
Documentation

User

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Part I

Documentation

Chapter 1

Program

1.1 Usage

For use the programme in the project root directory ¹ :

```
java -jar bin/AntHill [configurationFile.xml]
```

You will find some sample files in the directory : doc/examples

¹AntHill by default

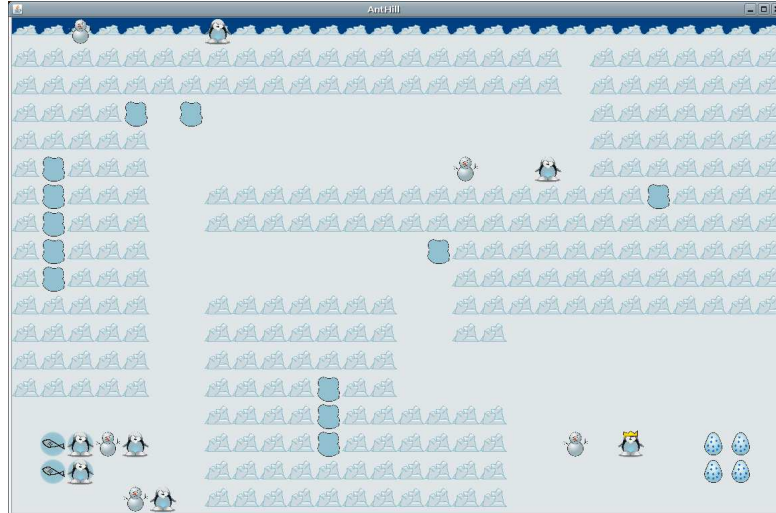
Chapter 2

Snapshots

2.1 default.xml



2.2 `attack.xml`



Chapter 3

Configuration File

The configuration file must be in XML format. It allows the user to define the characteristics of insects, ants, the ant's queen, areas of food and the display.

The program ignores case of tags and attributes. The tag must be inclusive "anthill" !

3.1 AntHill

This tag includes all configuration data of the program.

3.2 Declaration's Tags

These tags must be at the beginning of the document, before any "bug tag".

3.2.1 Theme

This tag is used to set display used, in particular, the pictures displayed. *It is mandatory.*

3.2.1.1 Name

This attribute allows you to define the theme (by name) to be used. The possible values are :

- default
- sand

- floe

3.2.2 Map

This tag is used to set gameboard used. *It is mandatory.*

3.2.2.1 Name

This attribute allows you to define the gameboard (by name) to be used. The possible values are :

- default
- attack

3.2.3 Define

This tag is used to define "constants" in order to avoid repeated many times the same parameters. *It is not mandatory.*

3.2.3.1 AntLifePoint

This attribute allows you to define the ants default number of lives points.

3.2.3.2 AntStomachCapacity

This attribute allows you to define the ants default stomach capacity.

3.2.3.3 AntMoveSpeed

This attribute allows you to define the time¹ taken by ant to move one space.

3.2.3.4 AntIngurgitateSpeed

This attribute allows you to define the time² taken by ant to eat a unit of food.

3.2.3.5 AntRegurgitateSpeed

This attribute allows you to define the time³ taken by ant to regurgitate a unit of food.

¹In milliseconds

²In milliseconds

³In milliseconds

3.2.3.6 InsectMoveSpeed

This attribute allows you to define the time¹ taken for an insect to move one space.

3.2.3.7 InsectDamages

This attribute allows you to define the ant number of lives points that takes away an insect during an attack.

3.2.3.8 InsectAttackSpeed

This attribute allows you to define the time² it takes for an insect to inflict damage on an ant.

3.2.4 Food

This tag allows you to define the characteristics of the food. *It is mandatory.*

3.2.4.1 Respawn

This attribute allows you to define the time³ between each new food on the map.

3.2.4.2 Quantity

This attribute allows you to define the amount of food that will be added to the zone at each renewal thereof.

3.3 Bugs' Tags

3.3.1 Ant

This tag can be added an ant to anthill.

¹In milliseconds

²In milliseconds

³In milliseconds

3.3.1.1 X-Coordinate

This attribute allows you to define the number of column position where this ant. This integer should be between 0 and 27 inclusive¹ and this attribute is mandatory.

3.3.1.2 Y-Coordinate

This attribute allows you to define the line number where this ant position. This integer should be between 0 and 17 inclusive² and this attribute is mandatory.

