

Student Name: Date: _

Items	Need Improvement (0.5 Points)	Beginning (2 Points)	Developing (2.5 Points)	Accomplished (3 Points)	Exemplary (4 Points)				
Visualization (18%)									
Proper Programming Practices (indenting, method naming, class naming, variable naming, etc.) Score = points x 1.1	Incomplete	Demonstrates proper programming practices as described in class with a limited degree of effectiveness	Demonstrates proper programming practices as described in class with some degree of effectiveness	Demonstrates proper programming practices as described in class	Demonstrates proper programming practices as described in class with a high degree of effectiveness				
Javadocs/docstrings and Commenting Score = points x 1.4	Incomplete	Demonstrates proper documentation practices as described in class with a limited degree of effectiveness	Demonstrates proper documentation practices as described in class with some degree of effectiveness	Demonstrates proper documentation practices as described in class	Demonstrates proper documentation practices as described in class with a high degree of effectiveness				
Objects Score = points x 1.9	Incomplete	Demonstrates proper use of objects as described in class with a limited degree of effectiveness	Demonstrates proper use of objects as described in class with some degree of effectiveness	Demonstrates proper use of objects as described in class	Demonstrates proper use of objects as described in class with a high degree of effectiveness				
Inheritance Score = points x 1.3	Incomplete	Demonstrates proper use of inheritance as described in class with a limited degree of effectiveness	Demonstrates proper use of inheritance as described in class with some degree of effectiveness	Demonstrates proper use of inheritance as described in class	Demonstrates proper use of inheritance as described in class with a high degree of effectiveness				
Methods and Functions Score = points x 1.4	Incomplete	Demonstrates the ability to use methods/functions whenever necessary with a limited degree of effectiveness	Demonstrates the ability to use methods/functions whenever necessary with some degree of effectiveness	Demonstrates the ability to use methods/functions whenever necessary	Demonstrates the ability to use methods/functions whenever necessary with a high degree of effectiveness				
Polymorphism Score = points x 0.9	Incomplete	Demonstrates proper use of polymorphism as described in class with a limited degree of effectiveness	Demonstrates proper use of polymorphism as described in class with some degree of effectiveness	Demonstrates proper use of polymorphism as described in class	Demonstrates proper use of polymorphism as described in class with a high degree of effectiveness				

Recursion Score = points x 1.6	Incomplete	Demonstrates the ability to properly use recursion with a limited degree of effectiveness	Demonstrates the ability to properly use recursion with a some degree of effectiveness	Demonstrates the ability to properly use recursion	Demonstrates the ability to properly use recursion with a high degree of effectiveness			
File Management and Data Loading Score = points x 2.5	Incomplete	Ability to read/write to/from files without freezing/hanging the program has been shown with a limited degree of effectiveness	Ability to read/write to/from files without freezing/hanging the program has been shown with some degree of effectiveness	Ability to read/write to/from files without freezing/hanging the program has been shown	Ability to read/write to/from files without freezing/hanging the program has been shown with a high degree of effectiveness			
Searching and Sorting Score = points x 2.5	Incomplete	Ability to sort and search information has been shown with a limited degree of effectiveness	Ability to sort and search information has been shown with some degree of effectiveness	Ability to sort and search information has been shown	Ability to sort and search information has been shown with a high degree of effectiveness			
Interactivity or Animation Score = points x 3.4	Incomplete	Interactivity and/or animation is demonstrated with a limited degree of effectiveness	Interactivity and/or animation is demonstrated with some degree of effectiveness	Interactivity and/or animation is demonstrated	Interactivity and/or animation is demonstrated with a high degree of effectiveness			
Visualization Explanation and Reflection (2%)								
Reflection Insight Score = points x 1.5	Incomplete	Provides insight and understanding about the project with a limited degree of effectiveness	Provides insight and understanding about the project with some degree of effectiveness	Provides insight and understanding about the project	Provides insight and understanding about the project with a high degree of effectiveness			
Visualization Explanation Score = points x 0.5	Incomplete	Provides minimal guidance, and guessing is required for a majority of the visualization of the meaning and how it works	Provides some guidance, and guessing is required for some of the visualization of the meaning and how it works	Provides guidance, and the meaning of the visualization and how it works is explained	Provides highly effective guidance, and the meaning of the visualization and how it works is explained with high clarity			