Jordan Clark

CS230 – Wk1 UML

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/Users/jordan/Downloads/CS230_Wk1_UML.portait.pdf

**Encapsulation**: The Vehicle class and Twowheeled classes contain contents from a package whose details are hidden from user. This level of abstraction protects the user from making changes to code

**Portability**: We can easily modify the program by altering individual classes, rather than having to make the same changes in multiple places within the same document. Here, if changes were made to the Twowheeled class the changes would be shown in the relationships to the Bicycle class but not the Vehicle class.

**Inheritance**: The Twowheeled class inherits the vehicle class; the Bicycle class inherits the Twowheeled class, which also means it’s a sub-child of Vehicle and can access its methods and attributes as well.

**Polymorphism**: The outputData method is an overloaded method because it has the original void return type, and another outputData method that takes different parameters to return a different return type. The Bicycle constructor is overloaded several times to create different instances of the bicycle with various parameters. The original Bicycle constructor creates the new object, one instance references color, one instance references the number of gears, and one contains all of the attributes.