# **AREA**

## Vars

* eSpaceSystem system;
* String name;
* int location;

## Constants

* public static final int *MIN\_SYSTEM\_BOUNDARY* = 0;
* public static final int *MAX\_SYSTEM\_BOUNDARY* = 12;

## Constructor with ARGS

* public Area(eSpaceSystem system, String name, int location)

# **BOARD**

## Constants

* public static final int *PROPERTYBOARD\_SIZE =* 10;

## ARRAYLIST

* private static ArrayList<Area> movementBoard = new ArrayList<>();
* private static ArrayList<Element> propertyBoard = new ArrayList<>();

## METHODS

* public static boolean checkArea(Player currentPlayer)

# **Element**

## Vars

* **int** blueprintCost;
* **int** devOneCost;
* **int** devTwoCost;
* **int** devThreeCost;
* **int** blueprintFee;
* **int** devOneFee;
* **int** devTwoFee;
* **int** devThreeFee;
* **int** currentFee;
* **int** developmentLevel;
* **int** maxInGroup;
* Player owner;
* Player sysOwner;
* Object sysRef;

## Constants

* public static final int *MIN\_DEV\_LEVEL* = 0;
* public static final int *MAX\_DEV\_LEVEL* = 4;

## Constructor with ARGS

* public Element(eSpaceSystem system, String name, int location, Player sysOwner, int blueprintCost, int devOneCost, int devTwoCost, int devThreeCost, int blueprintFee, int devOneFee, int devTwoFee, int devThreeFee, int currentFee, int developmentLevel, Player owner, int maxInGroup)

## METHODS

* public int displayNextDevCost(eSpaceSystem eSpaceSystem)
* public String displayDevelopmentLevel()
* public void incremenetDevelopmentLevel()
* public void updateCurrentFee()

# **eSpaceSystem**

## Enums

* NEUTRAL
* SPACE\_LAUNCH\_SYSTEM
* ORION\_SPACECRAFT
* LANDING\_SYSTEMS
* ARTEMIS\_BASE\_CAMP

# **GAMEADMIN**

## Constants

* public static final int *MIN\_NUM\_PLAYERS* = 2;
* public static final int *MAX\_NUM\_PLAYERS* = 4;
* public static final int *STARTING\_BITCOIN* = 500;
* public static final int *STARTING\_XP* = 0;
* public static final int *STARTING\_POSITION* = 0;

## ARRAYLIST

* public static ArrayList<Player> playerOrder;
* ArrayList<Player> list = createPlayers();
* public static ArrayList<Player> displayPlayerList(ArrayList<Player> playerList)
* public static ArrayList<Player> nextPlayer(ArrayList<Player> playerList)
* public static Player setCurrentPlayer(ArrayList<Player> playerList)

## METHODS

* public static void buyBlueprint(Player currentPlayer, Element currentElement)
* private static boolean checkIfPlayerOwnsAnySystems(Player currentPlayer)
* public static void completeGame(Player currentPlayer, ArrayList<Player> playerOrder)
* public static void developElement(int index, Player currentPlayer)
* public static ArrayList<Player> displayPlayerList(ArrayList<Player> playerList)
* public static eSpaceSystem getSystemOfCurrentElement(Player currentPlayer)
* private static boolean checkIfPlayerOwnsAnySystems(Player currentPlayer)
* public static void manageResources(Player currentPlayer, ArrayList<Element> propertyBoard)
* public static boolean payFee(Player currentPlayer, Element currentElement)
* public static void playerMovement(Player currentPlayer, ArrayList<Area> movementBoard)
* public static void printElementsWherePlayerOwnsSystem(Player currentPlayer)
* public static boolean quitGameEndTurn(Player currentPlayer)
* public static boolean quitGameTakeTurn(Player currentPlayer)
* public static void updateSystemOwners(Player currentPlayer)
* public void gamePlay()

# NeutralElement

## Constructor

* public NeutralElement(eSpaceSystem esystem, String name, int location) {}

// inherited attributes from Area superclass

# Player

## Vars

* String name;
* **int** XP;
* **int** btc;
* **int** position;

## Constants

* public static final int *MIN\_SYSTEM\_BOUNDARY* = 0;
* public static final int *MAX\_SYSTEM\_BOUNDARY* = 12;
* public static final int *MIN\_NAME\_LENGTH =* 2;
* public static final int *MAX\_NAME\_LENGTH* = 20;

## Constructor with ARGS

* public Player(String name, int btc, int XP, int position) {}

## METHODS

* public int takeTurn() {}