programming as well as writing codes. He also spends a significant amount of his time in meetings with other production teams to align expectations and share project progress.</p> <p>He is proficient at project management and a technical expert. He is adept at planning and organizing in order to deliver project outcomes effectively. He should also be effective at collaboration, communication and stakeholder management in order to work effectively in cross-functional project teams.</p>				
<b>Critical Work Functions and Key Tasks</b>	<b>Critical Work Functions</b>	Plan game development	<b>Key Tasks</b>		
			Analyse the feasibility, complexities and returns of investments needed to develop proposed game features and functions		
			Convert product requirements into a technical design by collaborating with stakeholders		
			Contribute to modification of game design by suggesting alternative game features and functions to achieve the objectives of game design		
			Support the development of a detailed technical document focusing on specific elements for user interface (UI), artificial intelligence (AI), sound, physics and gameplay		
			Lead the development of prototypes and experiment with different algorithms and usability scenarios for a game		
	Execute game development	Guide the team on a variety of atypical and complex features for development of the game			
		Lead team of programmers to deliver against programming objectives			
		Provide technical mentoring to the team members in executing gameplay ideas and features			
		Manage the development of various builds and versions to achieve technical stability and functional objectives			
	Optimise game development	Resolve performance and stability issues proactively as required			
		Troubleshoot complex problems and construct solutions to unforeseen design problems in a timely manner			
		Ensure integration of the various game modules and levels for a seamless experience			
		Contribute to best practices including peer reviews, coding standards and others as necessary			
	Manage the game release and maintenance	Oversee the continuous maintenance, iterations and addition of new features to the game			
		Oversee development of software patches, expansion of games via updates including extra features or content			
		Oversee the porting process to make the game available on multiple platforms			
	<b>Skills and Competencies</b>	<b>Technical Skills and Competencies</b>		<b>Generic Skills and Competencies (Top 5)</b>	
		Audio Programming	Level 3	Computational Thinking	Advanced
		Game Artificial Intelligence Development	Level 3	Problem Solving	Advanced
Game Engine Development		Level 2	Communication	Intermediate	
Game Level Development		Level 3	Teamwork	Basic	
Game Physics Development		Level 3	Interpersonal Skills	Basic	
Game Porting		Level 3			
Game User Interface Development		Level 3			
Gameplay Development		Level 3			
Tools Development		Level 2			

<b>Programme Listing</b>	For a list of Training Programmes available for the Media sector, please visit: <a href="http://www.skillsfuture.sg/skills-framework/Media">www.skillsfuture.sg/skills-framework/Media</a>
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The information contained in this document serves as a guide.