|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Class Name** | **Description** | **Instance Variables** | **Methods** | **Constructors** |
| Position | Represents a position of the figure on the board | 2 private int variables (coordinates) | public int getPosition();  public void setPosition(int x, int y);  public void setPosition(Sring coordinates); | * No-argument constructor (sets top-left corner as default) * Constructor (int x, int y) * Copy constructor |
| Put | Represents a step that the player makes | 2 private int variables(coordinates) | public String getCoordinates();  public int getXCoordinate();  public int getYCoordinate(); | * Constructor (int x, int y) * Copy constructor |
| Quarto | Represents the board of the game. Stores the state of the ongoing game and provides means for changing that state | private String [][] board  private int counter  private Figure[] figures | public String[][] getBoard() - returns a deep copy  private void printCurrentState();  private int getTurn();  private boolean isGameOver();  private boolean isEmpty(Position p);  private String getPieceAt(Position p);  public Figure takeFigure(int index);  public boolean performPut(Put p, takeFigure); -> checks if isEmpty() => updates the board, increments the number of moves, removes current figure from the list and returns true | * No-arg constructor() => returns 4x4 matric filled with ‘-‘ indicating empty cells |
| Figure | Represents the 16 figures. Each will have 4 characteristics: colour(light/dark), height(tall/short), shape(square/round), form(hollow/solid). | private String colour;  private String height;  private String shape;  private String form; | public String getColour();  public String getHeight();  public String getShape();  public String getForm();  private void setColour(String s);  private void setHeight(String s);  private void setShape(String s);  private void setForm(String s);  public static Figure[] getAllFigures(); -> returns an array of type Figure with all the 16 figures in it. | * No-arg constructor() * Constructor(String colour, String height, String shape, String form) => uses mutator methods |