Carl Fampo Assignment 1 C322

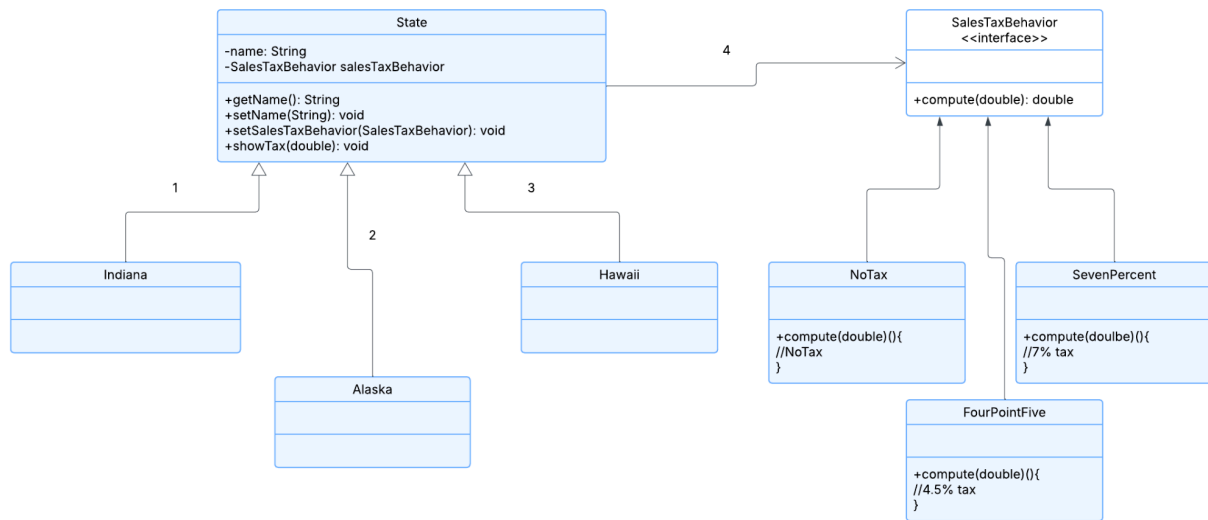**Problem 1.)**
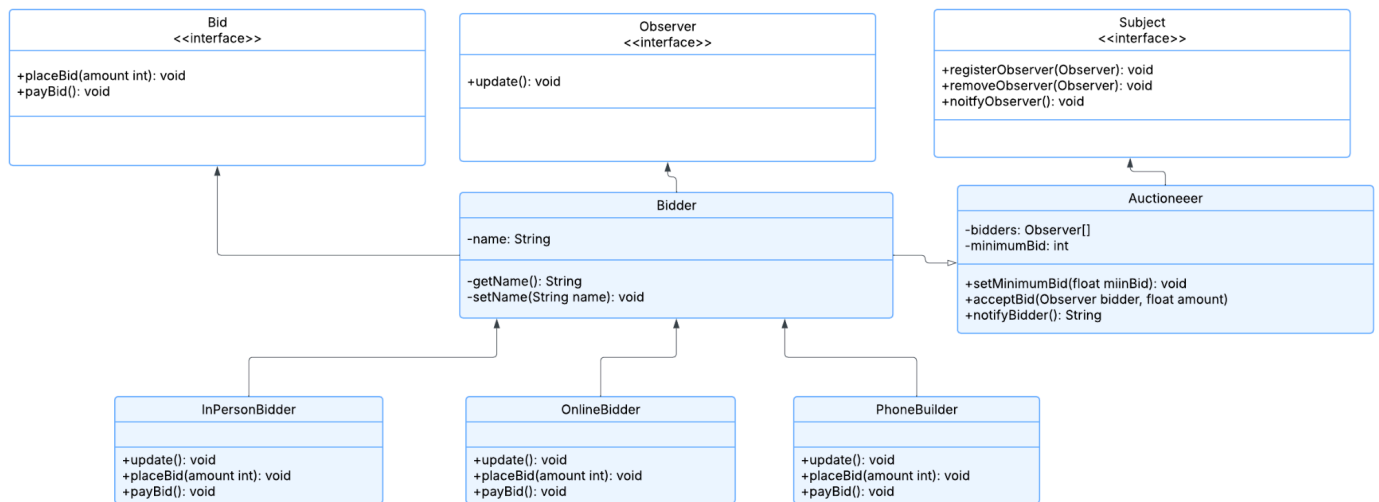(The interface shape in LucidChart wasn't working for me so I just used a class shape and changed it to behavior)

State
-name: String
-SalesTaxBehavior salesTaxBehavior

+getName(): String
+setName(String): void
+setSalesTaxBehavior(SalesTaxBehavior): void
+showTax(double): void

SalesTaxBehavior
<<interface>>

+compute(double): double

4

1

2

3

Indiana

Alaska

Hawaii

NoTax

+compute(double)(){
//NoTax
}

SevenPercent

+compute(doulbe)(){
//7% tax
}

FourPointFive

+compute(double)(){
//4.5% tax
}

Problem 2.)
1. IS-A, inherits from duck class
2. IS-A, inherits from duck class
3. IS-A, inherits from duck class
4. IS-A, inherits from duck class
5. HAS-A, duck is composed of FlyBehavior
6. HAS-A, duck is composed of QuackBehavior
7. IS-A, Quack implements QuackBehavior
8. IS-A, Squeak implements QuackBehavior
9. IS-A, MuteQuack implements QuackBehavior

Problem 3.)

Bid
<<interface>>
+placeBid(amount int): void
+payBid(): void

Observer
<<interface>>
+update(): void

Subject
<<interface>>
+registerObserver(Observer): void
+removeObserver(Observer): void
+noitfyObserver(): void

Bidder
-name: String
-getName(): String
-setName(String name): void

Auctioneeer
-bidders: Observer[]
-minimumBid: int
+setMinimumBid(float miinBid): void
+acceptBid(Observer bidder, float amount)
+notifyBidder(): String

InPersonBidder
+update(): void
+placeBid(amount int): void
+payBid(): void

OnlineBidder
+update(): void
+placeBid(amount int): void
+payBid(): void

PhoneBuilder
+update(): void
+placeBid(amount int): void
+payBid(): void

(The interface shape in LucidChart wasn't working for me so I just used a class shape and changed it to behavior)