

## **Board Class**

### **Properties:**

- Code Peg rowID(contain 10 rows)
- Key peg rowID (10 rows)

### **Methods:**

default

Constructor()

- create maxRow(10 )codePeg objects
- create maxRow(10) keyPeg objects

- 1) getCodePeg(int rowID)
  - getter for the codePeg
  - return codePeg object
- 2) setNewCodePeg(int rowID)
  - Parameter: int rowNum
  - create the new codePeg object based on the new row
- 3) getKeyPeg(int rowID)
  - Return keyPeg object
- 4) setNewKeyPeg(int rowID)
  - create the newkeyPeg object based on the new rowNum

## **CodePeg Class:**

### **Variables:**

Int rowID  
Int slotID  
Slot Objects

### **Methods:**

constructor(int rowID)

Getters and setters for slotID(4 slots) within the codePeg

Getters and setters for slot

- setters: param is the slotID

## **Slot:**

### **Variables:**

Int slotID  
Marble Object

Methods:

Getter and setters for slotID  
Getter and setters for marble

## **Marble:**

### **Variables: 6 different colors:**

Type: Color(6): Red, blue, yellow, green, orange, and purple

**Methods:**

Getters and setters for color

Param: the color passed in

**KeyPeg Class:****Variables:**

-int rowID

-int slotID(4 slots)

-white peg- constant

-black peg- constant

**Methods:**

constructor(int rowID)

Setters and getters for slotID

**CodePegSolutions:****Variables:**

Int rowID

Int slotID

Marble keyVal

**Method:**

Getters and setters codePegSolutions(int rowID, int slotID, Marble keyVal)

**BoardManager Class:**

Variable:

-currentRow

-maxRow : constant variable which defaults to 10

**Methods :**

1) Getter and Setter for currentRow

a) Throw exception in set method: if the currentRow exceed the maxRow

2) isTheMarblePlaced

a) For given codePeg, and slot- if the marble is null- then the slot is empty

b) Param: int rowID, Int slotID

c) Exceptions: if the marble is not placed: throw an exception

3) isCorrectColor

a) Param: CodePeg rowID, Slot slotID

b) Looks at the color of the marble, the codepeg rowID, slot slotID and the solution key if it corresponds with the right combination

c) Set keyPeg object to white

States:

- 1) ColorMatched
- 2) NoMatch

4) isCorrectPosition

- a) Param: CodePeg rowID, Slot slotID,
- b) Look to see if the marble is in the correct position
  - i) States:
    - (1) PositionMatched
      - (a) Set the keyPeg object to black
    - (2) noMatch