3.3.1.3 StomachCapacity

This attribute allows you to define the capacity of the stomach ant. *It is not mandatory.*

3.3.1.4 LifePoints

This attribute allows you to define the number of life points of this ant. *It is not mandatory.*

3.3.1.5 MoveSpeed

This attribute allows you to define the time³ taken by this ant to move one space. *It is not mandatory.*

3.3.1.6 IngurgitateTime

This attribute allows you to define the time⁴ taken by this ant to eat a unit of food. *It is not mandatory.*

3.3.1.7 RegurgitateTime

This attribute allows you to define the time⁵ taken by this ant to regurgitate a unit of food. *It is not mandatory.*

¹0 is a left and 27 right of the window

²0 is the top and 17 at the bottom of the window

³In milliseconds

⁴In milliseconds

⁵In milliseconds

3.3.2 Queen

This tag allows you to define the queen of the anthill. *She should be defined only once.*

3.3.2.1 StomachCapacity

This attribute allows you to define the capacity of the stomach queen. *It is not mandatory.*

3.3.2.2 LifePoints

This attribute allows you to define the number of life points of the queen. *It is not mandatory.*

3.3.2.3 MoveSpeed

This attribute allows you to define the time¹ taken by the queen to move one space. *It is not mandatory.*

3.3.2.4 IngurgitateTime

This attribute allows you to define the time² taken by the queen to eat a unit of food. *It is not mandatory.*

3.3.2.5 RegurgitateTime

This attribute allows you to define the time³ taken by the queen to regurgitate a unit of food. *It is not mandatory.*

3.3.2.6 ReplyTime

This attribute allows you to define the time⁴ taken by the queen to create a new ants.

3.3.2.7 NumberOfFoodIngurgitateForReply

This attribute allows you to define the quantity of food in the stomach of the queen for reply. *It is not mandatory.*

¹In milliseconds

²In milliseconds

³In milliseconds

⁴In milliseconds

3.3.2.8 ChildrenStomachCapacity

This attribute allows you to define the capacity of the stomach that ants queen generate. *It is not mandatory.*

3.3.2.9 ChildrenLifePoints

This attribute allows you to define the number of life points of queen's children. *It is not mandatory.*

3.3.2.10 ChildrenMoveSpeed

This attribute allows you to define the time¹ taken by queen's children to move one space. *It is not mandatory.*

3.3.2.11 ChildrenIngurgitateTime

This attribute allows you to define the time² taken by queen's children to eat a unit of food. *It is not mandatory.*

3.3.2.12 ChildrenRegurgitateTime

This attribute allows you to define the time³ taken by queen's children to regurgitate a unit of food. *It is not mandatory.*

3.3.3 Insect

This tag can be added an insect to anthill.

3.3.3.1 X-Coordinate

This attribute allows you to define the number of column position where this insect. This integer should be between 0 and 27 inclusive⁴ and this attribute is mandatory.

3.3.3.2 Y-Coordinate

This attribute allows you to define the line number where the insect position. This integer should be between 0 and 17 inclusive⁵ and this attribute is

¹In milliseconds

²In milliseconds

³In milliseconds

⁴0 is a left and 27 right of the window

⁵0 is the top and 17 at the bottom of the window

mandatory.

3.3.3.3 MoveSpeed

This attribute allows you to define the time¹ taken by this insect to move one space. *It is not mandatory.*

3.3.3.4 Damages

This attribute allows you to define the number of lives points to remove the ant attack. *It is not mandatory.*

3.3.3.5 AttackTime

This attribute allows you to define the time² taken by an insect to carry out an attack on an ant. *It is not mandatory.*

3.4 Examples

3.4.1 default.xml

```
<AntHill>
  <theme name="default" />
  <map name="default" />

  <food respawn="25000" quantity="90" />

  <define antLifePoints="100" />
  <define antStomachCapacity="45" />
  <define antMoveSpeed="80" />
  <define antIngurgitateSpeed="15" />
  <define antRegurgitateSpeed="20" />
  <define insectMoveSpeed="110" />
  <define insectDamages="5" />
  <define insectAttackSpeed="95" />
```

¹In milliseconds

²In milliseconds

```

    <ant x-coordinate="13" y-coordinate="1" />
    <ant x-coordinate="5" y-coordinate="4" />
    <ant x-coordinate="7" y-coordinate="7" />
    <ant x-coordinate="12" y-coordinate="7" />
    <ant x-coordinate="17" y-coordinate="5" />
    <ant x-coordinate="13" y-coordinate="16" />
    <ant x-coordinate="17" y-coordinate="13" />
    <ant x-coordinate="23" y-coordinate="2" />
    <ant x-coordinate="13" y-coordinate="2" />

    <queen replyTime="1000" lifePoints="10000" />

    <insect x-coordinate="0" y-coordinate="0" />
    <insect x-coordinate="1" y-coordinate="0" />
    <insect x-coordinate="3" y-coordinate="0" />

    <insect x-coordinate="27" y-coordinate="0" />
    <insect x-coordinate="26" y-coordinate="0" />
    <insect x-coordinate="24" y-coordinate="0" />

</AntHill>

