# Class Troop

java.lang.Object
    greenfoot.Actor
        Troop

**Direct Known Subclasses:**

Dragon, Serpentine

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```
public abstract class Troop
extends greenfoot.Actor
```

## Troop Class

Superclass of all different troops, contains all the necessary instance variables pertaining to the properties of each troop, also includes vital methods for the activities of the troops, such as targeting the nearest troops, establishments, and getting hit by enemies.

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### *Field Summary*

#### Fields

| Modifier and Type | Field | Description |
|---|---|---|
| protected int | actCount | |
| protected int | alliance | |
| protected Chateau | chateau | |
| protected double | closestEstablishment | |
| protected double | closestTroop | |
| protected ArrayList<Establishment> | establishments | |
| protected StatBar | healthBar | |
| protected int | hp | |
| protected int | level | |
| protected int | maxHP | |
| protected int | reloadCounter | |

| protected **Troop** | **targetTroop** |
| protected **ArrayList<Troop>** | **troops** |

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## *Constructor Summary*

### Constructors

| Constructor | Description |
| --- | --- |
| **Troop**(int alliance, int level, **Chateau** chateau) | Constructor for Troop, sets starting values of variables. |

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## *Method Summary*

**All Methods**    Instance Methods    Concrete Methods

| Modifier and Type | Method | Description |
| --- | --- | --- |
| void | **death** (boolean isCastleDestroyed) | Called when a troop's HP is 0 or below. |
| protected **Establishment** | **findEstablishment**() | Returns the closest establishment of the enemy alliance, returns null if there are none. |
| protected **Troop** | **findTroop**() | Returns the closest troop of the opposing alliance. |
| int | **getAlliance**() | Getter method, returns the alliance of the Troop (0 - Gold, 1 - Blue). |
| protected double | **getDistance** (greenfoot.Actor a) | Returns the distance between a troop and another actor. |
| protected void | **hit**(int damage) | Called when the troop gets hit, decrements HP accordingly. |
| void | **setAlliance**(int alliance) | Sets the alliance of the Troop. |

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## Methods inherited from class greenfoot.Actor

## Methods inherited from class java.lang.**Object**

clone, equals, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

### *Field Detail*

**alliance**

protected int alliance

**maxHP**

protected int maxHP

**hp**

protected int hp

**reloadTime**

protected int reloadTime

**speed**

protected int speed

SEARCH:  Search

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**level**

protected int level

---

**closestTroop**

protected double closestTroop

---

**closestEstablishment**

protected double closestEstablishment

---

**reloadCounter**

protected int reloadCounter

---

**troops**

protected ArrayList<Troop> troops

---

**establishments**

protected ArrayList<Establishment> establishments

---

**targetTroop**

protected Troop targetTroop

protected Establishment targetEstablishment

### chateau

protected Chateau chateau

### healthBar

protected StatBar healthBar

## Constructor Detail

### Troop

```
public Troop(int alliance,
             int level,
             Chateau chateau)
```

Constructor for Troop, sets starting values of variables.

**Parameters:**

alliance - Alliance the troop belongs to (0 - Gold, 1 - Blue)

level - Level of the troop

chateau - Chateau that the troop belongs to

## Method Detail

### hit

SEARCH:   Search

damage - Damage dealt to the troop

## findEstablishment

`protected Establishment findEstablishment()`

Returns the closest establishment of the enemy alliance, returns null if there are none.

**Returns:**
Establishment Closest establishment of enemy alliance to the troop

## findTroop

`protected Troop findTroop()`

Returns the closest troop of the opposing alliance.

**Returns:**
Troop Closest troop of the opposing alliance

## getDistance

`protected double getDistance(greenfoot.Actor a)`

Returns the distance between a troop and another actor.

**Returns:**
double Distance between a troop and another actor

## death

`public void death(boolean isCastleDestroyed)`

Called when a troop's HP is 0 or below.

**Parameters:**

**getAlliance**

```
public int getAlliance()
```

Getter method, returns the alliance of the Troop (0 - Gold, 1 - Blue).

**Returns:**
int Allinace of the Troop (0 - Gold, 1 - Blue)

**setAlliance**

```
public void setAlliance(int alliance)
```

Sets the alliance of the Troop.

**Parameters:**
alliance - Alliance of the Troop (0 - Gold, 1 - Blue)