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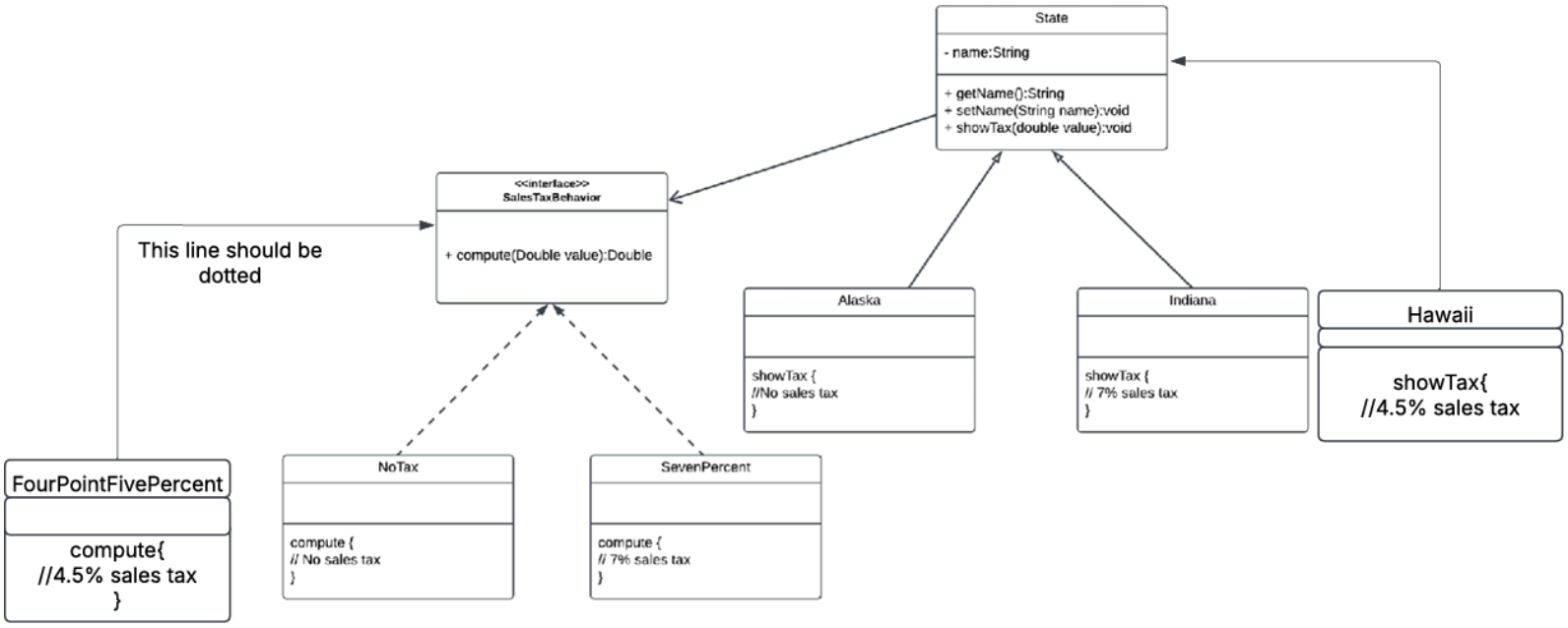
Problem 1 Part B Diagram



Problem 2

IS-A: MallardDuck IS-A Duck because it inherits from the Duck class.

IS-A: RedheadDuck IS-A Duck because it extends the Duck class, inheriting its properties and behaviors.

IS-A: RubberDuck IS-A Duck as it extends the Duck class, meaning it is a specific type of Duck.

IS-A: DecoyDuck IS-A Duck since it is a subclass of Duck, following an inheritance relationship.

HAS-A: Duck HAS-A FlyBehavior because it contains an instance variable of type FlyBehavior, allowing dynamic assignment of flying behavior.

HAS-A: Duck HAS-A QuackBehavior as it holds an instance of QuackBehavior, enabling flexible quack behavior.

IS-A: Quack IS-A QuackBehavior because it implements the QuackBehavior interface, providing a specific quack behavior.

IS-A: Squeak IS-A QuackBehavior as it implements the QuackBehavior interface, defining a squeaking behavior.

IS-A: MuteQuack IS-A QuackBehavior since it implements the QuackBehavior interface, defining a silent quack behavior.

Problem 3