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CS-240 Operating Platforms

Module 1 Assignment

The first principle used is “creating a concise object.” For this diagram, the main class is the bicycle where all of the information is gathered. Therefore, that class in the diagram shows all of the attributes and behaviors needed to gather the information for the other classes to use. The next principle is encapsulation. I did this by showing which attributes and behaviors were specific to the bicycle class by stating whether they were public or private. By doing this the data can only be changed through the Bicycle class and the other classes pull that information from the Bicycle class. Lastly there is the principle of inheritence. This is allowing the other classes to properly pull the data required from the bicycle class. As the textbook stated, it can best be done by using the “Is A” checks to verify that your statements are in fact true. For instance, the Bicycle class pulls certain information from the twoWheeled class, which also pulls certain information from the Vehicle class. A two wheeled vehicle does not have to be a bicycle which is the reason twoWheeled fails the instance of bicycle test. The driver class is almost separate from the other classes because the Vehicle, twoWheeled, and Bicycle classes are not dependent on the driver’s information. This is why it is only associating with the Vehicle class. It is pulling data all the way through the chain of classes to gather the number of gears, cost, color, and weight of the bicycles while the other classes are not actually inheriting data from the Driver class.

