arobert6_HW3

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Hierarchical Index

Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

Class Index

Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

File Index

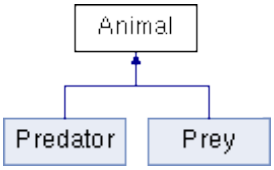
File List

Here is a list of all files with brief descriptions:

Class Documentation

Animal Class Reference

`#include <Animal.h>`
Inheritance diagram for Animal:



Public Member Functions

Animal ()

Protected Member Functions

char **getIdentity** ()
void **setIdentity** (char **identity**)
int **getTurns** ()
void **setTurns** (int timeSteps)
virtual void **eat** (int i, int j)
virtual **Animal** * **adjacent** (int i, int j)
int **getLaidTurns** ()
void **setLaidTurns** (int **laidTurns**)
int **getEatTurns** ()
void **setEatTurns** (int **eat**)
virtual void **move** (int i, int j)
virtual void **breed** (int i, int j)
virtual void **die** (int i, int j)

Protected Attributes

int **steps**
char **identity**
int **turns**
int **laidTurns**
int **eatTurns**

Friends

class **Board**
class **Simulation**

Constructor & Destructor Documentation

Animal::Animal ()

Description: Kills agent Parameters: Int X and Y locations of agent Return Value: Void

---

Member Function Documentation

Animal * Animal::adjacent (int *i*, int *j*) `[protected], [virtual]`

Description: Agent eatting method Parameters: Int X and Y locations of agent Return Value: Void

void Animal::breed (int *i*, int *j*) [protected], [virtual]

Description: Moves Agent Parameters: Int X and Y locations of agent Return Value: Void

virtual void Animal::die (int *i*, int *j*) [protected], [virtual]

Description: Causes agent to reproduce Parameters: Int X and Y locations of agent Return Value: Void

void Animal::eat (int *i*, int *j*) [protected], [virtual]

Description: Setter for agents total steps Parameters: Total TimeSteps for simulation Return Value: Void

int Animal::getEatTurns () [protected]

Description: Setter for steps since last breeding Parameters: Int new number of turns since last breeding Return Value: Void

char Animal::getIdentity () [protected]

int Animal::getLaidTurns () [protected]

Description: Checks adjecent cells for other agents Parameters: Int X and Y locations of agent Return Value: Animal*

int Animal::getTurns () [protected]

Description: Setter for agents identity Parameters: Char identity Return Value: Void

virtual void Animal::move (int *i*, int *j*) [protected], [virtual]

Description: Setter for number of turns since last meal Parameters: Int new number of turns since last meal Return Value: Void

void Animal::setEatTurns (int *eat*) [protected]

Description: Getter for number of turns since last meal Parameters: No parameters required Return Value: Int

void Animal::setIdentity (char *identity*) [protected]

Description: Getter for agents identity Parameters: No parameters required Return Value: Char

void Animal::setLaidTurns (int *laidTurns*) [protected]

Description: Getter for steps since last breeding Parameters: No parameters required Return Value: Int

void Animal::setTurns (int *timeSteps*) [protected]

Description: Getter for agents total steps Parameters: No parameters required Return Value: Int

---

Friends And Related Function Documentation

friend class Board [friend]

Description: **Animal** constructor Parameters: No parameters required Return Value: New **Animal**

friend class Simulation [friend]

Member Data Documentation

int Animal::eatTurns [protected]

Steps since last meal

char Animal::identity [protected]

type of agent p=passive v=vicious

int Animal::laidTurns [protected]

Steps since last breeding

int Animal::steps [protected]

Number of steps agent has taken

int Animal::turns [protected]

Number of steps agent has taken

The documentation for this class was generated from the following files:

0 /home/hooch/Desktop/untitled folder 2/**Animal.h**
1 /home/hooch/Desktop/untitled folder 2/**Animal.cpp**

Board Class Reference

`#include <Board.h>`

Public Member Functions

Board (int hunters, int hunted)

Friends

class **Animal**

Constructor & Destructor Documentation

Board::Board (int *hunters*, int *hunted*)

Friends And Related Function Documentation

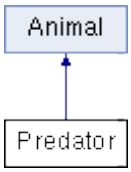
Animal `[friend]`

The documentation for this class was generated from the following files:

2 /home/hooch/Desktop/untitled folder 2/**Board.h**
3 /home/hooch/Desktop/untitled folder 2/**Board.cpp**

Predator Class Reference

`#include <Predator.h>`
Inheritance diagram for Predator:



Public Member Functions

Predator ()

Additional Inherited Members

Constructor & Destructor Documentation

Predator::Predator ()

Description: Kills agent Parameters: Int X and Y locations of agent Return Value: Void

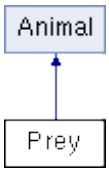
---

The documentation for this class was generated from the following files:

4 /home/hooch/Desktop/untitled folder 2/**Predator.h**
5 /home/hooch/Desktop/untitled folder 2/**Predator.cpp**

Prey Class Reference

`#include <Prey.h>`
Inheritance diagram for Prey:



Public Member Functions

Prey ()

Additional Inherited Members

Constructor & Destructor Documentation

Prey::Prey ()

Description: Kills agent Parameters: Int X and Y locations of agent Return Value: Void

---

The documentation for this class was generated from the following files:

6 /home/hooch/Desktop/untitled folder 2/**Prey.h**
7 /home/hooch/Desktop/untitled folder 2/**Prey.cpp**

Simulation Class Reference

`#include <Simulation.h>`

Public Member Functions

Simulation (int hunters, int prey)

Constructor & Destructor Documentation

Simulation::Simulation (int *hunters*, int *prey*)

The documentation for this class was generated from the following files:

8 /home/hooch/Desktop/untitled folder 2/**Simulation.h**
9 /home/hooch/Desktop/untitled folder 2/**Simulation.cpp**

File Documentation

/home/hooch/Desktop/untitled folder 2/Animal.cpp File Reference

```
#include "Animal.h"
```

/home/hooch/Desktop/untitled folder 2/Animal.h File Reference

```
#include <iostream>
#include <string>
```

Classes

class **Animal**

/home/hooch/Desktop/untitled folder 2/Board.cpp File Reference

```
#include "Animal.h"
#include "Predator.h"
#include "Prey.h"
#include "Board.h"
#include <cstdlib>
#include <math.h>
```

/home/hooch/Desktop/untitled folder 2/Board.h File Reference

Classes

class **Board**

/home/hooch/Desktop/untitled folder 2/main.cpp File Reference

```
#include <cstdlib>
#include "Animal.h"
#include "Prey.h"
#include "Predator.h"
#include "Board.h"
#include "Simulation.h"
```

Functions

int **main** ()

Function Documentation

int main ()

/home/hooch/Desktop/untitled folder 2/Predator.cpp File Reference

```
#include "Animal.h"
#include "Predator.h"
```

/home/hooch/Desktop/untitled folder 2/Predator.h File Reference

```
#include "Animal.h"
```

Classes

class **Predator**

/home/hooch/Desktop/untitled folder 2/Prey.cpp File Reference

```
#include "Animal.h"
#include "Prey.h"
```

/home/hooch/Desktop/untitled folder 2/Prey.h File Reference

```
#include "Animal.h"
```

Classes

class **Prey**

/home/hooch/Desktop/untitled folder 2/Simulation.cpp File Reference

```
#include "Animal.h"
#include "Predator.h"
#include "Prey.h"
#include "Board.h"
#include "Simulation.h"
```

/home/hooch/Desktop/untitled folder 2/Simulation.h File Reference

Classes

class **Simulation**

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