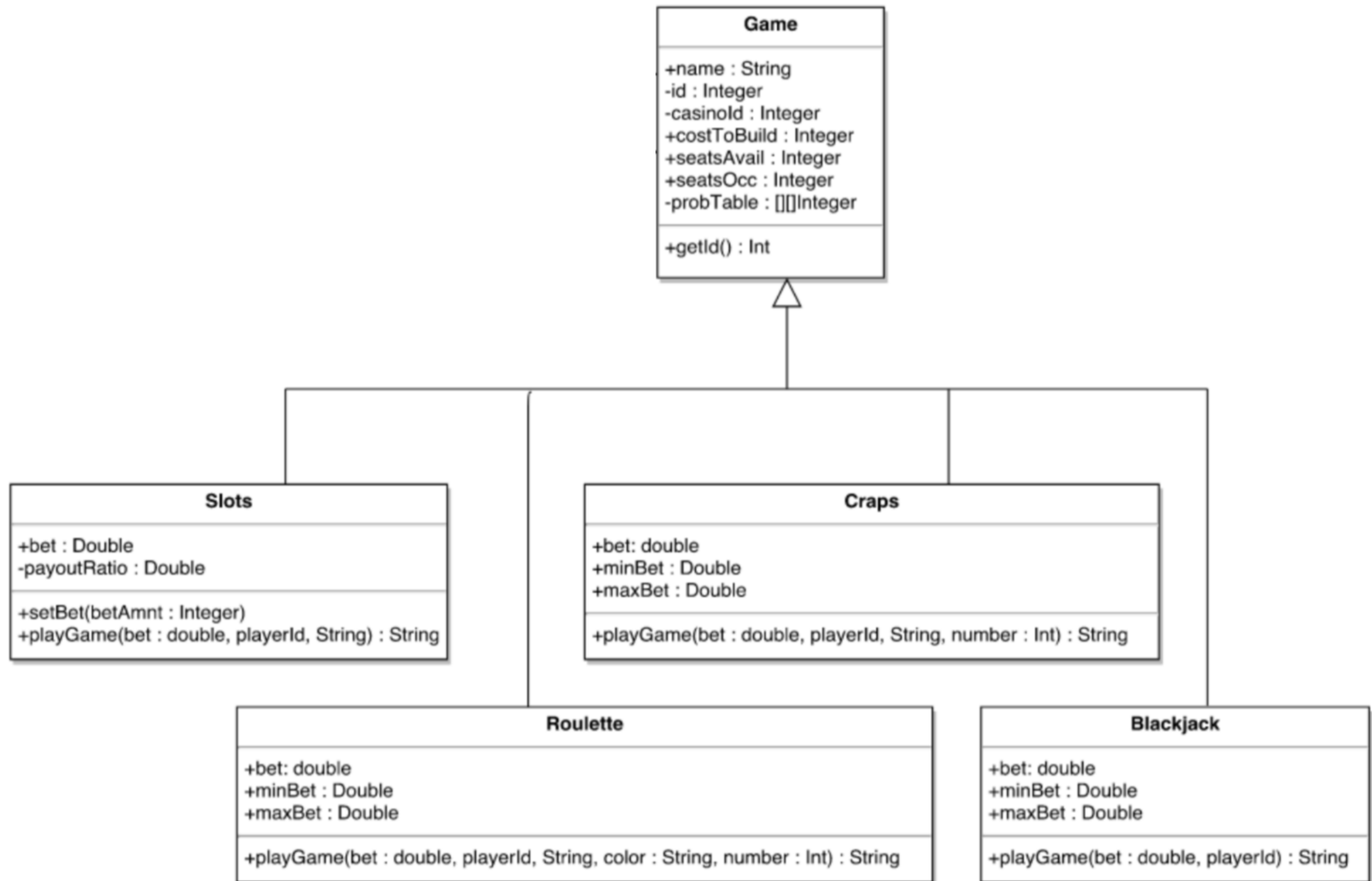# CasinoSim

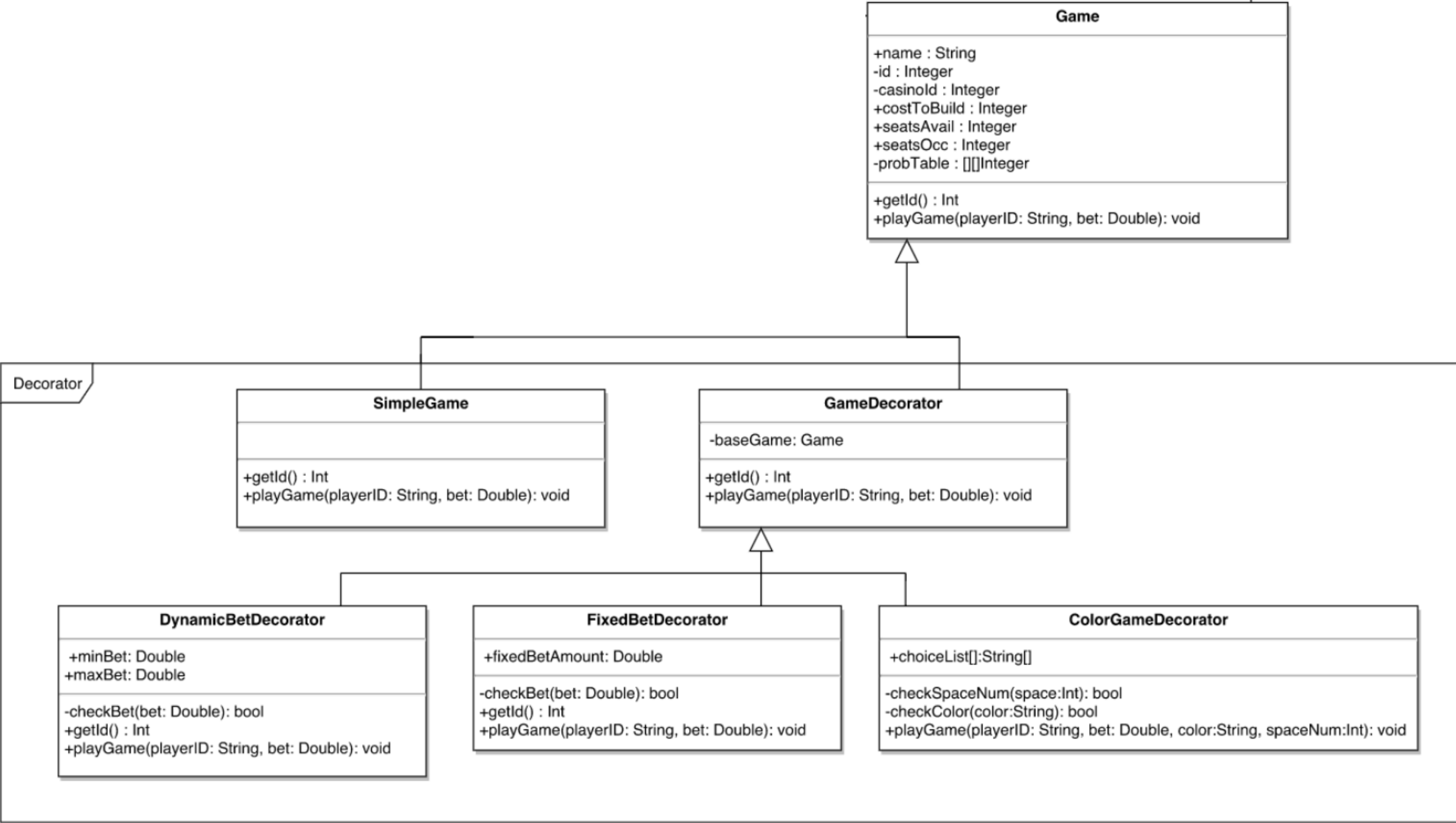Paige Johnson, Derek Gorthy, Michael Condon

```
Welcome to CasinoSim!
Log in or Sign up?
```

Game Implementation

▶ Originally declared each on individually

▶ Revised to utilize the decorator class to avoid bloated code

▶ More generally, decorator is a useful pattern if aspects of a game can be generalized to individual components

Game

+name : String
-id : Integer
-casinoId : Integer
+costToBuild : Integer
+seatsAvail : Integer
+seatsOcc : Integer
-probTable : [][]Integer

+getId() : Int

Slots

+bet : Double
-payoutRatio : Double

+setBet(betAmnt : Integer)
+playGame(bet : double, playerId, String) : String

Craps

+bet: double
+minBet : Double
+maxBet : Double

+playGame(bet : double, playerId, String, number : Int) : String

Roulette

+bet: double
+minBet : Double
+maxBet : Double

+playGame(bet : double, playerId, String, color : String, number : Int) : String

Blackjack

+bet: double
+minBet : Double
+maxBet : Double

+playGame(bet : double, playerId) : String

Game

+name : String
-id : Integer
-casinoId : Integer
+costToBuild : Integer
+seatsAvail : Integer
+seatsOcc : Integer
-probTable : [][]Integer

+getId() : Int
+playGame(playerID: String, bet: Double): void

Decorator

SimpleGame

+getId() : Int
+playGame(playerID: String, bet: Double): void

GameDecorator

-baseGame: Game

+getId() : Int
+playGame(playerID: String, bet: Double): void

DynamicBetDecorator

+minBet: Double
+maxBet: Double

-checkBet(bet: Double): bool
+getId() : Int
+playGame(playerID: String, bet: Double): void

FixedBetDecorator

+fixedBetAmount: Double

-checkBet(bet: Double): bool
+getId() : Int
+playGame(playerID: String, bet: Double): void

ColorGameDecorator

+choiceList[]:String[]

-checkSpaceNum(space:Int): bool
-checkColor(color:String): bool
+playGame(playerID: String, bet: Double, color:String, spaceNum:Int): void

Further Extensibility

- Designed system to accommodate other business types in the future

- While we never proposed different types of businesses, we thought it was important to leave code open to expansion