

SELF ASSESSMENT GUIDE

| | | |
|---|---|-----------|
| Qualification: | GAME PROGRAMMING NC III | |
| Units of Competency Covered: | <ul style="list-style-type: none"> • Design game program logic • Apply object-oriented programming language skills • Apply programming skills for in-game application | |
| Instruction: <ul style="list-style-type: none"> • Read each of the questions in the left-hand column of the chart. • Place a check in the appropriate box opposite each question to indicate your answer. | | |
| Can I? | YES | NO |
| DESIGN GAME PROGRAM LOGIC | | |
| • Formulate/design game program logic * | | |
| • Analyze game specifications | | |
| • Obtain, review and clarify design documentation | | |
| • Conceptualize game technical design | | |
| • Analyze game physics | | |
| • Identify and solve physics problems/equations based on GDD | | |
| • Apply differentiation based on GDD | | |
| • Prepare technical game documentation* | | |
| • Transform requirements to technical design document | | |
| • Illustrate program structures | | |
| • Identify and document special routines or procedures | | |
| • Identify resources for coding and testing of program | | |
| • Prepare concept arts for GUI * | | |
| • Validate technical game documentation * | | |
| • Check technical design document | | |
| APPLY OBJECT-ORIENTED PROGRAMMING LANGUAGE SKILLS | | |
| • Identify game/project coding standards | | |
| • Apply basic language syntax and layout* | | |

| | | |
|--|--|--|
| • Use and customize appropriate language syntax for sequence, selection and iteration constructs | | |
| • Apply basic object-oriented principles in the target languages* | | |
| • Implement a class that contains primitive member/instance variables | | |
| • Implement a class that contains multiple options for object construction | | |
| • Enforce a class security using encapsulation | | |
| • Implement inheritance to at least two levels of depth | | |
| • Use polymorphism via inheritance to enable easy code extension | | |
| • Debug codes* | | |
| • Use integrated development environment | | |
| • Use a program debugging techniques to detect and resolve errors | | |
| • Follow guidelines for developing maintainable code | | |
| • Use and follow internal documentation standards | | |
| • Test codes* | | |
| • Develop and conduct simple tests to confirm the coding process | | |
| • Document activities | | |
| APPLY PROGRAMMING SKILLS FOR IN-GAME APPLICATION | | |
| • Obtain game mechanics by analyzing the GDD and TDD | | |
| • Analyze technical design document | | |
| • Derive technical storyboard and corresponding pseudo code from GDD and TDD | | |
| • Prepare game development environment * | | |
| • Set the necessary hardware/software to code, compile and run game development tools | | |
| • Apply basic language syntax and layout | | |
| • Use and customize appropriate language syntax for sequence, selection and iteration constructs | | |
| • Write code for game application* | | |

| | | |
|--|--------------|--|
| • Develop working prototype | | |
| • Identify game module per iteration | | |
| • Define and explain game loop | | |
| • Create and implement program code | | |
| • Use mathematical concepts and techniques in controlling and implementing game systems | | |
| • Use the style and design principles to solve common game programming problems | | |
| • Use and customize the data structures and algorithms to ensure robust and fast implementation of game systems | | |
| • Identify and apply appropriate design patterns in coming up with initial prototype | | |
| • Execute and test the game application* | | |
| • Check workability of the prototype | | |
| • Evaluate prototype based on GDD | | |
| • Apply prototype iteration based on evaluation results | | |
| • Implement iterative prototyping cycle until game final prototype is approved | | |
| • Refine/debug a system | | |
| • Assess game prototype to follow quality assurance/testing techniques | | |
| • Address and fix program errors | | |
| • Address overall game design concerns | | |
| • Optimize a game program based on project requirements | | |
| I agree to undertake assessment in the knowledge that information gathered will only be used for professional development purposes and can only be accessed by concerned assessment personnel and my manager/supervisor. | | |
| Candidate's Name: | Date: | |

NOTE: *Critical Aspects of Competency