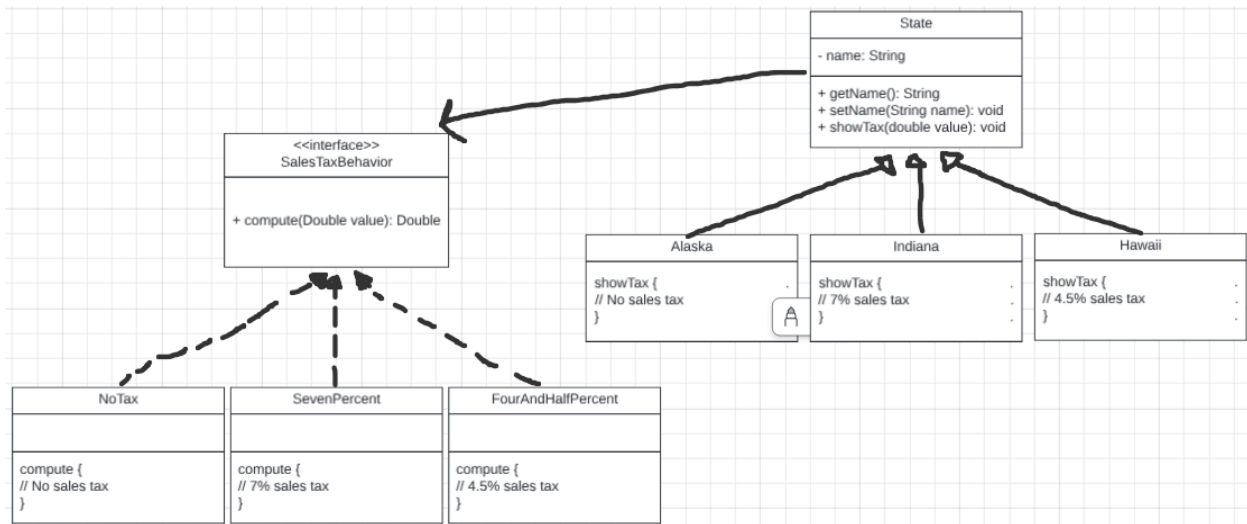


Problem 1: Setting Behavior Dynamically

Part B



Problem 2: HAS-A and IS-A

Based on the different relationships in the duck simulator app, categorize the numbered relationships in the UML class diagram below into HAS-A or IS-A. Justify your classification using one sentence for each one.

1 - 4

- IS-A because all of the duck types (MallardDuck, RedheadDuck, RubberDuck, DecoyDuck) are inherited from Duck.

5 - 6

- HAS-A because Duck delegates the behavior (Fly and Quack) to a separate behavior class.

7 - 8

- IS-A because all of the quack types (Quack, Squeak, MuteQuack) are inherited from QuackBehavior.

Problem 3: The Observer Design Pattern

