

CSE 142 Section Handout #8 Cheat Sheet

Field (8.1) *(data inside each object)*

```
private type name;
```

Method (8.2) *(behavior inside each object)*

```
public type name (parameters) {  
    statements;  
}
```

Constructor (8.3) *(code to initialize new objects)*

```
public className (parameters) {  
    statements;  
}
```

toString method (8.6) *(called when object is printed)*

```
public String toString() {  
    code that produces & returns a String;  
}
```

Critter classes

```
public class name extends Critter {  
    fields  
  
    constructor  
  
    public Color getColor() {  
        statement(s) that return a Color (such as Color.GREEN);  
    }  
  
    public Action getMove(CritterInfo info) {  
        statement(s) that return an Action;  
    }  
  
    public String toString() {  
        statement(s) that return a String;  
    }  
}
```

The CritterInfo class has the following methods:

| CritterInfo Method | Description |
|--|---|
| getFront(), getBack(), getLeft(), getRight() | returns one of Neighbor.WALL, Neighbor.EMPTY, Neighbor.SAME, Neighbor.OTHER |
| getDirection() | returns one of Direction.NORTH, Direction.SOUTH, Direction.EAST, Direction.WEST |
| frontThreat(), backThreat(), leftThreat(), rightThreat() | returns whether there is an enemy facing you, on a particular side of you |

There are four constants that are of type Neighbor:

| Constant | Description |
|----------------|--|
| Neighbor.WALL | The neighbor in that direction is a wall |
| Neighbor.EMPTY | The neighbor in that direction an empty square |
| Neighbor.SAME | The neighbor in that direction is a critter of your species |
| Neighbor.OTHER | The neighbor in that direction is a critter of another species |

There are four constants that are of type Direction and four of type Action:

| Constant | Description |
|-----------------|--------------|
| Direction.NORTH | facing north |
| Direction.SOUTH | facing south |
| Direction.EAST | facing east |
| Direction.WEST | facing west |

| Constant | Description |
|---------------|--|
| Action.INFECT | Changes Critter in front to your species |
| Action.HOP | Moves Critter in direction its facing |
| Action.RIGHT | Turns Critter to face its right |
| Action.LEFT | Turns Critter to face its left |