



**HUMBER**

School of Media Studies  
& Information Technology

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## **GAME255 DATA STRUCTURES AND DESIGN PATTERNS**

### **LAB 7: SINGLETON VARIATION**

**PROFESSOR:** Jean – Paul Amore

**GRADE VALUE:** 25 Marks = 6% of Final Grade

**END DATE:** Week 11

**LEARNING OUTCOMES  
TARGETTED:** Describe numerous common design patterns and be able to create simple implementations of them.

**REQUIREMENTS:**

Modify the Singleton Design Pattern to allow a maximum limit of four object instances. Integrate the functionality into the attached project solution Controller.

**DELIVERABLES:**

Submit the implemented Singleton variation inside Controller.cpp.



LAB #7						
CRITERIA	0 POINTS	1 POINT	2 POINTS	3 POINTS	4 POINTS	5 POINTS
1. LOGIC	Did not submit	Does not demonstrate ability to use logical process	Poorly demonstrates ability to use logical process	Somewhat demonstrates ability to use logical process	Demonstrates ability to use logical process	Demonstrates exceptional ability to use logical process
2. EFFICIENCY	Did not submit	Does not demonstrate any efficiency	Poorly demonstrates efficiency	Demonstrates some efficiency	Demonstrates efficiency	Demonstrates exceptional efficiency
3. FUNCTIONALITY	Did not submit	Asset is not functional	Asset is barely functional	Asset is somewhat functional	Asset is functional	Asset is exceptionally functional
4. PROCESS & ORGANIZATION	Did not complete assigned work	No code follows a systematic and organized approach to problem solving	Parts of code follows a systematic and organized approach to problem solving	Some code follows a systematic and organized approach to problem solving	Most code follows a systematic and organized approach to problem solving	All code follows a systematic and organized approach to problem solving
5. TEST CASE	Did not complete assigned work	Does not compile	Barely any code functions with test case	Partially functions with test case	Mostly functions with test case	Fully functions with test case