## Robot

### CRC

|  |  |
| --- | --- |
| Robot | |
| Encompasses the condition of a robot and its Stats throughout a game. | Collaborators: RobotBuilder,  Stats |

### Description / Overview

The Robot class contains the stats of a specific robot in a game. A robot is one of three types being a Scout, Sniper or Tank, each with their own unique properties. This class is responsible to control keep track of and control the state of this robot and does not affect any other models directly as this is done through GameMaster.

### Instance Variables

#### maxHealth

Data Type:Integer

The amount of health this unit will spawn with at the start of the game.

#### health

Data Type:Integer

The amount of health this unit has left.

#### damage

Data Type:Integer

The amount of damage this Robot deals when they attack a tile.

#### range

Data Type:Integer

The maximum radius in which this robot can see and shoot.

#### maxMove

Data Type:Integer

The maximum amount of times this Robot can move in a play.

#### remainingMoves

Data Type:Integer

The remaining moves this Robot has for this play.

#### type

Data Type:RobotType

The type of robot this unit is (Scout, Sniper or Tank)

#### position

Data Type:HexNode

The current node that this Robot resides on.

#### name

Data Type:String

A name for this robot. The name is displayed below the robot on the game board.

#### stats

Data Type:Stats

A collection of this robot’s stats specific to this game. (Kills, Damage Dealt etc.)

#### facing

Data Type:Integer

The Global Direction that this robot is facing on the board.

#### teamColour

Data Type:TeamColour

The colour of the team that this robot belongs to.

### Method Overview

*public Robot()*

*public static RobotBuilder getBuilder(boolean isAI)*

*public int getHealth()*

*public int getMaxHealth()*

*public int getDamage()*

*public int getRange()*

*public int getMaxMoves()*

*public int getRemainingMoves()*

*public RobotType getType()*

*public HexNode getPosition()()*

*public TeamColour getTeamColour()()*

*public String getName()*

*public void setHealth(int health)*

*public void setDamage(int damage)*

*public void setRange(int range)*

*public void setMoves(int moves)*

*public void setType(RobotType type)*

*public void setPosition(HexNode node)*

*public void setName(String name)*

*public void setTeamColour(TeamColour colour)*

*public Stats getStats()*

*public void consumeMove()*

*public boolean isAlive()*

*public void takeDamage(int amount)*

*public void startPlay()*

### Method Writeups

#### public static RobotBuidler getBuilder(boolean isAI)

Gives us an instance of RobotBuilder which is a helper class to create robots.

#### public void consumeMove()

Decrements the amount of moves this Robot has in its turn.

#### public boolean isAlive()

Checks if this robot is still alive.

#### public void takeDamage (int amount)

Reduces this Robots health by amount and updates the stats of the robot with the amount of damage it took and if it died from the damage.

#### public void startPlay ()

Update the Robot’s stats by incrementing the play count and reset this robots remaining moves.