```

3.4.2 [attack.xml](#)

```

<AntHill>
    <theme name="floe" />
    <map name="attack" />

    <food respawn="10000" quantity="25" />

    <define antLifePoints="100" />
    <define antStomachCapacity="30" />
    <define antMoveSpeed="150" />
    <define antIngurgitateSpeed="250" />
    <define antRegurgitateSpeed="350" />
    <define insectMoveSpeed="200" />
    <define insectDamages="15" />
    <define insectAttackSpeed="350" />

```

```
<ant x-coordinate="5" y-coordinate="12" />
<ant x-coordinate="5" y-coordinate="15" />
<ant x-coordinate="5" y-coordinate="17" />
<ant x-coordinate="5" y-coordinate="17" />
<ant x-coordinate="5" y-coordinate="17" />
<ant x-coordinate="3" y-coordinate="0" />
<ant x-coordinate="20" y-coordinate="2" />
<ant x-coordinate="5" y-coordinate="16" />

<queen replyTime="1000" lifePoints="5000" />

<insect x-coordinate="20" y-coordinate="12" />
<insect x-coordinate="1" y-coordinate="14" />
<insect x-coordinate="18" y-coordinate="4" moveSpeed="10" />
<insect x-coordinate="1" y-coordinate="17" damages="10" />
<insect x-coordinate="0" y-coordinate="0" attackTime="1" />

</AntHill>
```

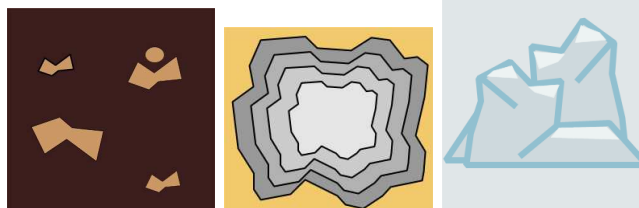
Chapter 4

Maps and different Elements of Anthill



4.1 Elements

4.1.1 Obstacles



This elements is fixed. Nobody can cross it. This case does not change during the party.

4.1.2 Food Zone



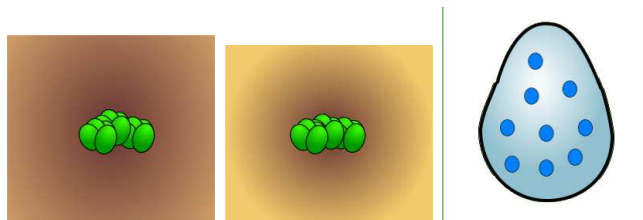
This sprite is use to show the place where the food respawn. The number of this element and their location are fixed at the initialization of the map.

4.1.3 Food



This sprite represent the food on the map. You can seen on a food zone case or on the way if an ant regurgitate. This sprite apparait or disparait during the party.

4.1.4 Lay Zone



The lay zone is the one place where the queen can lay. The position is fixed at the initialization of the map. It composing of four cases adjoining

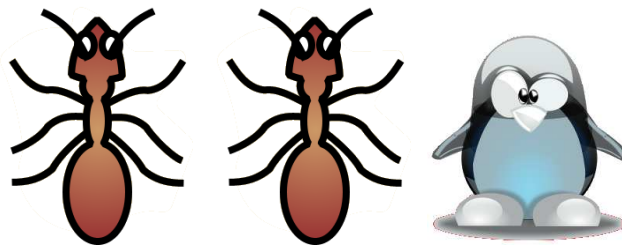
4.2 Bugs

4.2.1 Insects



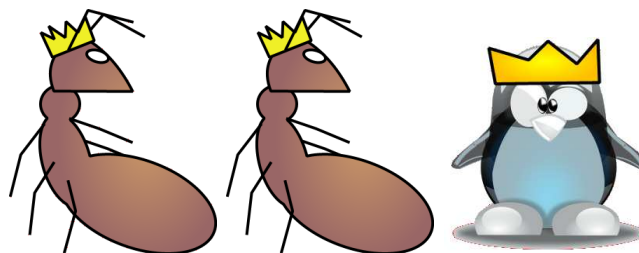
An immortal bug their number and location are initialized at the begining. They can move and fight. They must kill all ants and the queen.

4.2.2 Ants



An mortal bug their number and location are initialized at the begining. Their number changes because insects kill them and the queen create another ants. They can move, eat and regurgitate. They must bring the food to the quenn.

4.2.3 Ants'Queen



A special ant: the queen can create ants with the food in her stomach. She can move,eat,regurgitate and lay.

Part II

Appendix

Appendix A

Information on this book

- It were Thibaut Chèze and Sebastien Planson who took the initiative in creating this document.
- The language that allowed its writing is L^AT_EX.
- All informations contained in this document are accurated on the date of January 6, 2008